

## The role of digital internal auditing in activating digital university governance

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### Abstract

This study seeks to investigate the impact of digital internal auditing on the activation of digital governance practices in Palestinian universities, particularly in relation to enhancing transparency, strengthening accountability, promoting e-participation, and reinforcing electronic oversight mechanisms.

Approach/Methodology/Design:

A descriptive-analytical approach was employed using a structured questionnaire to measure the levels of digital internal auditing and digital governance. The study population consisted of administrative and academic-administrative staff at seven Palestinian universities: An-Najah National University, Birzeit University, Al-Quds University Abu Dis, Al-Quds Open University, Bethlehem University, Hebron University, and Palestine Technical University – Kadoorie. Population data were obtained from the Palestinian Central Bureau of Statistics (2023–2024). Using stratified random sampling, 271 questionnaires were distributed, of which 237 were returned, yielding a response rate of 87.5%.

Results:

The findings revealed a high level of digital internal auditing across all dimensions, including auditor independence, professional competence, audit performance quality, and scope of work. Digital governance was rated high for accountability, e-participation, and electronic oversight, while transparency scored moderately. Regression analysis indicated that digital internal auditing has a statistically significant positive impact on all dimensions of digital governance, explaining 23.9% to 46.3% of the variance, with the strongest effect on transparency.

Conclusions:

The results suggest that Palestinian universities achieve effective digital governance primarily through robust digital internal auditing mechanisms. To enhance governance comprehensively, universities should strengthen transparency measures, invest in digital infrastructure, and provide continuous professional development for auditors. The study provides actionable insights for policymakers and administrators to optimize digital governance frameworks, improve institutional performance, and foster trust among stakeholders.

**Keywords:** Digital Internal Auditing, E-Participation, Digital university governance.

### INTRODUCTION:

The contemporary world is witnessing rapid technological advancements driven by the Fourth Industrial Revolution, prompting higher education institutions (HEIs) to adopt digital infrastructures, software, and integrated systems. These developments have reshaped universities' operational and educational environments, encouraging the adoption of digital governance to enhance transparency, accountability, participation, and institutional performance (Dayioğlu & Turker, 2021; Al-Ra'i, 2021). Digital governance provides a framework for managing educational systems effectively, improving institutional performance, extending societal impact, and ensuring efficient utilization of resources. Its

success, however, depends on robust internal control mechanisms, particularly digital internal auditing.

Digital internal auditing has evolved beyond traditional methods, leveraging tools such as data analytics, automated monitoring, and risk assessment to detect irregularities, predict risks, and ensure timely and accurate reporting (Hamza, 2025; Rashwan & Abu Arab, 2022). It plays a strategic role in supporting digital governance by enhancing preventive oversight, mitigating risks, ensuring information security, and strengthening e-participation and electronic control systems. Moreover, it contributes to institutional trust, quality of services, and informed decision-making (Al-Sharif, 2025).

Despite its benefits, the implementation of digital transformation and auditing in universities faces challenges, including limited digital skills, inadequate technical infrastructure, high costs, and resource constraints, which may compromise internal auditing effectiveness (Ali & Ahmed, 2024). Addressing these challenges requires aligning strategic directions, administrative and financial structures, and human resources to support digital initiatives while ensuring transparency, accountability, and participation across stakeholders.

This study investigates the role of digital internal auditing in activating digital university governance in Palestinian universities. It examines the level of digital internal auditing, the current reality of governance, and its impact on transparency, accountability, e-participation, and electronic control. Furthermore, it identifies organizational and technical obstacles and proposes practical solutions to enhance governance effectiveness. By filling a research gap in the integration of digital governance and internal auditing, the study provides evidence-based insights to guide decision-makers in adopting digital audit tools, improving institutional performance, and fostering trust among students, faculty, administration, and other stakeholders.

## Methodology

### A. The study population and sample

The descriptive analytical approach was adopted, which is based on studying the phenomenon as it exists in reality, and is concerned with describing it accurately, and expressing it quantitatively and qualitatively, through analyzing the data, drawing conclusions and interpreting them in light of the theoretical framework and previous studies.

### Study Population and Sample

The study population consists of all administrative and academic-administrative staff at private universities in the West Bank. The targeted universities included: **Al-Quds Open University, Birzeit University, An-Najah National University, Al-Quds University (Abu Dis), Palestine Technical University – Kadoorie, Bethlehem University, and Hebron University**. According to reports from the **Palestinian Central Bureau of Statistics**, the total number of staff reached **913 male and female employees**.

The distribution of the study population and the selected statistical sample across the universities is presented in **Table No. (1): Distribution of the study population and sample members by university**.

	University	Number of members of the community	Number of individuals in the statistical sample
1	Al-Quds Open University	192	56
2	Birzeit university	191	57
3	An-Najah National University	188	56
4	Jerusalem Abu Dis An-Najah National University	130	39
5	university Palestine Technical	73	22
6	BethlehemUniversity	70	21
7	Hebron University	69	20
<b>Total</b>		<b>913</b>	<b>271</b>

### :Third: The study sample

#### 1. :Sample of the experimental study

Selected sample experimental It consists of ( 30 ) administrative and academic administrative staff in private universities in the West Bank , in order to verify the validity .and reliability of the study instrument

#### 2. :Actual study sample

:The sample size was calculated using the following equation

$$n = \left( \frac{Z}{m} \right)^2$$

:The sample size was corrected using the following equation

$$n = \frac{nN}{n-1}$$

:where

N .The size of the study population :

m ,.Marginal error, expressed in decimal places (e.g :±0.05

Z ,.The standard value corresponding to a known significance level (e.g :Z=1.96 for a significance level  $\alpha \leq 0.05$  .

The sample size for the statistical study was271 administrative and academic administrative staff in private universities in the West Bank . The staff were targeted through a questionnaire prepared for this purpose, and 237questionnaires were returned, representing .the actual/real study sample

:The individuals in the actual study sample are distributed according to the following tables

**.Table No(2)Distribution of study sample members by university**

m	University	repetition	%
1	Al-Quds Open University	49	20.7
2	Birzeit university	47	19.8
3	An-Najah National University	50	21.1
4	Jerusalem Abu Dis An-Najah National University	33	13.9
5	university Palestine Technical	20	8.4
6	BethlehemUniversity	19	8.0
7	Hebron University	19	8.0
<b>the total</b>		<b>237</b>	<b>100%</b>



The study sample was distributed across seven Palestinian universities. **An-Najah National University** accounted for the highest proportion of participants (21.1%), followed by **Al-Quds Open University** (20.7%) and **Birzeit University** (19.8%). The remaining participants were distributed among **Al-Quds University – Abu Dis** (13.9%), **Palestine Technical University – Kadoorie** (8.4%), **Bethlehem University** (8.0%), and **Hebron University** (8.0%). This distribution reflects a relatively balanced representation across the universities, with a higher concentration in institutions hosting a larger number of administrative and academic-administrative staff.

**Table No(3) Distribution of study sample members according to job title**

	<b>Job Description</b>	<b>repetition</b>	<b>%</b>
1	Vice President of the University for Financial and Administrative Affairs	2	0.8
2	Vice President of the University for Innovation and Artificial Intelligence	2	0.8
3	Dean of the College	7	3.0
4	Head of Department	40	16.9
5	Director of the Finance Department	5	2.1
6	Director of the Administrative Department	5	2.1
7	Head of Internal Audit Department	6	2.5
8	Internal auditor	30	12.7
9	Director of Technology Department	5	2.1
10	Software engineer	35	14.8
11	Financial and Administrative System Officer	5	2.1
12	Academic with administrative duties	95	40.1
<b>Total</b>		<b>237</b>	<b>100%</b>

The study sample was distributed across various job titles, with **academics holding administrative roles** representing the largest group (40.1%), followed by **department heads** (16.9%), **software engineers** (14.8%), and **internal auditors** (12.7%). This distribution demonstrates a clear representation of personnel directly involved in the administrative and digital functions relevant to the study. In contrast, the proportions of senior leadership positions were relatively low, including **university vice presidents** (0.8%), **deans of colleges** (3.0%), and **directors of departments and heads of internal audit units** (ranging from 2.1% to 2.5%). Overall, this distribution reflects a diverse occupational composition within the sample, enhancing the comprehensiveness of perspectives on the study's topic.

