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Do Digital Management Tools Redefine Job Titles in UAE Schools? Evidence from a Multi-School Survey Study

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ABSTRACT

This study explores the potential effects of using digital management systems in schools on job roles and job-title expectations for administrators. It explores the shift from operational to new roles of coordination, evaluation, planning and governance of digital platforms. This study used a cross-sectional survey approach involving 201 respondents from UAE schools (principals, assistant principals, teachers, librarians, guidance counselors, and IT coordinators). Quantitative data were analyzed using descriptive statistics, frequency distributions, and cross-tabulations. Thematic analyses were conducted on qualitative data from an open-ended question (193 coded mentions). The majority (85.7%) agreed that there has been a change in administrator roles because of technology. Themes identified were: new roles/new jobs (62 mentions), increased emphasis on digital management (38 mentions), flexibility in work (34 mentions), changed daily tasks (18 mentions), changed goals (15 mentions), school-wide communication as a daily task (13 mentions), more tool-mediated than people-focused work (11 mentions). Role change was accentuated in larger schools (>1,000 students, n=131). LMS (n=41), ERP (n=40), School Voice (n=37) were the top three. Schools should refine roles to include digital governance responsibilities, develop role clarity, establish workflow-based professional development and implement digital responsibility registers.

INTRODUCTION

The nature of school systems is changing (Leal Filho *et al.*, 2026). A once-paper-based world of manual registers, handwritten reports, and verbal communication has become a networked digital world of systems (Sangwa & Mutabazi, 2025), dashboards, and workflows. Learning Management Systems (LMS), Enterprise Resource Planning (ERP) systems, student information systems (SIS), (Gonugunta & Leo, 2024). and communication platforms like Microsoft Teams and SchoolVoice now underpin many of the essential administrative processes that support schools: attendance, grades, parent engagement, timetabling, assessments and examinations, and reporting.

These technologies are usually rolled out with the promise of increased efficiency (Kljaić *et al.*, 2023), precision and accountability, but they also profoundly alter the human dimension of school administration (Mincu, 2022). What was once a day's work can now be done in a few minutes. But they also create new tasks: setting up systems, user management, data verification, interpretation of dashboard metrics, integration of multiple systems, cybersecurity, and data privacy. These responsibilities do not replace existing tasks; they add a broader set of tasks that are not always incorporated into job descriptions or performance reviews (Selenko *et al.*, 2022).

In the United Arab Emirates (UAE), digital transformation is not just an isolated local project but a national agenda (Al Sulaity *et al.*, 2025). The UAE Vision 2021 and subsequent digital government initiatives have encouraged

smart services and data-driven decision-making, and the integration of technology across government and industry. An important focus is education. The UAE's education sector demands standardized reporting to regulatory authorities like the Abu Dhabi Department of Education and Knowledge (ADEK) and the Knowledge and Human Development Authority (KHDA). This puts pressure on the need for accurate data, timely digital reporting and the expertise of school staff to use these systems.

In this environment, school administrators - principals, assistant principals, heads of department, coordinators and support staff - are at the crossroads of digital governance and education leadership. They are shifting their roles, sometimes informally, as they take on responsibilities for overseeing the system, ensuring data integrity and coordination of workflows (EBUK & CHUKWUEMEKA, 2025). Insight into the impact of these expectations on job roles, job descriptions, and potentially job titles is essential to enhance implementation quality, protect staff well-being, and ensure that digital transformation does not create a mere redistribution of work.

While many schools in the UAE are adopting digital management tools, little is known about how they are changing the nature of work, roles and job descriptions of school administrators. Do staff feel changes in their work? Do we see changes in job titles and descriptions? Or does digital transformation result in a new form of "invisible work"? Our research aims to answer these

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questions in the following ways:

RQ1: How strongly are school staff perceiving the transformation of roles and job descriptions following the introduction of digital management tools?

RQ2: What are the most impacted job roles (e.g., reporting, monitoring, communication, compliance, data governance) due to the use of digital tools?

RQ3: What attributes (school size, job role, work experience, types of tools) are associated with increased perceptions of role change?

RQ4: What are the barriers and enablers (e.g., fear of change, training opportunities, leadership support) of role change acceptance?

This research is the first to make three contributions. First, it offers empirical evidence specific to the UAE on how digitalization is changing school administration jobs, extending ICT-in-education research from generic studies to those specific to school governance and administration. Second, it draws attention to the difference between formal role change (i.e., job title) and informal role expansion (i.e., job description). Third, it provides practical lessons for school administrators, human resource professionals, and policy makers on how to balance the use of digital tools, role clarity and development, and workload.

LITERATURE REVIEW

Digital Transformation in Educational Administration

The use of information and communication technology (ICT) in school leadership (Yang *et al.*, 2025) and management has been widely researched over the past few decades. An international study on the use of ICT in school leadership revealed that digital technologies are increasingly being used for communication (Gerick *et al.*, 2024) reporting, and data-driven decision-making. But they also found that gaps remain: leaders' lack of digital skills, lack of technical support, and fear of an increased workload when it should be a relief.

