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### **Research Article**

# Integration Sustainable Between Knowledge Banks and A Platform at Education

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### **ABSTRACT**

Received: 18 Dec 2024 Revised: 15 Feb 2025 Accepted: 28 Feb 2025 platforms, an area that has been relatively underexplored. The research highlights the application of various types of integration (horizontal, vertical, structural, and functional) to enhance the sustainability of online educational platforms and achieve effective knowledge management in educational institutions. The study emphasizes adopting sustainable practices that ensure continuous updates, data protection, data integrity, the development of common protocols, improved search and retrieval capabilities, and quality control. Its importance lies in enhancing efficiency, quality, and sustainability in e-learning, thereby contributing to the development of educational systems and preparing them to meet future demands. The research utilized the opinions of 345 platform users from Educational GPT and Classera. The sample included students, academics, technicians, administrators, and other stakeholders. Data were collected through an electronic questionnaire, which was subjected to statistical analysis using tools such as SPSS, Amos, and confirmatory factor analysis. The study focused on four main axes: knowledge banks and educational platforms, the quality of provided information, information reliability, and proposed improvements. It also examined the relationships between latent and observed variables using advanced statistical methods, including linear regression and statistical prediction. The results confirmed the importance of sustainable educational platforms achieved through effective integration, which enhances intelligent search capabilities and better responds to users' needs.

Keywords: Educational Platform, Integration Sustainable, Knowledge Banks.

### **INTRODUCTION**

The education sector is shifting from e-learning to mobile learning due to its motivational capabilities that push students towards self-learning [1]. However, this requires online participation through the exchange of good knowledge of social capital of resources. The low student engagement reported in the past calls for confirmation of whether social capital influences social capital in mobile learning. Scholars have evaluated this effect and have found little evidence of whether mobile learning regulates SC through KS Thus, this motivating goal reflected through a conceptual framework, i.e. was tested using multiple regression analysis after collecting data from 334 undergraduate students in a private university's College of Business Administration. The results confirm that mobile learning mitigates SC through KS for students in e-learning/mobile learning on Moodle Implications for theory, practice, and society are explored in this article.

The study deals with [2-3] Developing a comprehensive e-learning model that supports education for sustainable development through seven successive levels of professional and personal development, based on the status-building theory. The model focuses on promoting self-learning and self-development of individuals through active integration into education, which contributes to the development of skills necessary for achieving sustainable development, such as critical thinking, systemic thinking, and partnership building. The study also reviews the role of technological educational platforms, and recommends improving them to support stable professional growth, especially in the fields of tourism and hospitality, with the possibility of applying the model in multiple sectors to train employees and

browse study previous knowledge banks and their use within educational platforms artificial intelligence applications in SEO [4-5]. Through three main methodologies: evolutionary computing, fuzzy logic, and statistical models and classifiers. The scientific literature was analyzed to identify practical examples, and several prototypes emerged such as: polidoxa, fuzzy inference, and some commercial packages such as SPSS clementine and Search hyper loop, as well as algorithmic applications such as support vector machine and K-Nearest neighbor. However, research efforts face challenges due to the secrecy of the algorithms used by companies and search engines, which limits the transparency and open development of these models.

The study examines the impact of globalization on the global expansion of companies, and the role of web services technologies in supporting this expansion by presenting an ideal model for developing web servers for small businesses. The model focuses on integrating search engine optimization techniques, such as keyword selection based on organic search results and demographic analysis of customer patterns [7]. The quality of services is also reviewed in areas such as trust, reputation, security, and application integration. The study also addresses future trends, such as developments in the internet of things (IOT) and device-to-device communication. (M2M), which is expected to drive significant growth in the business world.

Knowledge bank integration is the process of integrating and coordinating multiple and diverse sources of knowledge [8-9], and knowledge banks to achieve greater benefit from them in producing knowledge and making decisions. This process is used in fields that depend on huge amounts of information such as education and scientific research, where integration facilitates users' access to information in organized and cooperative ways.