**Table No(4) Distribution of study sample members according to years of service**

	<b>Years of experience</b>	<b>Repetition</b>	<b>%</b>
1	under 5 years	50	21.1
2	From 5 to 10 years old	59	24.9
3	More than 10 years	128	54.0
<b>Total</b>		<b>237</b>	<b>%100</b>

The study reveals that the majority of participants 54.0% possess more than 10 years of experience, indicating that over half of the respondents have extensive practical experience which enhances the reliability and accuracy of their opinions. Those with between 5 and 10 years of service comprised 24.9%, while those with less than 5 years of service constituted

This reflects a diversity in experience levels within the sample, enriching the study's findings and giving it a more comprehensive dimension

**Table No(5) Distribution of study sample members according to academic qualification**

	Academic qualification	repetition	%
1	Diploma	7	3.0
2	Bachelor's	97	40.9
3	Master's	82	34.6
4	PhD	51	21.5
<b>Total</b>		<b>237</b>	<b>100%</b>

The study indicates that the majority of participants hold a **bachelor's degree** (40.9%), followed by those with a **master's degree** (34.6%), and a **doctoral degree** (21.5%), while **diploma holders** represented the smallest proportion (3.0%). These findings suggest that most participants possess a relatively high level of education, which enhances their capacity to understand the concepts related to digital internal auditing and digital university governance, thereby increasing the reliability and validity of the data collected.

#### **:Fourth: The research tool**

The questionnaire was used as a data collection tool, and it was designed to identify the role of digital internal auditing in activating digital university governance

#### **Questionnaire component:**

The questionnaire consists of

**1. Personal data :** This includes the following data: University, job title, number of years of service, academic qualification.

**2. :Digital internal audit pillars ,** which consist of

**Table No (6) Digital Internal Audit Keys And the number of its paragraphs**

axis	Number of paragraphs
Independence of the internal auditor	5
Professional competence of the internal auditor	5
Quality of internal audit performance	5
Scope of work of internal audit	5
<b>Digital Internal Audit</b>	<b>20</b>

**3. :The pillars of digital university governance** consist of

**Table No.(7) Digital university governance themes and number of sections**

axis	Number of paragraphs
Transparency	7
accountability	7
e-participation	7
Electronic monitoring	7
<b>Digital university governance</b>	<b>28</b>

#### **:Grading scale**

The responses of the study sample were measured using a **five-point Likert scale** ranging from 1 to 5, where **1** represents the lowest degree of agreement and **5** represents the highest degree of agreement. Specifically, the scale categories were defined as follows: **very little (1), little (2), moderate (3), large (4), and very large (5).**

The length of each category (cell) was determined by calculating the **range of the scale** ( $5 - 1 = 4$ ) and dividing it by the total number of points on the scale ( $4 \div 5 = 0.80$ ). This value was then added to the lowest point of the scale (1) to determine the upper limit of the first category, and the same procedure was applied sequentially to define the upper limits of the remaining categories.

The levels of agreement were then interpreted according to the grading scale presented in Table No. (7).

**Table No (8) Approval scoring scale**

degree Approval	the weight digital	arithmetic mean		relative weight	
		from	to	from	to
Very few	1	1.00	Less than 1.80	20.00	Less than 36.00
few	2	1.80	Less than 2.60	36.00	Less than 52.00
Medium	3	2.60	Less than 3.40	52.00	Less than 68.00
large	4	3.40	Less than 4.20	68.00	Less than 84.00
Very large	5	4.20	5.00	84.00	100.00

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**:Fifth: The validity of the questionnaire**

### Validity of the Research Instrument

The validity of the research instrument refers to the extent to which the instrument measures what it was designed to measure. In this study, the validity of the questionnaire was verified through the following methods:

#### 1. Expert Judgment:

The questionnaire was presented to **five experienced and specialized referees** to assess the correctness of its linguistic formulation, the clarity of its instructions, the appropriateness of the axes and items, and the suitability of the questionnaire for measuring the study objectives. Thus, the validity of the questionnaire was confirmed from the referees' perspective.

#### 2. Construct Validity:

The construct validity of the questionnaire axes was verified by calculating the **Pearson correlation coefficients** between each item and the total score of its axis, as presented in Table No. (8).

**Table No (9) Constructive truth of axes questionnaire**

axis	Correlation coefficient	The value " ofSig "	Significance
Independence of the internal auditor	0.899	0.000	Function
Professional competence of the internal auditor	0.755	0.000	Function
Quality of internal audit performance	0.826	0.000	Function
Scope of work of internal audit	0.944	0.000	Function
Transparency	0.839	0.000	Function
accountability	0.881	0.000	Function
e-participation	0.756	0.000	Function

axis	Correlation coefficient	The value " ofSig "	Significance
Electronic monitoring	0.875	0.000	Function

It is evident from the above table that all significance values are below **0.05**, indicating that all axes possess statistically significant validity coefficients and are therefore suitable for achieving the objectives of the study.

### 1. :The truth of internal consistency

The internal consistency of the questionnaire items was calculated by finding **Pearson's :correlation coefficients** , as shown in the following tables

**Table No(10)**

**.digital internal audit axes is valid**

Paragraph	Correlation coefficient	The value " of Sig "	Significance	Paragraph	Correlation coefficient	The value " of Sig "	Significance
<b>Independence of the internal auditor</b>				<b>Professional competence of the internal auditor</b>			
1	0.852	0.000	Function	1	0.907	0.000	Function
2	0.768	0.000	Function	2	0.860	0.000	Function
3	0.933	0.000	Function	3	0.923	0.000	Function
4	0.799	0.000	Function	4	0.757	0.000	Function
5	0.690	0.000	Function	5	0.921	0.000	Function
Paragraph	Correlation coefficient	The value " of Sig "	Significance	Paragraph	Correlation coefficient	The value " of Sig "	Significance
<b>Quality of internal audit performance</b>				<b>Scope of work of internal audit</b>			
1	0.673	0.000	Function	1	0.791	0.000	Function
2	0.902	0.000	Function	2	0.764	0.000	Function
3	0.843	0.000	Function	3	0.869	0.000	Function
4	0.842	0.000	Function	4	0.827	0.000	Function
	0.914	0.000	Function	5	0.845	0.000	Function

,It is evident from the previous table that the significance level values are less than 0.05 meaning that all items have statistically significant validity coefficients and meet the .purposes of the study

### B. (Dolom No.(11) The internal consistency of the paragraphs of the digital university

**.governance axes is valid**

Paragraph	Correlation coefficient	The value " of Sig "	Significance	Paragraph	Correlation coefficient	The value " of Sig "	Significance
<b>Transparency</b>				<b>accountability</b>			
1	0.796	0.000	Function	1	0.887	0.000	Function
2	0.807	0.000	Function	2	0.637	0.000	Function
3	0.816	0.000	Function	3	0.876	0.000	Function
4	0.699	0.000	Function	4	0.858	0.000	Function
5	0.714	0.000	Function	5	0.658	0.000	Function
6	0.912	0.000	Function	6	0.739	0.000	Function
7	0.831	0.000	Function	7	0.884	0.000	Function