Dexter & Barton (2021) studied school leadership teams and concluded that successful technology leadership is about more than using digital tools; it requires aligning technology strategies with school objectives. Effective leaders' time is spent interpreting data, coaching staff, and redesigning processes - tasks that are not the traditional focus of administrators (Dexter & Barton, 2021). This finding suggests that digital transformation is not just about adopting new technology, but also redefining jobs and practices (Ferdousi *et al.*, 2026).

Role Transformation: From Clerical Work to Coordination and Governance

A recurring theme in studies is the transformation from clerical to coordination, monitoring, and governance activities (Diem, 2025). When schools adopt systems that offer near-real-time operational data, administrators must analyse and interpret indicators, coordinate workflows between departments, and govern data and technology systems (Vanari *et al.*, 2025). For instance, an LMS not

only tracks grades but also provides analytics on student participation, assignment submissions, and learning outcomes. Administrators must interpret these analytics and understand how to use them.

This shift can be explained via socio-technical systems theory, which highlights how technology and organisational structures are in a symbiotic relationship. A digital platform not only alters the tools used but also coordination, accountability, and decision-making. Dashboards centralise monitoring activities and self-service portals decentralise data entry, redistributing work tasks. This can lead to a reallocation of tasks, which can be empowering for some but frustrating for others, based on digital skills, role ambiguity, and support (Shinde, 2025).

Formal vs. Informal Role Change: The Job Title Question

An important gap in the literature is the distinction between formal change (job title) and informal change (job description) (Douarin & Schnyder, 2025). Formal change occurs when HR changes the organisational chart, issues new job titles (e.g., "Data Governance Officer"), or amends job descriptions. Informal change occurs when staff take on new digital tasks (such as data entry, dashboard monitoring, email and other platform notifications, digital communication management) that aren't reflected in formal workloads, job descriptions or performance evaluations.

Informal role change is particularly prevalent in schools because digital learning approaches and technologies are frequently implemented quickly to address reporting or operational needs, whereas HR reforms tend to happen more gradually. This can create an "implementation gap" where staff take on digital responsibilities, but these are not reflected in salary, status, or workload. This can result in role ambiguity, task inequity, and staff overburden (especially among those who are seen as "digitally able" and given additional informal responsibilities) (Silvia *et al.*, 2025).

Emergence of Specialist Digital Roles

With the growing and more formalised digital responsibilities in schools, some education systems are starting to introduce or formally establish digital roles to handle these responsibilities. Roles such as a Digital Coordinator or EdTech Integration (Costache, 2025). Lead can support staff, manage digital platforms, liaise with technology providers, and ensure that the institution is aware of the latest digital trends. A Data Analyst or Data Governance Officer is another role that focuses on data collection, verification, and analysis from various systems to inform regulatory compliance, institutional planning, and improvement processes. Another position that some schools may have is a school-based IT Administrator who oversees user accounts, manages access, troubleshoots basic IT issues, and raises awareness of cybersecurity issues for staff and students (Tiwari *et al.*, 2025). In the UAE, we may see a similar role specialization depending

on the governance structure, regulatory compliance requirements, institutional goals, and digital systems in place. But there is a need for large-scale empirical studies to map the presence of these roles and the factors that contribute to their emergence.

Barriers and Enablers of Role Change

The existing literature highlights several factors that influence the success or failure of role adaptation during digital transformation, or the creation of resistance, frustration, and disorder. Perhaps the most frequently cited is training and development, as existing courses in ICT tend to be too general. Staff need job-specific training that focuses on day-to-day tasks, rather than the technical aspects of the software (Mhando & Casmir, 2025). But change management is also a major barrier, as some employees may view technology as a threat to their employment, an additional complexity, or as an infringement on their autonomy (Tandon *et al.*, 2025). Lack of IT support can also compound these challenges, especially in small schools with limited IT resources, which may require administrative staff to troubleshoot technical problems. Uncertainty about the new role can also be a significant challenge, with unclear professional expectations for integrating technology into new roles often producing greater stress, reduced efficacy beliefs, and lower job satisfaction.

However, several factors can help make the transition easier and outcomes more beneficial. Leadership support is especially important, with principals and other senior leaders who model new digital practices and support staff development contributing to a culture of innovation. Peer coaching and having digital champions in the organisation can also ease concerns by offering accessible, informal mentoring and guidance. Open communication about the reasons for the introduction of new technologies and responsibilities can reduce uncertainty and anxiety. Finally, formal rewards that recognise and reward changes

to staff roles, such as through performance appraisal, promotion, or salary increases, can boost staff motivation and role acceptance.

Conceptual Model

This study uses a three-pathway model of role outcomes in response to the adoption of digital tools used in schools, based on the literature as shown in Figure 1. The conceptual model illustrates how digital tools in schools lead to changes in employee roles via changes in the task environment. When schools adopt systems like learning management systems, enterprise resource planning, student information systems or analytics systems, administrative tasks are often automated, and new digital processes are created. Simultaneously, data accuracy, reporting, compliance, and inter-departmental collaboration take on a higher priority in schools. These changes alter work tasks and set new performance expectations.