The importance of the study came in enhancing the sustainability of the educational process because sustainable integration helps ensure the continuity of updating educational content and effective knowledge management, which supports the long-term goals of educational institutions, in addition to enhancing smart research, it enables the improvement of search and information retrieval mechanisms, which speeds up the process of accessing knowledge and makes it more comprehensive and appropriate for users. In addition to responding to multiple needs through integration, the needs of different beneficiary groups can be met, whether students, academics or administrators, which enhances their satisfaction and benefit, and finally supports the digital transformation in education, as integration contributes to enhancing the transformation of institutions towards sustainable digital education, which is a basic requirement to keep pace with the rapid changes in the modern era [10].

### STUDY METHODOLOGY

### Study objectives

To specify the main objectives to study knowledge bank platform, does the bank aim to improve access to information in a particular field, help students improve their academic performance, or enhance certain skills? Based on this is amazing objectives identify the research questions you will answer using the platform data [6]:

What is the impact of students' access to a knowledge bank on their academic achievement?

What behavioral patterns can be observed in students' use of the knowledge bank?

How can the platform design be improved to facilitate access to knowledge?

# Benefits of Integration Sustainable between Knowledge Banks [11]

1. Boost productivity: By enabling different teams to access and share knowledge faster and more efficiently.

Improve decision making quality: By providing comprehensive, accurate and diverse data.

Support innovation integration facilitates access to different knowledge resources, which stimulates creativity and accelerates the discovery of new solutions.

Cost saving: It helps reduce duplication of efforts and saves resources that would have been wasted collecting data individually.

### Advantages of Knowledge Banks in Education [14]

 Easy access to information: allows students and teachers to access information and resources from anywhere, anytime. **Diversity in content:** It contains multiple sources such as books, articles, research, videos, and interactive materials.

Facilitating self-learning: Students can use it for self-study and improve their academic skills.

**Supporting innovation in education:** Provides teachers with tools to enrich lessons and implement modern teaching methods based on technology.

# Integration challenges sustainable between knowledge banks [12]

Data variance knowledge banks can vary in their data structure, requiring standardization.

Security and privacy especially if the information is sensitive, it becomes necessary to provide high-level protection to ensure data integrity.

Technical complexity integrating the digital infrastructure of different systems may require significant resources and careful planning.

## Types of integration between knowledge banks [13]

1. Horizontal integration aims to link knowledge banks containing data from similar domains, facilitating knowledge sharing between systems that deal with similar types of information.

Vertical integration aims to link different levels of knowledge within a single field, so that it is easy to trace knowledge from the general level to the specialized level and vice versa.

Structural integration focuses on integrating database systems and technical infrastructure, where data formats and processing techniques are standardized to ensure that different knowledge banks are compatible with each other.

Functional integration: aims to integrate the processes and functions of different knowledge banks so that knowledge is exchanged or used to achieve a common goal, such as collaboration in research or decision-making. Represents integration sustainable knowledge banks are an important step towards achieving effective and comprehensive knowledge management in many institutions and fields. educational, which includes several tasks, as follows:

Horizontal integration between knowledge banks focuses on linking knowledge sources that are similar in content or field, allowing users to access diverse and integrated information within the same framework, and enhancing the efficiency of data and knowledge exchange between interconnected systems. Horizontal integration is characterized by linking knowledge bases of the same level, which helps facilitate operations and achieve common goals with flexibility and speed. It also works to unify data formats to ensure integration between knowledge banks. Data formats must be unified and coordinated in ways that facilitate integration, by converting data into common formats, unifying value types (such as dates and currencies) to enable seamless data exchange, and then linking them using unified platforms to support knowledge base integration through central interfaces, such as content management systems (CMS) or knowledge management systems (KMS). These platforms provide easy interfaces to access and quickly exchange similar information sources, with a platform such as Google Scholar, a unified platform that allows researchers to access several specialized research databases in various scientific fields. As for integration via application programming interfaces (APIs), which enable us to link different databases, these interfaces have helped to call specific data from integrated knowledge banks [5], enabling systems to interact in a unified and automatic manner, as the API can provide the educational knowledge bank with access to educational content or research reports, while communicating with other knowledge banks to exchange similar data, using semantic web technologies.