Paragraph	Correlation coefficient	The value " of Sig "	Significance	Paragraph	Correlation coefficient	The value " of Sig "	Significance
<b>e-participation</b>				<b>Electronic censorship</b>			
1	0.855	0.000	Function	1	0.867	0.000	Function
2	0.830	0.000	Function	2	0.929	0.000	Function
3	0.856	0.000	Function	3	0.872	0.000	Function
4	0.895	0.000	Function	4	0.784	0.000	Function
5	0.847	0.000	Function	5	0.751	0.000	Function
6	0.904	0.000	Function	6	0.864	0.000	Function
7	0.852	0.000	Function	7	0.875	0.000	Function

,It is evident from the previous table that the significance level values are less than (0.05) meaning that all items have statistically significant validity coefficients and meet the .purposes of the study

#### **:Sixth: Questionnaire reliability**

The reliability of a research instrument means that the instrument gives approximately the same results if it is applied again to the same group of individuals, i.e., the results do not :change. The reliability of the questionnaire was verified through the following

##### **1. :Stability using Cronbach's alpha equation**

The reliability of the questionnaire was verified by calculating the correlation coefficients :using Cronbach's alpha equation, as shown in the following table

**Table No(12) Correlation coefficients using Cronbach's alpha for the questionnaire axes**

axis	Correlation coefficient
Independence of the internal auditor	0.907
Professional competence of the internal auditor	0.888
Quality of internal audit performance	0.750
Scope of work of internal audit	0.823
<b>Digital Internal Audit</b>	<b>0.965</b>
Transparency	0.915
accountability	0.822
e-participation	0.936
Electronic censorship	0.882
<b>Digital university governance</b>	<b>0.959</b>

It is evident from the previous table that the correlation coefficients using Cronbach's alpha equation are statistically significant reliability coefficients, and they meet the purposes of the .study

##### **2. :Stability by the split-half method**

The reliability of the questionnaire was verified by calculating correlation coefficients using :the split-half method, as shown in the following table

**.Table No(13): Split-half correlation coefficients for questionnaire axes**

axis	Correlation coefficient	
	Before editing	After modification
Independence of the internal auditor	0.608	0.756

axis	Correlation coefficient	
	Before editing	After modification
Professional competence of the internal auditor	0.789	0.882
Quality of internal audit performance	0.713	0.832
Scope of work of internal audit	0.590	0.742
<b>Digital Internal Audit</b>	<b>0.763</b>	<b>0.866</b>
Transparency	0.751	0.858
accountability	0.774	0.873
e-participation	0.533	0.695
Electronic censorship	0.738	0.849
<b>Digital university governance</b>	<b>0.770</b>	<b>0.870</b>

It is evident from the previous table that the correlation coefficients using the split-half method are statistically significant reliability coefficients, and they meet the purposes of the study.

#### Seventh: Statistical methods used

To answer the study questions, the Statistical Package for the Social Sciences (SPSS) was used to conduct the necessary statistical analyses for the study, as follows:

1. **Frequency and percentage**: To provide a statistical description of the study sample.
2. **Correlation coefficient**: To verify construct validity and internal consistency validity.
3. **Cronbach's alpha equation**: to check the reliability of the questionnaire.
4. **Split-half method**: to check the reliability of the questionnaire.
5. **Central limit theory**: To test whether the data follows a normal distribution or not.
6. **One Sample T-Test**: To determine the extent of the high or low responses of the study sample on the axes and items of the questionnaire.
7. **Linear regression analysis**: to show the effect of independent variables on the dependent variable.

#### Eighth: Data distribution

The Central Limit Theory was used, which indicates that the larger the sample size, the closer its variance is to the population variance, and the larger the sample size, the closer the distribution of the mean of these random variables is to the standard normal distribution. The distribution can be considered to be approximately normal when the sample size is (30) and above, meaning that the data in this study follow a normal distribution, and therefore parametric tests were used.

#### Results of the study

The question states the following:

What is the level of **digital internal auditing** in universities?

This question was answered using a test **One Sample T-Test** as shown in the following tables:

**Table No.(14) Analysis of the axes of digital internal audit**

	axis	average Calculation	deviation Standard	value T"	value Sig."	the weight relative	Order	degree Approval
1	Independence of the internal auditor	3.613	0.732	12,879	0.000	72.253	4	large

2	Professional competence of the internal auditor	3.624	0.553	17.379	0.000	72.489	3	large
4	Quality of internal audit performance	3.862	0.666	19.944	0.000	77.249	1	large
5	Scope of work of internal audit	3.738	0.672	16.909	0.000	74.768	2	large
	<b>Digital Internal Audit</b>	<b>3.709</b>	<b>0.450</b>	<b>24.285</b>	<b>0.000</b>	<b>74.190</b>		<b>large</b>

:The table above shows that

- The level of **independence of the internal auditor** in universities came with a relative weight of 72.253 .which is a high degree of agreement ,(
- The level of **professional competence of the internal auditor** in universities came with a relative weight of 72.489 .which is a high degree of agreement
- level of **internal audit performance** in universities came with a relative weight of 77.249 , .which is a high degree of agreement
- The level of **scope of work of internal auditing** in universities came with a relative weight of 74.768 .which is a high degree of agreement ,(
- The level of **digital internal auditing** in universities came with a relative weight of **74.190** .which is a high degree of agreement ,(

These results indicate that the universities under study possess a relatively high level of organizational and professional support for the implementation of digital internal auditing, as reflected in the high averages across all axes and their statistical significance. The high ranking of the internal audit performance quality axis can be explained by the universities clear focus on developing and improving the efficiency of audit procedures and methods to align with digital transformation and the requirements of the modern technological environment. The high ranking of the scope of work axis reflects the expansion of audit areas to encompass various digital and administrative aspects, while the high professional competence indicates the universities' commitment to training auditors and developing their technical capabilities. The lowest average score for internal auditor independence—though still within the high range—may suggest the presence of some organizational or administrative challenges that may somewhat limit complete independence, but which do not fundamentally affect the overall effectiveness of the digital internal audit system. The study (Al-Mashhadani, 2025) showed that there is an urgent need to develop internal auditing by having the internal auditor examine the extent of data integrity, reliability and completeness, and change the methods of examination and risk assessment associated with the use of digital transformation governance mechanisms

**.Table No(15)of the Internal Auditor's Independence axi2**

m	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	Implementing digital transformation at the university impacts the enhancement of direct	3.477	1.230	5.967	0.000	69.536	3	large

m	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
	communication and interaction between the internal auditor and the director of the internal audit department.							
2	The implementation of digital transformation at the university affects the non-participation of internal auditors in any executive work that may affect their independence.	3.789	1.174	10.344	0.000	75.781	2	large
3	The implementation of digital transformation at the university affects granting the internal auditor access to all data, records, files, and related staff.	3.418	1.085	5.929	0.000	68.354	5	large
4	The implementation of digital transformation at the university affects the provision of necessary protection for the internal auditor from any interference, pressure or threat while performing his duties.	3.435	1.176	5.691	0.000	68.692	4	large
5	The implementation of digital transformation in the university affects the ability of the internal auditor to perform his work freely and objectively.	3.945	1.022	14,243	0.000	78.903	1	large
	<b>The axis as a whole</b>	<b>3.613</b>	<b>0.732</b>	<b>12,879</b>	<b>0.000</b>	<b>72.253</b>		<b>large</b>

The results of the analysis of the items in the Internal Auditor Independence axis indicate that the implementation of digital transformation in universities clearly contributes to enhancing auditor independence. The axis as a whole received a high level of agreement and a relative weight of 72.253%. The high ranking of the item "Enabling the internal auditor to perform their work freely and objectively" (relative weight 78.903%) can be explained by the effective role of digital transformation in reducing administrative and bureaucratic constraints, thus granting the auditor the freedom to make professional decisions without external influence. The lower weight of the item "Granting the internal auditor access to all data, records, files, and relevant personnel" 68.354% can be explained by the existence of some technical and administrative constraints or difficulties that sometimes limit full access to information, although these do not diminish the overall effectiveness of the auditor's independence. Overall, these results reflect that digital transformation tangibly supports the independence of the internal auditor, with some minor challenges in accessing complete data . A study by Al-Mashhadani (2025) showed a pressing need to develop internal auditing