Our model identifies three pathways of role outcomes. First, there is informal role expansion, whereby staff take on new digital roles and responsibilities (such as monitoring systems, supervising data entry, and coordinating workflows) without a formal change in role title or contract. The second pathway is role redesign, which happens when the digital roles are formalised and become strategically significant, and the organisation then changes the job descriptions, titles, and remuneration. And the third pathway is role specialisation, which involves the creation of new roles or specialist functions, such as Digital Coordinators, EdTech Leads, or platform administrators.

The pathways do not operate in all schools. Their extent and the probability of occurrence are moderated by the capacity of the organisation, access to resources and IT support, staff digital literacies, change attitudes, and external governance arrangements associated with accountability and compliance.

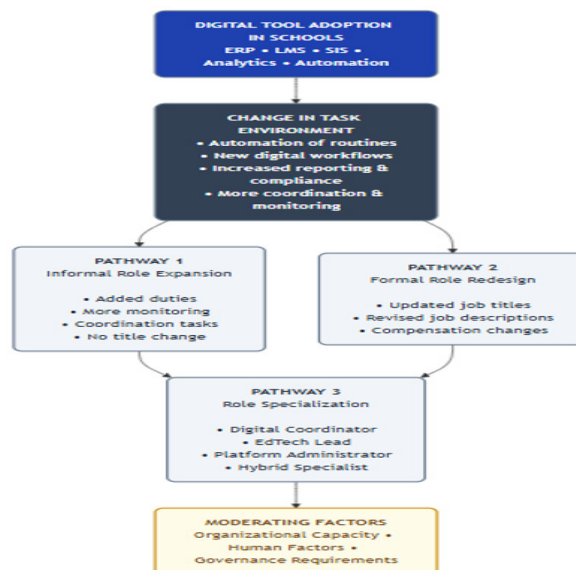


Figure 1: Conceptual Model of Digital Tool Adoption and Role Outcomes in Schools

MATERIALS AND METHODS

Research Design

The research design for this study was a cross-sectional survey design, which was adopted to investigate perceptions of staff about changes to their roles resulting from the use of digital management systems in schools. A cross-sectional design is appropriate because it allows for data collection from a wide range of participants at one point in time, thereby providing a snapshot of current trends, patterns, and relationships across organisations. The study's exploratory nature dictated a mixed quantitative-qualitative approach. Closed-ended questions produced quantitative data that could be statistically described, while open-ended questions facilitated more detailed descriptions of the impact of digital technologies on job roles, responsibilities, and processes. This combination of survey questions enhanced the validity of the study through a blend of quantitative trends and qualitative insights.

Setting and Participants

The research was carried out in schools across different education stages in the United Arab Emirates (UAE). These ranged from Primary Education (Grades 1-4) to Secondary Schools (Grades 5-8), High Schools (Grades

9-12), and Early Years/Kindergarten. It was important to include various stages to reflect the broad range of administrative and teaching environments in the UAE education system. Respondents were those working in school leadership, management, administration, and operations. The sample includes principals, assistant principals, administrative teachers, librarians, laboratory teachers, guidance counselors, social workers, coordinators, head teachers, and paid employees in administrative positions. This sampling frame was chosen to include a range of formal and informal leaders and also staff whose work is in the realm of digital systems. The survey was distributed electronically via professional networks, school channels, and educators for a period of one month. There were no incentives offered, and responses were anonymous. To reduce social desirability bias, the survey introduction stated there were no correct answers and that all data would be reported only at the aggregate level. We received 201 responses with valid demographic information and school size. Of these, 193 unique responses were available for the main open-ended question about role change and were analysed for themes. Some expressed more than one idea, leading to multiple themes being coded per response. Participants' context is shown in Table 1.

Table 1: Participant Setting and Scope

Category	Description
Country	United Arab Emirates
School Phases	Early Years, Primary, Secondary, High School
Participants	Principals, Assistant Principals, Teachers, Coordinators, Librarians, Counselors, Administrative Staff
Data Collection Mode	Online survey
Collection Period	Four weeks
Total Respondents	201
Open-ended Responses Coded	193

Measures and Instruments

The study gathered the data via an online questionnaire with four key sections, as detailed in Table 2.

Section A: Demographic and Organisational Profile

This section included participant and school characteristics, including age (18-28, 29-38, 39-48 and 49+ years), whether they were an administrative role (Yes/No), their current role (open-ended), years at their current school (0-4, 5-10, 11-15, 16-20, 21+ years), school cycle/grade level (Primary, Secondary, High School, Early Years) and school size (1-500, 501-1,000, 1,000+ students). These factors were used to examine whether there were differences in perceptions by experience, role type, or context.

Section B: Digital Tool Adoption

Participants selected the digital systems used in their schools from a drop-down list of technologies commonly

implemented in schools. This included Learning Management Systems (LMS), Enterprise Resource Planning (ERP) systems, SchoolVoice, Nearpod, Microsoft Teams, ADEK Parent Survey Platform, Microsoft SharePoint, and "Other" (free text) to allow for other technologies.

Section C: Perceptions of Role Change (Closed-ended)

An "agreement" item asked if the respondent thought technology had changed administrative roles. The question stated:

"In your opinion, have the roles of school administrators (such as Principals, Assistant Principals, and other school administrators) changed as a result of the use of technology in administration?"