These techniques use meta-data to facilitate automatic search and matching of related information in different knowledge banks, the goal is to find links between similar concepts across different knowledge systems, which facilitates the retrieval of related information in intelligent ways, common data protocols, it is important to develop unified protocols that address how information is shared and integrated, to include how data is read and written, exchange formats, and privacy and security policies, (Enhanced Search and Retrieval) horizontal integration provides a significant improvement in search and retrieval capabilities between similar systems [4], as it allows the user to search multiple knowledge banks through a unified search engine, this enhances the ability to retrieve integrated data quickly and efficiently, and helps provide comprehensive and reliable results, (Quality Control and Validation) To achieve a high level of quality, horizontal integration requires monitoring and controlling data, ensuring that

information is not duplicated or conflicting, and that all data is up to date and correct. Quality management tools can be used to ensure that horizontal integration achieves its objectives accurately and effectively as shown in Figure (1).

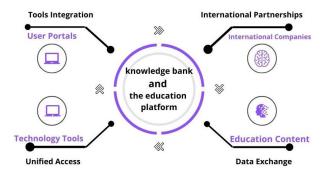
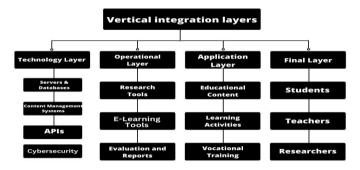


Fig. 1. Shows horizontal integration tools

Regarding vertical integration between knowledge banks general and specialized databases are linked, and vertical integration requires creating links between databases containing general information and other specialized databases that deal with in-depth details. In the medical field, for example, a general database of medical information was linked to a detailed database containing accurate information about specific diseases. Researchers have also used multilevel information management systems that support the display of data from different levels. These systems allow users to access general summaries or indicators [6], with the ability to delve deeper and access detailed information when needed. An example of this is academic information management systems that link general data about students with accurate details about their academic achievements to link operational data and analytical data in vertical integration, it is useful to combine operational data that represents daily activities with analytical data that deals with performance analysis or results. For example, financial institutions, daily transaction data can be linked to analytical reports on financial performance to enable a comprehensive view of the financial situation from different levels. Data layers are layers that represent different levels of information. These layers usually include: the foundational layer that contains raw data or basic information, the analytical layer that contains aggregated data or information extracted from the analysis, and the predictive layer that contains information based on advanced analysis or predictive models. Analysis tools such as Drill-Down Analysis have been used, which allows users to delve into the data and navigate between levels to obtain more accurate insights to navigate between ascending and descending knowledge, vertical integration has enabled navigation between ascending information and moving from details to larger summaries, while descending is moving from a general level to precise details. This approach supports better decision-making, as it allows users to understand how accurate data contributes to general trends. Artificial intelligence and machine learning systems have also been used in vertical integration through data analysis. From multiple levels and extracting patterns and relationships between them, as the artificial intelligence system can analyze general data from the market and accurate data about customer behavior to come up with specific marketing recommendations as shown in diagram no.1.



**Diagram 1**. Shows the tools and requirements of vertical integration.

In support of structural integration between knowledge banks and the atmosphere [8] Application Programming Interfaces (APIs) APIs are among the most important software tools for integrating knowledge banks, which allow the creation of a communication channel between different systems, facilitating the transfer and retrieval of data. As for (Data Integration), it is the use of data integration techniques to collect and unify data from different sources,

including (Extract, Transform, Load) tools that are used to extract data from multiple sources, then transform it into a unified format, and load it into a central database or data warehouse. The apache Nifi tool supports real-time integration processes to process data instantly, and (Cloud Storage Integration) The cloud infrastructure provides compatible and flexible storage platforms to support the integration of knowledge banks. Using Google Cloud Platform (GCP) cloud solutions, data can be stored and managed in ways that facilitate its integration with different systems and ensure ease of access and security. (Access Control and Security) to ensure data security, an access control system is used that defines the roles and powers of each user or connected system. It includes technologies such as OAuth to provide secure authentication [9], and data encryption to protect information during transmission. (Metadata Management) is the system responsible for managing metadata, as it helps in unifying how data is described between different systems. This system requires software that supports (Data Mapping) and (Resource Description Framework) standards to represent metadata in a unified manner. As for (Big Data Integration), which contains huge amounts of data, integration techniques are used with big data platforms such as Spark, which support large-scale data processing, high-speed analysis, and storage in distributed systems. There are (Compatible Databases) to ensure seamless integration. Databases that support shared and shared connections are used, such as relational databases MySOL and non-relational databases no SOL, as they allow the flexibility required to store data in different ways that suit the requirements of the system. Finally, (Data Integration Automation) can be used to facilitate the data integration process, using tools such as Apache Airflow, [12] which manage workflows and integration periodically or when certain events occur, saving time and reducing manual intervention. As shown in diagram no. 2.