**Table No(16) the professional competence axis for the internal auditor**

m	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	The implementation of digital transformation in the university affects the way the internal auditor deals with financial and administrative data and information .	3.586	1.003	9.001	0.000	71.730	4	large
2	The implementation of digital transformation in the university affects the ability of the internal auditor to use modern technologies and auditing programs in light of the electronic operation of data.	3.755	0.965	12.048	0.000	75.105	2	large
4	The implementation of digital transformation in the university affects the ability of the internal auditor to build and maintain positive professional relationships with employees in the internal audit unit.	3.890	1.088	12.602	0.000	77.806	1	large
5	The implementation of digital transformation at the university impacts the ongoing professional development of internal auditors.	3.181	1.064	2.625	0.009	63.629	5	Medium
6	The implementation of digital transformation in the university affects the ability of the internal auditor to use modern digital tools	3.709	1.067	10.223	0.000	74.177	3	large
	<b>The axis as a whole</b>	<b>3.624</b>	<b>0.553</b>	<b>17.379</b>	<b>0.000</b>	<b>72.489</b>		<b>large</b>

The results of the analysis of the items in the Internal Auditor's Professional Competency axis indicate that digital transformation in universities clearly contributes to enhancing auditors' professional competence. The axis as a whole received a high level of agreement and a relative weight of 72.489%. The high ranking of the item "The Internal Auditor's Ability to Build and Maintain Positive Professional Relationships with Staff in the Internal Audit Unit" 77.806% demonstrates that digital transformation is not limited to developing technical skills but also strengthens the social and professional aspects that contribute to creating a comprehensive work environment. The moderately low ranking of the item "Continuous Professional Development of Internal Auditors" 63.629% indicates a relative gap in training and continuous development programs, suggesting a need to focus more on supporting auditors' ongoing learning to keep pace with digital developments and modern auditing technologies. Overall, the results reflect the ability of digital transformation to raise auditors' professional competence, while also highlighting the need to strengthen continuous development programs

. A study by Al-Mashhadani (2025) showed a pressing need to develop internal auditing

**Table No.(16) the Internal Audit Performance Quality axis**

m	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	The application of digital transformation in the university affects the planning, execution, and accurate and effective communication of internal audit tasks and their results.	3.819	0.985	12,787	0.000	76.371	4	large
2	The implementation of digital transformation at the university affects compliance with international professional standards for internal auditing.	4.046	0.944	17.058	0.000	80.928	1	large
4	The implementation of digital transformation in the university affects the efficiency of internal auditors and the scope of services they provide.	3.738	1.016	11.185	0.000	74.768	5	large
5	Implementing digital transformation at the university increases the effectiveness of the time allocated to risk assessment and control systems.	3.827	1.029	12.372	0.000	76.540	3	large
6	The implementation of digital transformation in the university impacts the improvement of the operational efficiency of the internal audit function.	3.882	0.949	14.301	0.000	77.637	2	large
	<b>The axis as a whole</b>	<b>3.862</b>	<b>0.666</b>	<b>19.944</b>	<b>0.000</b>	<b>77.249</b>		<b>large</b>

The results indicate that digital transformation in universities effectively contributes to improving the quality of internal audit performance, with the overall axis receiving a high level of agreement and a relative weight of 77.249%. The item "Adherence to International Professional Standards for Internal Auditing" (80.928%) stands out as the highest-ranking item, demonstrating that digital transformation enhances compliance with professional standards and aligns audit performance with international best practices. The lower-ranked item, "Efficiency of Internal Auditors and the Breadth of Services They Provide" (74.768%), while still within the high range, may reflect challenges related to expanding the scope of audit services or the need for further training and technical support for auditors. Overall, the results suggest that digital transformation strengthens both the operational and professional performance of internal auditing, while highlighting opportunities to enhance individual auditor capabilities and broaden service coverage. Al-Mashhadani (2025) emphasized the pressing need to develop internal auditing to fully realize these benefits.

**Table No.(17) Analysis of the paragraphs of the Internal Audit Scope axis**

m	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	The implementation of digital transformation at the university affects the internal auditor's ability to verify compliance with approved regulations, rules, instructions, and organizational procedures.	3.831	1.107	11.559	0.000	76.624	2	large
2	The implementation of digital transformation in the university affects the internal auditor's ability to verify the efficiency and effectiveness of resource utilization .	3.578	1.285	6.924	0.000	71.561	5	large
4	The implementation of digital transformation at the university affects the internal auditor's review of contracts and agreements concluded by the university.	3.726	0.977	11.438	0.000	74.515	3	large
5	The implementation of digital transformation at the university affects the internal auditor's ability to provide consulting services to the university administration.	3.705	1.072	10.117	0.000	74.093	4	large
6	The implementation of digital transformation at the university affects the scope of work of the internal auditor to include examining programs and all operational processes to ensure that the results are consistent with the .set objectives	3.852	1.123	11,680	0.000	77.046	1	large
	<b>The axis as a whole</b>	<b>3.738</b>	<b>0.672</b>	<b>16.909</b>	<b>0.000</b>	<b>74.768</b>		<b>large</b>

The results indicate that digital transformation in universities significantly contributes to expanding and enhancing the scope of the internal auditor's work. This dimension received a high level of agreement, with a relative weight of (74.768%). The high ranking of the item, "Ensuring the scope of the internal auditor's work includes examining programs and all operational processes to ensure that results align with the objectives" (77.046%), highlights the critical role of digital transformation in enabling comprehensive auditing that accurately covers all processes. Conversely, the item "Verifying the efficiency and effectiveness of resource utilization" (71.561%), although still within the high range, reflects some challenges in fully measuring and optimizing the use of digital and administrative resources. This finding suggests opportunities for improving the tools and methods employed in this area. Overall, the results demonstrate that digital transformation enhances the internal audit function's ability to perform its tasks more comprehensively and objectively, while emphasizing the need for continued focus on operational efficiency , Mashhadani (2025)

highlighted a pressing need to develop and enhance internal auditing practices, reinforcing the importance of continuous improvement in this area.

**:Second: Results of the second question and their discussion**

:The question states the following

? What is the reality of governance in digital universities

.This question was answered using a test(One Sample T-Test) as shown in the following , tables

**.Table No.(18) Analysis of the axes of digital internal audit**

m	axis	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	Transparency	3.343	0.709	7.449	0.000	66,860	4	Medium
2	accountability	3.560	0.559	15.418	0.000	71,200	2	large
4	e-participation	3.669	0.603	17.093	0.000	73.382	1	large
5	Electronic censorship	3.530	0.734	11.117	0.000	70.597	3	large
	<b>Digital university governance</b>	<b>3.525</b>	<b>0.500</b>	<b>16.174</b>	<b>0.000</b>	<b>70.509</b>		<b>large</b>

:The table above shows that

□ The reality of transparency within digital university governance recorded a relative weight of 66.860, indicating a moderate level of agreement. The reality of accountability within digital university governance recorded a relative weight of 71.200, indicating a high level of agreement.

□ The reality of electronic participation within digital university governance recorded a relative weight of 73.382, indicating a high level of agreement.

□ The reality of electronic monitoring within digital university governance recorded a relative weight of 70.597, indicating a high level of agreement.

□ The reality of overall digital university governance recorded a relative weight of 70.509, indicating a high level of agreement.