Yes or No.

Section D: Open-ended Role Change Description

The main open-ended question asked about changes to

respondents' jobs:

"How has the use of technology tools changed your job description or responsibilities? Please provide examples."

Other open-ended responses from other sections of the dataset also asked for feedback on the use of technology tools for administrative efficiency. These were used to

triangulate and illustrate.

Data Analysis Procedures

Quantitative Analysis

Descriptive statistical analyses were used for quantitative data. Descriptive statistics (frequencies and percentages)

Table 2: Survey Instrument Structure

Section	Focus Area	Item Type
A	Demographic and organisational profile	Closed-ended + open role title
B	Digital tool adoption	Multiple response
C	Perceived role change	Binary (Yes/No)
D	Impact on job description/responsibilities	Open-ended

were generated for demographic factors, school characteristics, patterns of tool usage, and responses to the dichotomous role-change question. Bivariate cross-tabulation techniques were applied to examine the relationship between school size and perceived role change, and to explore the relationship between years of experience and use of digital tools. These analyses gave an overview of perceptions across institutional and professional sub-groups.

Qualitative Analysis (Thematic Coding)

Analysis of open-ended responses used an iterative approach to thematic analysis. First, all responses were read through several times to get a feel for the data and identify initial patterns. Second, codes were inductively generated based on participants' statements, such as "new tasks and responsibilities", "more flexibility", "more data entry", or "less face-to-face contact". Third, codes were grouped into categories to represent themes. Any coding decisions and disagreements were discussed between the two coders until agreement was reached.

For greater clarity, we counted each participant only once per theme. When responses encompassed multiple themes, all relevant themes were noted. Themes were then interpreted with reference to the study's research questions and the proposed digital role transformation model.

To enhance interpretive accuracy, we compared the results of our main role-change question with those of the supplementary item on the usefulness of digital tools to streamline work administration. The locality between these data sources was interpreted to indicate thematic validity.

Ethical Considerations

The research followed standard ethical guidelines of voluntary involvement, confidentiality, anonymity, and informed consent. No identifying information was collected. A survey preamble was presented before data collection to brief respondents on the purpose of the study, voluntary participation, and that they could withdraw from the study at any point without penalty. Data were only analysed and reported at the group level

to prevent identification of individuals and schools.

Trustworthiness and Quality Considerations

The following steps were taken to increase methodological soundness. First, the survey questions were framed in the language of actual administrative processes and well-acknowledged functions in school administration, thus enhancing content validity. Second, having samples representing different phases and roles in schools increased the diversity of perspectives in the sample. Third, in the qualitative phase, an iterative team approach to coding was implemented to minimise individual coder subjectivity and ensure that themes were grounded in participants' terms rather than those of the researchers. The count data were only used to show the ranking of themes, not to infer effect sizes. Themes were interpreted in terms of their meaning for the school, role adaptation strategies, and school management. Lastly, triangulation of multiple open-ended questions added to the dependability and consistency of the results.

RESULTS AND DISCUSSION

This section presents the findings in six subsections: (4.1) respondent demographic profile, (4.2) digital tool adoption patterns, (4.3) binary perceptions of role change, (4.4) thematic analysis of role change descriptions, (4.5) integration of findings with school size and experience, and (4.6) illustrative quotations.

Respondent Demographic Profile

Table 3 presents the distribution of respondents by age group, administrative role status, years in current school, school cycle, and school size. The sample is well-distributed across age groups, with a slight concentration in the 18–28 and 39–48 ranges. Most respondents (87) identified as holding an administrative role, though a substantial number (41) did not, providing a perspective from non-administrative staff who interact with digital tools. Experience in current school shows a bimodal distribution: peaks at 5–10 years ($n=44$) and 16–20 years ($n=44$), indicating a mix of mid-career and senior staff. Primary Education is the most represented cycle, which aligns with the larger number of primary schools

in the UAE. Critically, 131 of 201 respondents (65.2%) work in schools with more than 1,000 students, meaning the findings are weighted toward larger institutions. This is relevant because larger schools typically have more complex data management needs, more parent

communication, and more formalized role structures.

Digital Tool Adoption Patterns

Table 4 reports the frequency of digital tools used for school management and administration, based on

Table 3: Demographic Characteristics of Respondents

Characteristic	Category	Frequency (n)
Age Group	18–28 years	42
	29–38 years	38
	39–48 years	41
	49+ years	35
	Unspecified	45
Administrative Role Status	YES (holds administrative role)	87
	NO	41
	Unspecified	73
Years in Current School	0–4 years	18
	5–10 years	44
	11–15 years	40
	16–20 years	44
	21+ years (e.g., 23, 24)	31
	Unspecified	24
School Cycle	Primary Education (Gr 1–4)	48
	Secondary School (Gr 5–8)	21
	High School (Gr 9–12)	18
	Early Years (Kindergarten)	2
	Multiple stages indicated	4
	Unspecified	108
School Size (Students)	≤500	52
	501–1,000	18
	>1,000	131
	Total with size data	201

explicit mentions in open-ended responses and tool selection items. LMS and ERP systems are the most widely adopted, reflecting the core transactional and information management needs of schools. An LMS typically handles curriculum delivery, assignment submission, and grading, while an ERP manages student records, attendance, timetables, and fee collection. The prominence of SchoolVoice, a parent communication platform, indicates that digital parent engagement is a major aspect of administrators’ work. The presence of

analytics tools (Power BI, Google Data Studio) in the ‘other’ category suggests that some schools are moving toward data dashboards and business intelligence—a trend that further increases the need for data literacy among administrators. Importantly, most schools appear to operate in a multi-platform environment (average 2–3 tools per respondent), which can create hidden workload in the form of data reconciliation, duplicate entry, and navigating multiple interfaces.