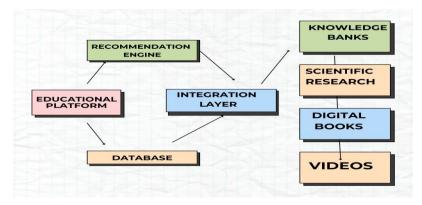


Diagram 2. Shows the tools and requirements of structural integration

Functional integration focuses on integrating and coordinating different processes and functions between systems or teams to work in harmony to achieve common goals. In practical terms, functional integration aims to enhance efficiency, simplify procedures, and improve the quality of life of employees [14], Improving the exchange of information across different departments in the organization and there some applied techniques to achieve employment integration: (Collaborative Platforms) The use of collaborative work platforms is one of the most important means of employment integration, as these platforms allow different work teams to be linked and their tasks to be integrated within a unified environment, platforms like slack for supports instant collaboration, file sharing, and progress tracking, helping teams accomplish shared tasks efficiently. Automate processes using software robotic process automation (RPA) in recruitment integration where is it? Automate repetitive tasks between departments, and tools RPA like blue prism contribute to perform routine operations (such as data entry or review) without human intervention, saving time, reducing errors, and enhancing integration between departments. Unification of database systems between departments to achieve employment integration, databases used in different departments are unified to ensure data consistency and ease of access. With a unified database, different departments such as HR [5] Financial, sales and access data and update it in a synchronous manner, ERP management systems (ERP) such as oracle ERP contribute to integrates recruitment processes across the organization, linking multiple activities such as accounting, purchasing, inventory management, and human resources into one central system. These systems facilitate the flow of information between departments in real time and help in making comprehensive and accurate decisions. As well as help analyze shared employment data for shared data analysis and achieve employment integration by analyzing information from multiple departments to gain unified insights, tools like tableau supports the integration and analysis of data from various sources, allowing different departments to make decisions based on comprehensive information and integrated analysis, and Y Joint training and mentoring From the means technology the mission is to integrate employment, where employees from different departments are trained to work in an integrated manner and cooperate to achieve common goals. This approach helps develop a deeper understanding of other departments' operations, and contributes to building a more collaborative and integrated team [15] and with using AI techniques to distribute and coordinate tasks AI can support employee integration through intelligent task allocation tools that determine the distribution of roles and tasks based on workload and employee availability. These tools help improve the allocation of human resources, and achieve greater flexibility in collaboration between different teams. As shown in diagram No.3.

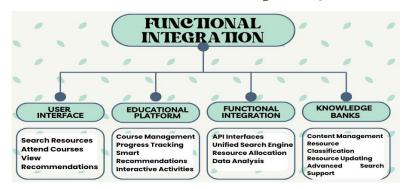


Diagram 3. Shows the tools and requirements of functional integration

### PRACTICAL FRAMEWORK AND DISCUSSION OF RESULTS

It was completed design educational platform Similar to Classera as a practical side to attract scientific research, e-learning classes, educational technology, educational psychology, and educational curriculum design, through this educational platform, researchers can study learner behavior, test new educational strategies, analyze learning outcomes, and use accurate data collected from the platform [20] to support the results, the educational platform for scientific research included:

**Teaching strategies test**: teaching strategies can be tested your adaptive learning, educational games, and AI reinforced learning, and it has been done this is done by designing content and specific activities on the platform, and then measuring the impact of these activities on learners' performance.

**Data collection and analysis**: save the platform and educational data on student performance, engagement levels, completion rates, and duration of activities have helped researchers analyze learning behaviors, by analyzing this data, relationships and conclusions can be drawn about the effectiveness of curricula and teaching methods.

**Conduct randomized controlled trials**: In case presence a large number of users, who can be divided into experimental and control groups to test the impact of certain techniques, such as comparing the effectiveness of traditional teaching methods with interactive methods or new educational applications.

**Polls and Surveys**: It was completed using the platform to collect student and teacher feedback about their elearning experience, which helped understand the challenges they face, and analyze their opinions about specific tools or methods.