These results indicate that Palestinian universities have achieved a good level of digital governance. The role of e-participation is particularly prominent, enhancing interaction with stakeholders and empowering them to contribute to decisions and policies. High levels of accountability and electronic oversight demonstrate the presence of clear mechanisms for monitoring compliance and protecting digital data and information. However, the relatively moderate level of transparency reflects some limitations in information disclosure and the limited availability of tools to measure stakeholder satisfaction. This suggests that universities need to strengthen digital disclosure practices and develop evaluation tools to ensure more comprehensive and effective governance. Previous studies support these findings: Abdel Aziz (2024) reported that the dimensions of digital governance are practiced

to a moderate degree at Sohag University; Abu Al-Ata and Hamdouna (2023) found a high level of digital governance dimensions in Palestinian universities in the southern governorates; and Madi and Abu Hujair (2020) indicated that university administrations show a high level of readiness to adopt digital transformation.

**Table No. (19) the transparency axis paragraphs**

m	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	The university's website provides tools to measure user satisfaction with the level of electronic services provided.	3.097	1.125	1.328	0.186	61.941	7	Medium
2	The university announces, via its website, the results of measuring beneficiary satisfaction with the electronic services provided.	3.241	1.206	3.070	0.002	64.810	6	Medium
3	The university publishes information on its website that reflects a realistic and accurate picture of its various activities.	3.477	1.287	5.702	0.000	69.536	1	large
4	The university discloses potential future risks and ways to deal with them on its website.	3.405	1.367	4.561	0.000	68.101	3	large
5	The university provides digital guides that explain the electronic services available to beneficiaries and the mechanisms for benefiting from them.	3.456	1.293	5.424	0.000	69.114	2	large
6	The university publishes on its website the approved councils regulations, and internal control procedures.	3.392	1.143	5.284	0.000	67.848	4	Medium
7	The university is committed to continuously updating the information published on its website.	3.333	1.208	4.246	0.000	66.667	5	Medium
	<b>The axis as a whole</b>	<b>3.343</b>	<b>0.709</b>	<b>7.449</b>	<b>0.000</b>	<b>66,860</b>		<b>Medium</b>

The results indicate that the level of transparency within digital university governance achieved a moderate level of agreement, with a relative weight of 66.860%. This suggests that universities are making tangible efforts to disseminate information and enhance clarity, although certain aspects still require further improvement. Notably, the statement “The university publishes information on its website that reflects a realistic and accurate picture of its various activities” received a relatively high score of 69.536%, highlighting the universities’ strong commitment to presenting their activities transparently. In contrast, the statement “The university website provides tools to measure user satisfaction with the level of electronic services provided” received a lower score of 61.941%, indicating a deficiency in user satisfaction assessment tools and their effective utilization. Overall, these findings demonstrate that universities maintain an acceptable level of digital transparency but need to strengthen their digital communication and engagement mechanisms with users to achieve

more comprehensive and effective transparency ,Al-Arada and Shehadeh (2023) found that digital transformation in internal auditing significantly enhances transparency in the Kuwaiti context.

**.Table No. (20)  
of the accountability axis**

	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	The university announces, through its website, the rules and principles adopted in decision-making.	3.173	1.017	2.620	0.009	63,460	7	Medium
2	The university announces to employees, via its website, the list of their job rights and duties.	3.354	0.869	6.279	0.000	67.089	6	Medium
3	The university's website provides ,clear information about its mission vision, values, and legal status.	3.544	1.151	7.279	0.000	70.886	4	large
4	The university administration monitors employees' adherence to digital controls and ethics while using technological resources.	3.831	0.994	12,872	0.000	76.624	2	large
5	The university implements electronic backup procedures to preserve important data and information.	4.068	0.954	17.221	0.000	81.350	1	large
6	The university's website provides a detailed description of the responsibilities of each job, along with identifying the responsible parties.	3.376	1.255	4.607	0.000	67.511	5	Medium
7	All complaints submitted via the university's website are investigated and appropriate action is taken regarding them.	3.574	1.153	7.659	0.000	71.477	3	large
	<b>The axis as a whole</b>	<b>3.560</b>	<b>0.559</b>	<b>15.418</b>	<b>0.000</b>	<b>71,200</b>		<b>large</b>

The results indicate that the reality of accountability within digital university governance received a high level of agreement, with a relative weight of 71.200%, reflecting the universities' commitment to implementing controls and mechanisms for monitoring performance and responsibilities. The statement "The university applies electronic backup procedures to preserve important data and information" received the highest ranking (81.350%), highlighting the role of digital technologies in enhancing information protection and ensuring accurate accountability. Conversely, the statement "The university publishes the rules and principles adopted in decision-making on its website" received the lowest ranking (63.460%), suggesting challenges in fully disclosing decision-making procedures, which may limit the clarity of accountability mechanisms for employees and beneficiaries. Overall, the results indicate that universities maintain a good level of digital accountability, but there is a need to strengthen transparency in publishing policies and rules to ensure more comprehensive and clearer accountability. Al-Arada and Shehadeh (2023) similarly found

that digital transformation in internal auditing significantly enhances accountability in the Kuwaiti context.

**.Table No. (21) Analysis of the sections on the e-participation axis**

	Paragraph	average Calculation	deviation Standard	value T" "	value Sig. "	the weight relative	Order	degree Approval
1	The university has an official responsible for implementing the e-participation strategy.	3.755	1.049	11.082	0.000	75.105	3	large
2	The university has an active website on the internet.	3.350	1.228	4.390	0.000	67.004	7	Medium
3	The university provides sufficient technical, financial and human resources to implement e-participation activities.	3.612	1.150	8.188	0.000	72.236	4	large
4	The university encourages the participation of various stakeholders in formulating relevant policies and decisions.	3.907	1.029	13,570	0.000	78.143	2	large
5	The university has electronic applications that support effective electronic participation.	4.004	1.133	13,644	0.000	80.084	1	large
6	The university responds promptly to beneficiaries' inquiries and strives to solve their problems effectively.	3.557	1.090	7.865	0.000	71.139	5	large
7	The university provides electronic systems to protect the security and privacy of information shared by beneficiaries.	3.498	1.163	6.590	0.000	69.958	6	large
	<b>The axis as a whole</b>	<b>3.669</b>	<b>0.603</b>	<b>17.093</b>	<b>0.000</b>	<b>73.382</b>		<b>large</b>

The results indicate that the reality of e-participation within digital university governance received a high level of agreement, with a relative weight of 73.382%, reflecting the universities' capacity to empower stakeholders to engage in digital activities and decision-making processes. The statement "The university has electronic applications that support effective e-participation" received the highest ranking (80.084%), highlighting the important role of digital tools in facilitating communication and meaningful participation. Conversely, the statement "The university has an effective website" received the lowest ranking (67.004%), indicating certain shortcomings in website effectiveness, which may hinder easy access to information and limit digital interaction. Overall, the results suggest that universities achieve a good level of e-participation, but further improvements in digital infrastructure are necessary to ensure smoother and more effective engagement.