Table 4: Digital Tools Used for School Administration

Tool	Frequency (n)	Percentage of respondents with tool data (n=201)
Learning Management System (LMS)	41	20.4%
Enterprise Resource Planning (ERP)	40	19.9%
SchoolVoice	37	18.4%
Nearpod	16	8.0%
Microsoft Teams	13	6.5%

ADEK Parent Survey Platform	11	5.5%
Microsoft SharePoint	10	5.0%
Other (e.g., Power BI, Google Data Studio, Canva, ChatGPT)	8	4.0%

Binary Perceptions of Role Change

Respondents were asked: “Do you think the roles of school administrators (such as Principals, Assistant Principal and other school administrators) have changed as a result of the use of technology in administration?” Overwhelmingly (85.7%), respondents who answered this item affirmed that administrator roles have changed due to technology as shown in Table 5. The 14.3% who

responded “No” may represent staff who either (a) work in schools with minimal technology integration, (b) hold roles that have been largely unaffected, or (c) view changes as modifications to tasks rather than to the role itself. The high affirmation rate supports the overall finding that digital transformation is perceived as a significant driver of role change.

Table 5: Perceived Role Change (Binary)

Response	Frequency (n)	Percentage
Yes	24	85.7%
No	4	14.3%
Total	28	100%

**Note: This item had a smaller response set (n=28) than the open-ended question. The high “Yes” percentage is consistent with the qualitative themes.*

Thematic Analysis of Role Change Descriptions

The open-ended question generated 193 coded mentions across eight themes. Table 6 presents the frequencies, and Figure 2 provides a visual representation.

Dominant Theme – New Responsibilities and New Jobs (62 mentions):

This is the most frequently reported change, accounting for nearly one-third of all coded mentions. Respondents consistently described taking on tasks that did not exist before digital tools. A librarian now trains teachers and parents. A vice principal no longer solely makes schedules; dedicated staff use scheduling software. IT coordination, system access management, and cybersecurity have become part of administrative portfolios. This theme supports the conceptual model’s Pathway 1 (informal role expansion) and Pathway 3 (specialization).

Second Theme – Increased Focus on Digital Management (38 mentions):

Respondents highlighted the automation of previously manual tasks (attendance, grading, scheduling) and the consequent need to manage digital workflows. This is not merely about using tools but about managing them: ensuring data quality, coordinating platform use across departments, and monitoring system-generated reports. This theme reflects the shift from clerical work to governance.

Third Theme – Flexibility in Work (34 mentions):

Cloud-based systems enable remote access, after-hours work, and rapid response to emergencies. While often framed positively, flexibility can also blur boundaries between work and personal time. Some respondents noted being able to complete tasks from home, but others

implied that availability expectations have increased.

Fourth Theme – Changing Daily Tasks (18 mentions):

Respondents described that the rhythm of their workday has changed. Where once they might have spent hours on paperwork, they now spend time logging into platforms, checking dashboards, responding to digital notifications, and troubleshooting system issues. The task composition has shifted even if the overall job title remains.

Fifth Theme – Change Goals (15 mentions):

Several respondents noted that their professional goals have shifted. Instead of focusing on completing manual processes accurately, they now focus on strategic planning, data-driven decision-making, and resource allocation based on analytics. This theme aligns with the literature on digital leadership and strategic roles.

Sixth Theme – School-Wide Communication as Daily Task (13 mentions):

Communication that once happened through printed newsletters, phone calls, or in-person meetings is now mediated by platforms (SchoolVoice, Teams, WhatsApp groups, email). Administrators spend significant time each day managing these digital channels, ensuring messages are sent, read, and responded to.

Seventh Theme – More with Tools than People (11 mentions):

A smaller but notable group expressed concern that their work has become more tool-mediated and less people-centered. This may reflect changes in professional identity, especially for those who entered education for human interaction. It also points to potential risks of

over-automation and reduced relational trust.

Eighth Theme – Easier to Create Ideas (2 mentions):

A few respondents noted that digital tools facilitate

brainstorming, collaboration, and creativity (e.g., using Canva for visual planning or shared documents for collaborative ideation). This is a minor theme but suggests positive affordances of technology beyond efficiency.