**Customize interactive learning content**: It was completed design interactive lessons and monitor their impact on students' comprehension and understanding, so you can check whether this experience contributes to improving results.

**Study of motivation and commitment**: It was completed research into how to motivate students to maintain engagement and motivation in online education and from incentive features such as certificates electronic ornate, appreciation badges, and challenges. Front End It was designed an easy-to-navigate user interface, so that the user can easily access the available resources. The platform can include [16-18]:

Indexing and categorizing content by subject. Advanced search box to make finding sources easier. Dedicated pages for each source display details, ratings, and related content. Backend make sure researchers that the back-end of the platform is able to record interactions and collect data. because it is support:

Record browsing data such as the time a user spends reading each topic, or the number of times they visit certain resources. Record usage data such as the most visited content, the search method used, and the number of downloads for each source.

### MODEL TEST THE STUDY (CONFIRMATORY FACTOR ANALYSIS)

To find out the correlations between observations (variables) and the dimension it represents, in addition to knowing the correlation relationships between the latent variables (dimensions) of the variables under study and conduct confirmatory factor analysis of variables the study Since it has different scales, there are variables that used a fivepoint Likert[19], some a four-point Likert, and others a three-point Likert. Confirmatory analysis (CFA) is a powerful tool used to assess how well the relationships between observed (measured) variables and latent (unmeasured) variables fit. Missing values are treated using methods such as imputation or deletion if they are of little effect, with one regression coefficient fixed for each latent factor the regression weight of one of the observed variables associated with the latent variable is fixed at 1.0, after running the statistical analysis Amos it was completed judging the suitability of the model developed by the researcher with sample form, The figure shows no. 2 saturation values (Factor Loading) and correlation for observational variables with their (latent) variables and related variables the study and their values are shown on the single-headed arrow between the question and the latent variable bonus about the values of the correlation coefficients between each pair of latent variables, the values of which are shown on the double-headed arrow, where the results of the confirmatory factor analysis showed the significance of the model developed by the researcher and its conformity to the research sample model, as indicated by the quality of conformity indicators shown in table no 1 which are based on the goodness of fit indicators and acceptance limits used by most researchers and the results show that all indicators are consistent, i.e. within their acceptable limits.

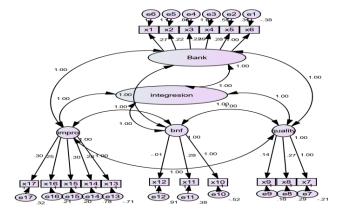


Fig. 2. Shows the relationships between observational variables and latent variables

Source: Prepared by the researchers in light of the results of statistical analysis using software AMOS V26 n=345

We note in Table No.1 all the indicators that indicate that the theoretical model is largely consistent with the actual data, excellent values such a CMIN/DF=0.651 the GFI=0.992 reflects the strength and accuracy of the model in interpreting the data.

**Table 1.** Containing structural analysis model fit indicators using the program AMOS helps assess the goodness of fit between the theoretical model and actual data

Indicator and acceptance limits	Result	Value	Indicators
The index measures how well the model fits the data. Values less			
than3 Indicates a good fit, while values less than2It is considered	identical	0.651	CMIN/DF
excellent., Value o. 651 Indicates that the model fits the data very	identicai	0.051	CMIN/Dr
well.			
Measures how well the model explains the data. Values between			
0.90 a value of 1 indicates a very good fit. A value of 0.992	identical	0.992	GFI
indicates that the model explains the data excellently.			

It is a modified version of GFI takes into account degrees of freedom. Values greater than 0.90 indicate a strong fit. A value of 0.983 indicates an excellent fit.	identical	0.983	AGFI
Evaluates how well the model performs relative to the number of variables used. Values between 0.50 a value of 1 indicates good efficiency. A value of 0.885 indicates that the model is efficient and not complicated.	identical	0.885	PGFI
Measures how much the current model improves compared to an independent model (null model). Values above 0.90 are considered excellent, and a value of 0.963 confirms an excellent fit.	identical	0.963	NFI
Similar to NFI but takes into account the complexity of the model. Values greater than 0.90 indicate high quality. A value of 0.952 indicates a very strong fit.	identical	0.952	RFI
Measures the average of the differences between the observed matrix and the expected matrix. Values less than 0.05 It indicates an excellent fit, and the value of 0.049 is within the acceptable range.	identical	0.049	RMR

Source: McDonald RP, & Ho MHR, 2002, Principles and Practice in Reporting Structural Equation Analyses, Psychological Methods, Vol. 7, No. 1.