**.Table No.(22)Analysis of the sections on electronic surveillance**

	<b>Paragraph</b>	<b>average Calculation</b>	<b>deviation Standard</b>	<b>value T" "</b>	<b>value Sig. "</b>	<b>the weight relative</b>	<b>Order</b>	<b>degree Approval</b>
1	The university provides a general framework for digital oversight that is consistent with its strategic plan.	3.439	1.147	5.891	0.000	68.776	5	large
2	The university's administrative units implement security plans and measures necessary to address various digital risks.	3,700	1.108	9.732	0.000	74.008	1	large
3	The university conducts periodic ,assessments of the efficiency strength, and robustness of its internal digital control systems to detect deviations.	3.696	1.017	10.538	0.000	73.924	2	large
4	The university has an electronic guide to support regulatory bodies in reducing information security risks.	3.536	1.010	8.164	0.000	70.717	3	large
5	The university's administrative units use firewalls to prevent unauthorized access to data.	3.414	1.080	5.892	0.000	68,270	6	large
6	The university prohibits employees from sharing or exchanging confidential documents via unapproved electronic sharing tools .	3.401	1.075	5.738	0.000	68.017	7	large
7	The university prohibits unauthorized persons from entering the mainframe computer rooms and servers.	3.523	1.181	6.821	0.000	70.464	4	large
	<b>The axis as a whole</b>	<b>3.530</b>	<b>0.734</b>	<b>11.117</b>	<b>0.000</b>	<b>70.597</b>		<b>large</b>

The results indicate that the implementation of electronic oversight within the governance of digital universities received a high level of agreement, with a relative weight of 70.597%, reflecting universities' commitment to establishing controls and procedures that ensure information security and data protection. The statement "University administrative units implement security plans and measures necessary to address various digital risks" received the highest ranking (74.008%), highlighting the universities' proactive efforts to prevent digital risks and minimize potential misuse. Conversely, the statement "The university prohibits employees from sharing or exchanging confidential documents via unauthorized electronic sharing tools" received the lowest ranking (68.017%), indicating some gaps or the need to reinforce adherence to information confidentiality procedures. Overall, the results suggest that universities have achieved a good level of electronic oversight, while emphasizing the need to strengthen digital security policies to ensure more comprehensive and effective protection of data and information

**:Third: Results of Question Three and Discussion**

:The question states the following

Does the role of digital internal auditing have an impact on activating **transparency** within the governance of digital universities?

:To answer this question, the following main hypothesis was formulated

There is no statistically significant effect at the  $\alpha \leq 0.05$  level of the role of digital internal auditing in activating **transparency** within the governance of digital universities

This hypothesis was verified using ( **linear regression analysis** ), as shown in the following table

**Table No.(23) Linear regression analysis of the role of digital internal auditing in enabling transparency**

m	independent variable	Dependent variable: Transparency						
		regression coefficient	Value " ofT "	The value " of Sig. "	Value " ofF "	The value " of Sig. "	Coefficient of determination	Modified coefficient of determination
1	The constant	-0.644	-2.293	0.023				
2	Digital Internal Audit	1.075	14,294	0.000	204.320	0.000	0.465	0.463

:The table above shows that

- **F value = 204.320** and **Sig. value = 0.000**, indicating a statistically significant effect at the significance level of ( $\alpha \leq 0.05$ ) of the role of digital internal auditing in enhancing transparency within the governance of digital universities.
- **Coefficient of determination (R<sup>2</sup>) = 0.465**, and **adjusted R<sup>2</sup> = 0.463**, meaning that 46.3% of the variation in transparency levels is explained by changes in digital internal auditing, while the remaining variation is due to other factors.
- **Regression equation:**

$$\text{Transparency Level} = -0.644 + 1.075 \times \text{Digital Internal Audit}$$

$$\text{Transparency Level} = -0.644 + 1.075 \times \text{Digital Internal Audit}$$

These results demonstrate the effective role of digital internal auditing in promoting transparency within digital universities. Digital auditing enables auditors to accurately monitor activities and processes, facilitates the disclosure of relevant information and data, and enhances accountability. The positive regression coefficient (1.075) indicates that any improvement in the level of digital auditing directly leads to increased transparency, highlighting the contribution of digital technologies and modern auditing tools in reducing administrative ambiguity and minimizing the potential for information manipulation. Furthermore, the coefficient of determination (46.3%) emphasizes that digital internal auditing is a key factor influencing transparency, though additional factors—such as disclosure policies and regulatory procedures—are necessary to achieve comprehensive and reliable digital governance., Al-Arada and Shehadeh (2023) similarly showed that digital transformation in internal auditing significantly contributes to enhancing transparency in the Kuwaiti environment.

#### Fourth: Results of Question Four and Discussion

The question under investigation is as follows:

Does the role of digital internal auditing have an impact on activating accountability within the governance of digital universities? , To address this question, the following main hypothesis was formulated:

There is no statistically significant effect at the ( $\alpha \leq 0.05$ ) level of the role of digital internal auditing in activating accountability within the governance of digital universities.

**Table No.(24) Linear regression analysis of the role of digital internal auditing in activating accountability**

m	independent variable	Dependent variable: Accountability						
		regression coefficient	Value " ofT "	The value " of Sig. "	Value " ofF "	The value " of Sig. "	Coefficient of determination	Modified coefficient of determination
1	The constant	0.852	3.475	0.001				
2	Digital Internal Audit	0.730	11.119	0.000	123.628	0.000	0.345	0.342

:The table above shows that

- **F value = 123.628** and **Sig. value = 0.000**, indicating a statistically significant effect at the significance level of ( $\alpha \leq 0.05$ ) of the role of digital internal auditing in enhancing accountability within the governance of digital universities.
- **Coefficient of determination ( $R^2$ ) = 0.345**, and **adjusted  $R^2 = 0.342$** , meaning that 34.2% of the variation in accountability levels is explained by changes in digital internal auditing, while the remaining variation is due to other factors.
- **Regression equation:**

$$\text{Level of Accountability} = 0.852 + 0.730 \times \text{Digital Internal Audit}$$

$$\text{Level of Accountability} = 0.852 + 0.730 \times \text{Digital Internal Audit}$$

These results indicate the effectiveness of digital internal auditing in promoting accountability within digital universities. Digital auditing enables the monitoring of compliance with rules and procedures, the clear definition of responsibilities, and the early detection of deviations and violations. The positive regression coefficient (0.730) demonstrates that any improvement in the level of digital auditing leads to a significant increase in accountability, emphasizing that digital auditing tools enhance the clarity of responsibilities and the accountability of stakeholders.

While digital internal auditing explains approximately 34.2% of the variation in accountability, this also highlights the importance of integrating other supporting factors—such as organizational policies, training, and awareness of responsibilities—to achieve more comprehensive and effective accountability within digital university governance.

A study by Al-Arada and Shehadeh (2023) similarly found that digital transformation in internal auditing significantly contributes to enhancing accountability in the Kuwaiti environment.

**:Fifth: Results of question five and discussion**

:The question states the following

Does the role of digital internal auditing have an impact on activating **electronic participation** within the governance of digital universities

:To answer this question, the following main hypothesis was formulated

There is no statistically significant effect at the  $\alpha \leq 0.05$  level of the role of digital internal auditing in activating **electronic participation** within the governance of digital universities

This hypothesis was verified using ( **linear regression analysis** ), as shown in the following table

**.Table No(25) Linear regression analysis of the role of digital internal auditing in enabling e-participation**

m	independent variable	Dependent variable: Electronic participation						
		regression coefficient	Value " ofT "	The value " of Sig. "	Value " ofF "	The value " of Sig. "	Coefficient of determination	Modified coefficient of determination
1	<b>The constant</b>	1.222	4.301	0.000				
2	Digital Internal Audit	0.660	8.670	0.000	75.161	0.000	0.242	0.239

:The table above shows that

- **F value = 75.161** and **Sig. value = 0.000**, indicating a statistically significant effect at the significance level of ( $\alpha \leq 0.05$ ) of the role of digital internal auditing in enhancing electronic participation within the governance of digital universities.
- **Coefficient of determination (R<sup>2</sup>) = 0.242**, and **adjusted R<sup>2</sup> = 0.239**, meaning that 23.9% of the variation in electronic participation is explained by changes in digital internal auditing, while the remaining variation is attributed to other factors.
- **Regression equation:**

$$\text{Level of Electronic Participation} = 1.222 + 0.660 \times \text{Digital Internal Audit}$$

$$\text{Level of Electronic Participation} = 1.222 + 0.660 \times \text{Digital Internal Audit}$$

These results highlight the effective role of digital internal auditing in promoting e-participation within digital universities. Digital auditing provides a structured and secure digital environment that facilitates user interaction and participation in decision-making and policy formulation. The positive regression coefficient (0.660) indicates that any improvement in digital auditing directly enhances the effectiveness of e-participation, demonstrating the importance of digital oversight tools in enabling participation.