Table 6: Thematic Coding Frequencies for Perceived Job-Role Changes

Theme	Number of Mentions	Example Quotation
New responsibilities and new jobs	62	“I think, before I just only librarian, I now working with principal to prepare the training for teachers and students and parents”
Increased focus on digital management	38	“Increased Focus on Digital Management: Tasks that were once manual, like attendance tracking or exam scheduling, are now handled through platforms like SIS or LMS”
Flexibility in work	34	“Cloud-based systems allow administrators to manage school operations remotely, offering flexibility and quick response during emergencies”
Changing daily tasks	18	“The daily task, change makes the job is not like before”
Change goals	15	“School administrators will take on more strategic and data-driven roles, with less focus on manual tasks”
Managing school-wide communication as a daily task	13	“Managing school-wide communication has become a daily task, using platforms like email systems, WhatsApp groups, or Microsoft Teams”
Job is more with tools than with people	11	“The job be more with tools than with people”
Easier to create ideas	2	“Easy to work, more ideas”

Role Change Descriptions



Figure 2: Coded Themes

Integration with School Size and Experience

Larger schools (>1,000 students) produced the highest absolute number of mentions for new responsibilities, consistent with their greater scale and complexity. However, the percentage of respondents mentioning new responsibilities was highest in mid-sized schools (33%), followed by large schools (34%), and lowest in

small schools (23%) as shown in Table 7. This suggests that while absolute change is more visible in large schools, relative change may be felt most acutely in schools transitioning from small to mid-sized or mid-sized to large, where systems are being formalized. For digital management focus, mid-sized schools had the highest percentage (28%), possibly because they have reached a

scale where manual processes break down but have not yet fully specialized digital roles.

Table 7: Perceived Role Change by School Size (Qualitative Theme Presence)

School Size	New Responsibilities Theme Present?	Digital Management Theme Present?
≤500 (n=52)	12 mentions (23%)	8 mentions (15%)
501–1,000 (n=18)	6 mentions (33%)	5 mentions (28%)
>1,000 (n=131)	44 mentions (34%)	25 mentions (19%)

Tool adoption is highest among mid-career staff (5–15 years) and declines among the most experienced staff (21+ years) as provided in Table 8. This may reflect either (a) longer-tenured staff being closer to retirement and less engaged with new systems, (b) longer-tenured staff having been promoted to roles that delegate technical

tasks, or (c) a cohort effect where newer staff have grown up with digital tools. The finding has implications for professional development: training cannot be one-size-fits-all; different experience groups have different starting points and learning needs.

Table 8: Tool Adoption by Experience Level

Years in School	LMS Use (n)	ERP Use (n)	SchoolVoice Use (n)
0–4 years (n=18)	5 (28%)	4 (22%)	5 (28%)
5–10 years (n=44)	12 (27%)	11 (25%)	10 (23%)
11–15 years (n=40)	9 (23%)	9 (23%)	8 (20%)
16–20 years (n=44)	10 (23%)	10 (23%)	9 (20%)
21+ years (n=31)	5 (16%)	6 (19%)	5 (16%)

Illustrative Quotations from Open-Ended Responses

On new responsibilities and role expansion:

“I think, before I just only librarian, I now working with principal to prepare the training for teachers and students and parents”
“Yes, I am responsible for creating and maintaining online schedules, coordinating virtual meetings, and managing school calendars”
“I handle administrative responsibilities related to system access, account management, and basic IT coordination.”

On automation and time savings:

“Technology has changed my job by automating many tasks. For example, I now use online systems for attendance, grading, and communication. This frees up time for planning and decision-making.”
“Before 10 years ago we need 2 weeks to prepare timetable but now with tools we need 1 hour to make schedule (school timetable)”

On strategic shifts and data use:

“School administrators will take on more strategic and data-driven roles, with less focus on manual tasks.”
“Using a BI tool like Power BI or Google Data Studio, we automatically pull in KPI data—attendance trends, academic performance, fee collection status—and display them on an interactive dashboard. Leadership can spot issues early.”

On communication transformation:

“Managing school-wide communication has become a daily task, using platforms like email systems, WhatsApp groups, or Microsoft Teams to keep staff, students, and parents informed.”
“Implementing Microsoft Teams for staff meetings, announcements, and document sharing has cut internal email volume by more than 60%.”

On concerns about tool-mediated work:

“The job be more with tools than with people”

On training and support gaps (from effectiveness items):

“No paper and we save the budget” (positive)
“ال” (No – suggesting dissatisfaction or lack of effectiveness).

Discussion

Summary of Key Findings

In this study, we examined whether the use of digital management tools is linked with role change and formal role titles in schools in the United Arab Emirates. The results suggest that there is a strong association between perceived role change and digital transformation in the education workforce. The majority of the study’s respondents (85.7%) indicated that roles in administration have changed due to technology use. By far the most frequently cited change was the development of new tasks and (in some cases) new jobs. This was followed by a greater focus on digital management tasks, as well as increased flexibility in how work is undertaken. Taken together, these findings indicate that the introduction of technologies is not simply making school work more efficient, but is also changing the work (Dell’Acqua *et al.*, 2025).

On the other hand, the findings suggest that formal roles and structures have not been transformed as rapidly as practise. Respondents reported significant changes in tasks, processes, and expectations, but these were not necessarily associated with changes in job titles or role descriptions. This suggests that roles may be expanding

faster than the human resource redesign process. This means, in effect, that staff may be doing very different work than that originally defined by their roles, but their titles don't change.