Table no. 2 displays the results of a statistical analysis using a measurement model, it shows standardized regression coefficient values (SRW-saturations) and non-standardized as well as their associated probability values (P-value), mostly in the context of path analysis. Structural equation modeling - SEM, t Share the indicator at user and in the model morally related to Indicators latent variables, where the estimates reflected the speculation and standard weight path coefficient between the latent variable and the indicator R, The extent to which the indicator is related to the latent variable and it was high values, which means the indicator explains the latent variable well, almost all model parameters are statistically significant because the values P-value less than 0.05, standard weights SRW shows that some indicators X10 (The information you received was helpful in achieving your educational/cognitive goals.) and it has a stronger connection from the rest latent variables and it is associated with interest and reliability with a value of 0.847, while the confidence intervals for all coefficients do not include zero, which enhances the reliability and significance of the results researchers concluded the model studied has strong indicators in explaining the latent variables, which means that the model construction is sound and the data supporting it is strong, based on the values, the model can be relied upon to analyze the relationship between different indicators and latent variables.

Table 2. Standardized and unstandardized regression coefficient values to confirmatory factor analysis results

	Parame	eter	Estimate	SRW	Lower	Upper	P-value
X1	<	ık	1,000	0.641	0.509	0.752	0.013
X2	<	Bank	1.228	0.821	0.746	0.909	0.007
X3	<	ge	0.900	0.641	0.506	0.735	0.015
X4	<	лed	1.242	0.675	0.519	0.790	0.009
X5	<	Knowledge	1.334	0.786	0.714	0.854	0.008
X6	<	$\Xi$	1,000	0.664	0.449	0.774	0.019
X7	<	ty ıati	1.206	0.672	0.512	0.773	0.009
X8	<	Quality of informati	1,500	0.781	0.671	0.851	0.015
X9	<	Qi	1.418	0.797	0.704	0.856	0.023
X10	<	iit ilit	1,000	0.847	0.772	0.909	0.009
X11	<	Benefit and reliabilit	0.994	0.772	0.676	0.849	0.014
X12	<		0.681	0.667	0.529	0.776	0.012
X13	<	Sugge sted impro	1.003	0.791	0.699	0.876	0.009
X14	<	Sugge sted impro	0.933	0.725	0.637	0.817	0.009

	Parameter	Estimate	SRW	Lower	Upper	P-value
X15	<	1,000	0.762	0.666	0.845	0.009
X16	<	0.937	0.794	0.666	0.867	0.009
X17	<	1.004	0.778	0.691	0.861	0.011

Source: Prepared by the researchers in view of results of statistical analysis using software AMOS V26 n=345

The most important indicator in the table no. 3 is are the values of the standardized regression coefficients (SRW) which represents the saturation values (correlation) of the questions with the dimension they are on, and the majority of their values are supposed to exceed (0.30), according to the sample size and as shown in Table (27), and from observing the results of the values (SRW) we find that all saturations are greater than (0.30), it is significant because all probability values corresponding to saturation values are less than (0.05).

**Table 3.** Shows the saturation values depending on the sample size.

Sample size required to achieve significance	factor saturation factor loading	Т
350	0.30	1
250	0.35	2
200	0.40	3
150	0.45	4
120	0.50	5
100	0.55	6
85	0.60	7
70	0.65	8
60	0.70	9
50	0.75	10

### HYPOTHESIS TESTING THE STUDY

After ensuring that the model matches, it will be testing hypotheses by testing the relationships of the effect of each independent variable on the dependent variable as follows:

**Main hypothesis**: There is no significant effect of requirements integration in knowledge bank and educational platform at a statistical significance level  $(0.05 \le \alpha)$  from the point of view of a sample of users of the knowledge bank and e-learning platform.