Although digital internal auditing accounts for approximately 23.9% of the variation in e-participation, other supporting factors such as robust digital infrastructure, user-friendly applications, and training on system use—are crucial for achieving more effective and inclusive e-participation within digital university governance, Previous studies support these findings. For example, Shaima (2025) reported a direct relationship between internal auditing and the risks associated with digital transformation, while Al-Hassawi et al. (2024) found a statistically significant relationship between digital transformation and the determinants of internal audit effectiveness.

**:Sixth: Results of question six and their discussion**

:The question states the following

Does the role of digital internal auditing have an impact on activating **electronic oversight** ? within the governance of digital universities

:To answer this question, the following main hypothesis was formulated

There is no statistically significant effect at the  $\alpha \leq 0.05$  level of the role of digital internal . auditing in activating **electronic control** within the governance of digital universities

This hypothesis was verified using ( **linear regression analysis** ), as shown in the following :table

**.Table No(26) Linear regression analysis of the role of digital internal auditing in activating electronic control**

m	independent variable	Dependent variable: Electronic surveillance						
		regression coefficient	Value " ofT "	The value " of Sig. "	Value " ofF "	The value " of Sig. "	Coefficient of determination	Modified coefficient of determination
1	The constant	-0.198	-0.631	0.529				
2	Digital Internal Audit	1.005	11.987	0.000	143.693	0.000	0.379	0.377

" :The table above shows that Digital Internal Auditing and Electronic Control

- **F value = 143.693** and **Sig. value = 0.000**, indicating a statistically significant effect at the significance level of ( $\alpha \leq 0.05$ ) of the role of digital internal auditing in enhancing electronic control within the governance of digital universities.
- **Coefficient of determination ( $R^2$ ) = 0.379**, and **adjusted  $R^2 = 0.377$** , meaning that 37.7% of the variation in the level of electronic control is explained by changes in digital internal auditing, while the remaining variation is attributed to other factors.
- **Regression equation:**

$$\text{Level of Electronic Control} = -0.198 + 1.005 \times \text{Digital Internal Audit}$$

$$\text{Level of Electronic Control} = -0.198 + 1.005 \times \text{Digital Internal Audit}$$

These results reflect the crucial role of digital internal auditing in strengthening e-governance within digital universities. It enables precise monitoring of digital processes, ensures compliance with controls and procedures, and safeguards data and information. The positive regression coefficient (1.005) indicates that improvements in digital auditing directly enhance electronic control, highlighting its role in mitigating digital risks and deviations.

Although digital internal auditing accounts for approximately 37.7% of the change in e-governance, other supporting factors—such as robust digital infrastructure, comprehensive security policies, and ongoing staff training—also play a critical role in achieving comprehensive and effective digital governance.

Supporting studies include:

- **Al-Sharif (2025):** The use of digital transformation technologies by Saudi public universities has a significant impact on internal auditing quality.

- **Salem et al. (2024):** Digital transformation contributes to improving and developing internal audit mechanisms.
- **Wahba (2023):** Digital transformation tools positively support sustainable development by enhancing digital governance processes and the quality of financial reports.

## Results:

### • Internal Auditing Dimensions:

- Independence of internal auditors: 72.253% (high agreement)
- Professional competence of internal auditors: 72.489% (high agreement)
- Performance of internal auditing: 77.249% (high agreement)
- Scope of work of internal auditing: 74.768% (high agreement)
- Level of digital internal auditing: 74.190% (high agreement)

### • Governance Dimensions:

- Transparency: 66.860% (moderate agreement)
- Accountability: 71.200% (high agreement)
- Electronic participation: 73.382% (high agreement)
- Electronic control: 70.597% (high agreement)
- Overall digital university governance: 70.509% (high agreement)

### • Statistical Findings:

- Digital internal auditing has a statistically significant effect ( $\alpha \leq 0.05$ ) on activating:
  - Transparency
  - Accountability
  - Electronic participation
  - Electronic control within the governance of digital universities

## Recommendations

1. **Enhance the independence of internal auditors** by developing clear policies granting unrestricted access to data and the ability to make professional decisions without interference.
2. **Raise digital transparency** by providing tools to measure beneficiary satisfaction and publishing accurate, up-to-date information about university activities and future plans.
3. **Develop digital infrastructure** to ensure effective and secure electronic participation of beneficiaries in policy and decision-making.
4. **Enhance accountability** by clearly defining responsibilities, improving the efficiency of digital monitoring systems, and ensuring follow-up on deviations and violations.
5. **Improve the quality of digital internal auditing** through continuous training, updating software and technical tools, and adopting international standards for digital auditing.
6. **Integrate electronic control measures** into daily operations, including data protection, backup procedures, and the implementation of effective security policies.

## :Third: Proposed studies

- A study of the impact of digital internal auditing on the efficiency of financial and administrative performance in digital universities
- A comparative study between digital universities in Palestine and other countries to evaluate best practices in digital governance and internal auditing

- An applied study on the role of training and building digital capabilities for auditors in enhancing the effectiveness of digital internal auditing
- A study of the impact of digital governance on the satisfaction of beneficiaries of electronic university services and the level of community participation

## References:

Abu Al-Ata, Ahed A. A., & Hamdouna, Alaa S. A. (2023). Digital Governance in Developing the Institutional Performance of Palestinian Universities Operating in the Southern Governorates. *Journal of the Association of Arab Universities for Research in Higher Education*, 43(1)

Abu Jabal, N. M. A., & Ahmed, Najwa Mahmoud Abdel Aziz,, & Abdel Aati,(2024). Digital governance and strategic reputation of Sohag University: An analytical study. *Journal of the Faculty of Education*, 21(122), 558–720.

Ali, A. W. N., & Muhammad, A. Y. (2024). The impact of digitizing the processes of public universities on the quality of their internal audit function. *Journal of Commerce and Finance*, 44(2), 64–95.

Al-Dahshan, J., & Jadallah, B. (2020). A proposed model for the requirements of e-governance at Assiut University in light of the Fourth Industrial Revolution. *Educational Journal*, 29, 240–326.

Al-Mashhadani, T. I. D. (2025). The role of internal auditing in promoting digital transformation: Governance mechanisms – An applied study in banks in Nineveh Governorate. *Journal of Business Economics for Applied Research*, 7(1), 1320–1335.

Al-Musallamani, ..., & Ibrahim, L. (2022). Digital transformation in Egyptian universities: Reality, requirements, obstacles. *Educational Journal of the Faculty of Education, Sohag*, (99), 793–876.

Al-Otaibi, S., & Al-Mufiz, K. (2021). Governance of digital transformation in educational administrations in the Kingdom of Saudi Arabia in light of global practices. *Journal of Arts, Literature, Humanities and Social Sciences*, 66, 192–216.

Al-Otaibi, S., & Al-Mufiz, K. (2023). Governance of digital transformation in educational departments in the Kingdom of Saudi Arabia in light of global practices. *Journal of Arts, Literature, Humanities and Social Sciences*, 66(3), 390–436.

Al-Qaraawi, H. M. (2022). A proposed vision for digital transformation in Saudi universities in light of the dimensions of digital transformation. *Journal of Arts, Literature, Humanities and Social Sciences*, (82).

Al-Ra'i, A. (2023). The reality of implementing e-governance in Jordanian public universities and its relationship to the administrative empowerment of faculty members from their point of view [Unpublished Master's thesis]. Middle East University.