Interpretation in Light of the Conceptual Model

The research supports the model proposed earlier in this study. First, the informal role expansion was the most prominent (Chandler *et al.*, 2026). Respondents reported many examples of undertaking new digital tasks without formal classification changes. These included librarians serving as “technology mentors” for their peers, teachers overseeing learning management systems and grade books, and vice principals overseeing digital reporting. These situations show how digital change can impact work content without formal change (Shahzad *et al.*, 2025).

Second, there was less but still strong evidence of the role redesign pathway. Some participants explicitly mentioned new occupations or roles such as IT coordination, system administrator, or data manager. However, the current study focused on perceptions based on a survey rather than hard documentation, and so we are unable to determine the extent to which these functions were formalised by changes to contracts, job descriptions, and pay. This is an avenue for further research.

Third, the role of role specialization was also seen. Interview participants mentioned roles of account management, platform governance, digital communications management, data quality control, and cybersecurity management. These functions are distinct from traditional administrative roles, and increasingly specialised skills are required. In less-advantaged or smaller schools, these may be separate roles. In smaller schools, they are likely to be subsumed within current roles.

The Gap Between Role Expansion and Title Change

A key finding of the research is the apparent disconnect between new tasks and unchanged job titles (Hopner *et al.*, 2025). This has several consequences for organisations. If employees are required to undertake additional digital governance activities but lack recognition, role confusion may result. There may be questions about priorities, accountability, or performance assessment.

A second implication is related to work equity. Employees with stronger digital skills can become the “go-to” people to solve problems in schools (Ramadian *et al.*, 2025) and, as a result, take on more work. This could result in an invisible and unsanctioned inequitable workload over time. Third, much of the work of digital labour is invisibilised. For example, data validation, dashboard updates, software set-ups, and parent communications can be time-consuming and yet not included in job descriptions or performance evaluation tools.

There are also identity-related implications. Education professionals often pursue careers due to an interest in relationships, development, and working with people. As

growing percentages of their time are devoted to platform management or compliance-focused digital activities, some may feel “de-professionalised”. While this change-induced tension may be a normal phase of modernisation, sustained incongruence between emerging and formal work roles can lead to job dissatisfaction, worker burnout, and a reluctance to embrace future change.

School Size as a Moderating Factor

School size is likely a key moderator of role change. The greatest absolute change was found in larger schools (more than 1,000 students). This makes sense in light of the increased administrative demands of the larger institution, which would involve more student data to be collected and reported on, more parent communication, more staffing, and a greater emphasis on reporting. But the percentage of respondents who reported new responsibilities was not significantly higher in large schools than in mid-sized schools. This may indicate that mid-sized schools are in a unique period of transition. They may have the size to require the sort of digital systems that require support, but not the staff or funding to establish new support roles. This may mean that existing staff need to juggle their existing roles and significant new digital tasks. This may account for why role enlargement may be particularly pronounced in those environments.

Comparison with Existing Literature

The study builds on previous international research on digital leadership and change in education. Prior research has indicated that introducing information and communication technologies (ICTs) results in a greater need for coordination, monitoring, and decision-making based on data. The current findings support this claim by showing that school staff do feel an increase in management tasks associated with technology use.

The present findings also echo research that technology leadership also involves time for redesigning processes, coaching staff, and facilitating change. The respondents in this study explicitly mentioned support, training, communication management, and monitoring. This study suggests that digital transformation is not simply about technology, but also the work done to integrate it.

But the study also adds complexity to the research literature by highlighting the theme that some respondents work “more with tools than with people”. Most studies emphasise efficiency gains, automation, and better information flows. This theme, on the other hand, draws attention to the social dimension. For some employees, greater use of digital mediation may result in a loss of face-to-face interaction. This finding implies that digital transformation should not only be judged by increased productivity, but also its impacts on occupational identity, social relations, and work meaning.

Practical Implications of the Role Recognition Gap

The study builds on previous international research

on digital leadership and change in education. Prior research has indicated that introducing information and communication technologies (ICTs) (Kehinde, 2025). result in greater need for coordination, monitoring, and decision-making based on data. The current findings support this claim by showing that school staff do feel an increase in management tasks associated with technology use.

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Implications

Implications for School Leaders

The research suggests schools need a phased and practical approach to human resource adaptation to technological change. In the first phase, in the period immediately after a major tool is introduced, schools should map workflows to determine what digital tasks staff are engaged in, how they are divided among staff, and where there is overlap or voids. This will bring these practices to the surface.

The second stage is documentation and role clarification. Roles and responsibilities should be updated to include significant digital elements, even if the formal roles are not. Performance evaluation processes should acknowledge digital governance responsibilities such as data management, report coordination, communication, and platform management. Documentation may clarify and enhance accountability.

Third, selective formalisation should take place. If digital work has become ongoing, strategic, and highly skilled, schools should explore the creation of specialist roles or the allocation of workloads. These could be roles such as Digital Learning Coordinator, Data Administrator, or Platform Governance Lead. This may not be necessary across the board, but it is becoming essential in those schools where digital work has become complex. This graduated approach recognises that change often takes time in organisations, while ensuring hidden work doesn't go unchecked.