The table no. 4 shows the direct effect of electronic management requirements on servant leadership, as indicated by the value of the regression coefficient estimate ( $\beta$ ) which reached (0.92This effect is significant in terms of the probability value P-value which was (0.018) which is less than (0.05), in addition to the similarity of the signs of both the lower limits (Lower) and Upper (95% Confidence Interval) at a significance level of (0.05) where both signals appeared positive. The researcher attributes, this relationship between the two variables is that the requirements integration which you own a platform the research will contribute effectively to the promotion of knowledge bank where it can be used in making appropriate decisions at any time and place., as and contribute knowledge banks in enhancing capabilities beneficiaries' educational platform. The researcher will achieve creativity and innovation and provide services and ideas remotely, and will also contribute to competitive progress in the same field of work. This leads us to reject the null hypothesis and accept the alternative hypothesis that there is a direct effect to integrate knowledge banks and the educational platform this effect is positive and significant at the significance level (0.05> $\alpha$ ).

**Table 4.** shows impact results integration between knowledge banks and educational platform

P-value	95% Confidence Interval		SRW	Estimate(β)	Dependent variable	Direction of influence	independent variable
	Upper	Lower			variable	minuence	variable

0.018	1.440	0.899	0.812	0.92	Knowledge Bank and Educational Platform	←	Integration Sustainable

Source: Prepared by the researcher in light of the results of statistical analysis using software AMOS V26 n=345

### CONCLUSIONS AND RECOMMENDATIONS

### **Conclusions**

The youth age group between 18-25 years old had the highest percentage of users of the knowledge bank attached to the educational platform, which was 44.3%, followed by the youth age group between 26-35 years old, which was 27%, then the working group over 45 years old, which was 18.3%, and finally the age group 36-45 years old, which was 10.4%. This indicates that the student category is the most users of the educational platform. The educational level category was 64.3% for university students, 20% for university professors and educators, 14.8% for employees, and 0.1% for others. To know how to identify the artificial intelligence platform, the highest percentage of those who inferred the platform through friends and colleagues was 36.5%, while those who inferred the platform through social media was 34.8%, through websites was 21.7%, and from other sources was 7%. It was concluded that the number of times the educational platform was used, whether daily or several times a week, was 31.3%, and use once a week was 20.9%, and rarely was 16.5%. The main purpose of using knowledge banks and e-learning platforms included academic study, which accounted for the largest percentage of 40.9%, while for developing new skills, an equal percentage of 27%, and for other purposes, at a percentage of 5.2%. As for evaluating the quality of information and the extent of the beneficiary's confidence in us provided by the educational platform and the knowledge bank, the answer was excellent and very good with an equal percentage of 36.5%, and good and acceptable with the same percentage of 18.5%. The knowledge bank has been adopted as a primary source for obtaining information, as it provides comprehensive and diverse information and achieves all the objectives of the educational process.

# Recommendations

To formulate recommendations based on the study findings, the focus was on the key points that support sustainable integration between the knowledge bank and the educational platform. The recommendations could be as follows: Targeting young age groups in particular, developing customized content that suits the needs of the 18-25 age group as the largest percentage of users, providing promotional and educational programs for the 26-35 age group to expand the user base and increase their participation. Increase recruitment of employees and academics, design targeted educational paths for employees and university professors to increase their participation rate, provide specialized courses and content related to professional and academic development to increase the value provided to this group. Strengthening promotion and dissemination channels, making more targeted use of social media to increase the platform's referral rate, launching targeted awareness campaigns across universities and educational institutions to enhance awareness of the knowledge bank through friends and colleagues. Encourage daily and continuous use of the platform, provide periodic reminder notifications to motivate users to use the platform daily or weekly, introduce gamification elements (Gamification) to increase engagement and retention. Expand the scope of use, add new skills development courses extensively to attract groups interested in self-development, enhance scientific research content to better meet the needs of academics. Improving the quality and evaluation of information, conducting periodic evaluation of the quality of information provided through the platform to ensure that users' expectations are met, expanding evaluation options (such as adding user feedback and suggestions features). Activating the role of the Knowledge Bank as a primary source, expanding the scope of content to include new specializations and topics of interest to broader groups, strengthening partnerships with universities and schools to adopt the Knowledge Bank as an official educational source. Measuring impact and improving strategies, conducting periodic surveys to learn about users' needs and developing the platform accordingly on sustainability requirements.

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