Al-Saidi, A. A., & Al-Harbi, T. I. A. (2026). The role of digital transformation in reducing job burnout: A field study on administrative employees at Jeddah University. *Journal of Economic, Administrative and Legal Sciences*, 10(1), 13–33.

Al-Shahawi, S. A. M. (2014). The impact of developing internal audit activities on the quality of financial reports by applying Enterprise Resource Planning (ERP) systems. *Journal of Trade and Finance*, (2).

Al-Sharif, J. O. (2025). The impact of digital transformation on the quality of internal auditing in Saudi public universities. *Journal of Gulf and Arabian Peninsula Studies*, 51(199), 95–138.

Al-Ta'i, A. S. W. A., & Al-Ibrahimi, W. M. R. (2023). The suitability of budget preparation procedures at the University of Mosul for performance evaluation purposes: A case study. *Journal of Business Economics*, 4(2), 305–322.

APA. (2016). The quality of internal auditing and its role in reducing the reissuance of financial statements: An analytical and empirical study. *Journal of Accounting Research*, 3(2), 57–116.

Asmiou, E., Al-Mabrouk, M., & Al-Koum, M. (2020). The extent of application of university governance principles in improving the quality of higher education in private universities in the city of Benghazi. *Journal of Economic Studies*, 2(2), 312–322.

Hamza, M. H. (2025). The impact of digital transformation on improving the quality of internal auditing: Emerging evidence from public sector institutions in the Northern State – Sudan. *Comprehensive Electronic Journal of Multidisciplinary Studies*, 81(3), 1–54.

Madi, K. I., & Abu Hujair, T. M. (2020). The extent of readiness of Palestinian private universities towards digital transformation. In *The First International Conference on Information Technology and Business (ICITB 2020)*.

Rashwan, A. R. M., & Abu Arab, H. H. (2022). The role of digital transformation in improving the quality of the internal audit process. *Journal of Accounting and Financial Studies (JAFS)*, 17(59), 35–52.

Youssef, ..., & Shehata, S. (2025). The role of internal auditing in reducing the risks of digital transformation and its implications for the quality of professional performance of the auditor: A field study. *Sadat Journal of Administrative and Financial Research*, 3(1).

Salem, ..., & Karim, ... (2024). Developing internal audit mechanisms in light of the implementation of digital transformation with the aim of achieving banking sustainability. *Journal of Financial and Commercial Research*, 25(1), 292–311.

Almagrashi, A., Mujalli, A., Khan, T., & Attia, O. (2023). Factors determining internal auditors' behavioral intention to use computer-assisted auditing techniques: An extension of the UTAUT model and an empirical study. *Future Business Journal*, 9, 74.

Barros, C., & Marques, R. P. (2022). Continuous assurance for the digital transformation of internal auditing. *Journal of Information Systems Engineering and Management*, 7(1).

- Brinkerhoff, D. W., & Wetterberg, A. (2016). Gauging the effects of social accountability on services, governance, and citizen empowerment. *Public Administration Review*, 76(2), 274–286. <https://doi.org/10.1111/puar.12399>
- Christ, M. H., Eulerich, M., Krane, R., & Wood, D. A. (2021). New frontiers for internal audit research. *Accounting Perspectives*, 20(4), 449–475.
- Dayıoğlu, M. A., & Turker, U. (2021). Digital transformation for sustainable future—Agriculture 4.0: A review. *Journal of Agricultural Sciences*, 27(4), 373–399.
- Efremova, E. I., Zatsarinnaya, E. I., & Soloshenko, A. A. (2023). Internal control system as a fraud management element in the company. *E3S Web of Conferences*, 449, 04007. <https://doi.org/10.1051/e3sconf/202344904007>
- Endaya, K. A., & Hanefah, M. M. (2013). Internal audit effectiveness: An approach proposition to develop the theoretical framework. *Research Journal of Finance and Accounting*, 4(10), 92–102.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Fung, A. (2015). Putting the public back into governance: The challenges of citizen participation and its future. *Public Administration Review*, 75(4), 513–522.
- Hazaea, S. A., Tabash, M. I., Khatib, S. F., Zhu, J., & Al-Kuhali, A. A. (2020). The impact of internal audit quality on financial performance of Yemeni commercial banks: An empirical investigation. *The Journal of Asian Finance, Economics and Business*, 7(11), 867–875.
- Hernandez, M. (2012). Toward an understanding of the psychology of stewardship. *Academy of Management Review*, 37(2), 172–193.
- Holt, T. P., & DeZoort, T. (2009). The effects of internal audit report disclosure on investor confidence and investment decisions. *International Journal of Auditing*, 13(1), 61–77.
- Islam, S., & Stafford, T. (2021). Factors associated with the adoption of data analytics by internal audit function. *Managerial Auditing Journal*, 37(2), 193–223.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kamau, J. K., Rotich, G., & Anyango, W. (2017). Effect of budgeting process on the budget performance of state corporations in Kenya: A case of Kenyatta National Hospital. *International Academic Journal of Human Resource and Business Administration*, 2(3), 255–281.
- Kotb, A., Elbardan, H., & Halabi, H. (2020). Mapping of internal audit research: A post-Enron structured literature review. *Accounting, Auditing & Accountability Journal*, 33(8), 1969–1996. <https://doi.org/10.1108/AAAJ-07-2018-3581>

Lois, P., Drogalas, G., Nerantzidis, M., Georgiou, I., & Gkampeta, E. (2021). Risk-based internal audit: Factors related to its implementation. *Corporate Governance: The International Journal of Business in Society*, 21, 645–662.

Masharipov, O., Khamidova, Z., Tursunkulova, G., & Azizov, O. (2023). Organizational aspects of internal control system in budget organizations and relationship with internal audit service. *BIO Web of Conferences*, 65, 08010. <https://doi.org/10.1051/bioconf/20236508010>

Newman, W., Muzvuwe, F., & Stephen, M. (2021). The impact of the adoption of data analytics on gathering audit evidence: A case of KPMG Zimbabwe. *Journal of Management Information and Decision Sciences*, 24(5), 1–15.

Radwan, H., Zeidan, A., & Elbasuony, H. (2021). The impact of digital transformation on internal audit. *International Journal of Instructional Technology and Educational Studies*, 2(4), 24–27.

Said, J., Alam, M. M., Mat Radzi, N., & Rosli, M. H. (2020). Impacts of accountability, integrity, and internal control on organizational value creation: Evidence from Malaysian government-linked companies. *International Journal of Business Governance and Ethics*, 14(2), 206–223. <https://doi.org/10.1504/IJBGE.2020.106350>

Silva, H. C. C. D., Silveira, D. S. D., Dornelas, J. S., & Ferreira, H. S. (2019). Information technology governance in small and medium enterprises: A systematic mapping. *JISTEM – Journal of Information Systems and Technology Management*, 17, e202017001.

Suleiman, N. (2015). Internal audit and the effectiveness and efficiency of operations in hospitals. In *Proceedings of the 11th International Business and Social Science Research Conference (January 8–9)*. Dubai, UAE.

Tiwari, S. P. (2022). Organizational competitiveness and digital governance challenges. *Archives of Business Research*, 10(3), 165–170.

Tømte, C. E., Fosslund, T., Aamodt, P. O., & Degn, L. (2019). Digitalization in higher education: Mapping institutional approaches for teaching and learning. *Quality in Higher Education*.

Wilkesmann, U. (2013). Internal governance and the use of performance indicators in German universities. *Public Administration*, 91(4), 891–907.

Zhikhoreva, S., Pogodaev, A., & Krylova, G. (2021). Information system to control internal audit process in educational organizations. In *2021 3rd International Conference on Control Systems, Mathematical Modeling, Automation and Energy Efficiency (SUMMA)* (pp. 252–255). IEEE.