For school leaders, the research highlights the need to consider technology as a people, not just an operational

issue. They should start by identifying the platforms used for each process, the people who conduct related tasks, and the problems they encounter. These audits should be participatory, relying on staff experiences as well as reporting relationships.

Leaders should also ensure standard operating procedures (SOPs) are in place for common digital work processes, such as attendance processes, report generation, parent communication, access controls, and escalations. Clear ownership prevents confusion and reliance on an ad hoc few digitally savvy individuals.

Implications for Human Resource Management and Workforce Planning

School human resource functions should audit the adequacy of current role descriptions in relation to current school work. Existing role descriptions may not reflect responsibilities for managing systems, digital communication, data and privacy, and inter-system communication. It is also important to separate small incremental additions to responsibilities from role redesign. Where these tasks are infrequent, minor changes in responsibilities might be enough. Where they involve a significant portion of the job or require particular skills, role redesign is warranted. Appraisal systems should consider digital skills such as data literacy, platform skills, process integrity, and information management. Similarly, schools may want to consider career pathways that recognise employees who build digital leadership skills.

Implications for Professional Development

The research finds that general ICT training is not enough for today's school. Instead, training should relate to specific workflows. School administrators may need to learn about dashboards, reporting cycles, and compliance reports. Teachers might need guidance in harnessing platforms to do more, with less administrative time. Support staff may need to be proficient in configuration, permission management, and troubleshooting.

Staff may also need support based on their expertise. Experienced staff may need individualised support to build confidence in skills that may not be familiar. Coaching, mentoring, and on-the-job support are likely to be more effective than workshops.

Finally, staff training should have change-management elements. There is a need to explain the need for systems, changing roles, and where to seek help. This may help calm fears and enhance buy-in.

Implications for System-Level Policy

At a policy level, the research shows interoperability and platform consolidation are needed. Complex multi-platform ecosystems can create invisible workloads due to entering information into multiple systems, reconciling information, and communicating across the platforms. Governments can minimise this overhead using standards, procurement integration, and interoperability incentives. Certain and consistent reporting standards are also

crucial. Consistency from external accountability bodies in terms of format and timing allows schools to automate their reporting rather than having to continually respond. This helps avoid wasted effort on reporting. It is essential to provide instruction on the remit and design of new specialist positions. Systems may need guidance on the need and design of digital coordination roles, such as when they are needed, what capabilities are required, and how they interact with teaching, administration, and IT. Finally, centrally provided professional development can ensure that smaller schools do not suffer from internal capacity problems.

Limitations and Future Research

There are some limitations. First, this is a cross-sectional study and thus cannot be used for causal analysis. The association between digital tool adoption and sense of role change does not permit inference of causality, and the temporal direction of the effect cannot be determined. Second, this is a self-report study. Participants' views on technology may have shaped perceptions of change. Future studies would benefit from objective measures such as log data, time diaries, or HR data. Third, research was conducted in UAE schools. While this is highly pertinent in the context of the digital transformation agenda in the country, results may not necessarily apply to other countries with different governance structures, labour markets, or cultural norms. Fourth, the counts of each theme reflect their prominence, not necessarily their significance. Themes mentioned less frequently may still be extremely important for staff. Finally, the study did not incorporate analysis of job descriptions, staff contracts or school charts. As a result, we rely on participant perceptions for conclusions on formal title change.

Longitudinal studies over several years, as technologies evolve, are needed. This research would allow us to establish if informal expansion of roles transitions to formal restructure or if misalignment continues. Future research should include objective behavioural data, such as computer logs and time allocation measures, to better measure digital workloads. Analysis of human resource documents would also help assess changes in job titles and competencies and responsibility lines. Intervention studies could examine whether initiatives such as job description changes, digital champions, or relevant on-the-job training increase job satisfaction, decrease digital overload, or increase retention. Comparative public and private schools (or Gulf states) would clarify the role of governance and resourcing in digital role change. Finally, interview studies could examine the lived experiences of role change, coping and meaningful work in the digitalized school environment.

CONCLUSION

The present research investigated how digital management systems are linked to role transition and changes in job

titles in schools in the UAE. Findings reveal that roles have changed considerably but not always been reflected in job titles. Digital tools have led to the emergence of new tasks, changes in the nature of daily work, increased demands for collecting and sharing information, and in some instances, new types of work. However, many of these changes seem to have been subsumed under the existing roles with little corresponding change to titles, workload models or performance evaluation. The key contribution of the study is the identification of an implementation gap between digital and organisational reality. Teachers and support staff are being asked to undertake increasingly important forms of labour that were not prominent in earlier models of school administration, but are invisible within the system. Untracked, this may lead to confusion, inequitable workloads, low morale, and a rejection of future change.

The ability to respond to this challenge need not be overkill. Not all schools need a new executive technology position. But all schools should know what digital work is, record major responsibilities, acknowledge other contributions, and give specific skills development. Thus, digital transformation is as much of a people problem as a technology problem. The results are particularly relevant for the UAE, where there is a strong focus on smart government and high-quality education. The keys to successful modernisation will not just be the investment in platforms, but also the evolution of workforce structures. By co-evolving systems, roles, and recognition, schools can optimise the digital transformation to benefit the business of education while maintaining the human dimension.

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