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ВИКОРИСТАННЯ ІНФОРМАЦІЙНИХ СИСТЕМ УПРАВЛІННЯ (MIS) ДЛЯ АДМІНІСТРАЦІЇ ВИЩИХ ТЕХНІЧНИХ ІНСТИТУТІВ В ЛІВІЇ

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IMPLEMENTING MANAGEMENT INFORMATION SYSTEMS (MIS) FOR ADMINISTRATION OF HIGHER TECHNICAL INSTITUTES IN LIBYA

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Анотація. Інформаційні ресурси є одним з найважливіших елементів ресурсного потенціалу підприємства, а інформація виступає ключовим елементом управління підприємством, конкретизує потреби управління ефективністю бізнесу. Управління підприємством – це управління чотирма протилежностями: клієнти, персонал, фінанси і бізнеспроцеси, які є рушійною силою будь-якого розвитку, в тому числі й розвитку бізнесу. Модель управління персоналом, яка відповідає стратегії і цілям бізнесу, також включає чотири компоненти – структурований належним чином функціонал (організаційна структура підприємства, посадові інструкції тощо), системи управління персоналом (підбір, розвиток, мотивація і кар'єрне зростання), компетентності, які потрібні для здійснення діяльності, та соціальна (корпоративна) культура. Інформаційна система управління персоналом (людськими ресурсами) як складова системи управління підприємством у цілому забезпечує автоматизацію управління персоналом підприємства на трьох рівнях: автоматизація розрахунку зарплати, автоматизація кадрового обліку та автоматизація управління трудовими ресурсами. Ці рівні відповідають етапам інформатизації управління персоналом і відображають її хронологічний порядок. За результатами досліджень світового ринку інформаційних технологій сучасні інтегровані системи управління персоналом містять шість основних функціональних блоків: інформаційного самообслуговування, управління процесом навчання, управління процесом найму, обліку праці, обліку кадрових операцій, управління ефективністю і талантами. Впровадження систем управління інформацією (MIS) для управління вищими технічними інститутами в Лівії. Інформаційна система управління є важливим аспектом, який допоможе Технічним інститутам Лівії підвищити якість управління освітою. Метою даного дослідження є аналіз та впровадження інформаційно-управлінської системи (ІСУ) у вищих навчальних закладах з метою інтеграції різних видів діяльності з різних відомств. Знайти це важко керувати інформацією в ньому через велику кількість студентів і інститутів у Лівії. Підхід логічної рамки (LFA) включає комплексний пакет інструментів для аналізу та вирішення проблем планування, а також для розробки та управління їхніми рішеннями шляхом моніторингу та оцінки ефективності цього проекту. Інформація з різних джерел була зібрана та проаналізована з використанням суб'єктивного підходу. Тому в оцінці буде виявлено фактор ризику виконання проекту.

Ключові слова: управління, інформаційна сиситема управління, MIS, технічні інститути, заклади вищої освіти.

Формули: 0, рис.: 2, табл.: 1, бібл.: 5

Annotation. Information resources are one of the most important elements of enterprise resource potential, namely information on key management elements that require efficient business management. Management is the management of four opposing parties: clients, personnel, finance, and business processes that are the driving force behind any business development. The model of human resources management that meets business strategy and goals also includes four components: structurally proper functioning (organizational structure of the enterprise, job description, etc.), personnel management systems (competence, responses, motivation and career support), competencies that are required for activity, and social (corporate) culture. Information system of human resources management (human resources), consisting of a system of management for the automatic management of personnel at the enterprise level: the automation of salary calculation, automation of personnel accounting and automation of management of labor resources. These levels are the levels of information management personnel and reflects its chronological order.

According to the results of the world market research, information technology modern integrated HR systems provide the main functional blocks: information self-service, process management training, management process management, labor accounting, personnel management accounting, efficiency management and talent. Implementation of System Information Management (MIS) for managing logos of technical institutes in Libya. The information management system is an important aspect that assists the Technical Institutes of Management. The method of this research consists in the analysis and implementation of the information management system (ISU) in the field of educational institutions with the integration of different types of activities from different departments. Find this important for information through a large number of students and institutions in Libya. The Logical Framework Approach (LFA) includes integrated toolkits for analyzing and solving planning problems, as well as for developing and managing their monitoring and project management solutions. Information from various sources has been collected and analyzed using a subjective approach. Therefore, the assessment will identify the risk factor for project implementation.

Key words: management, information management, MIS, technical intuitions, institutions of higher education.
Formulas.: 0; fig.: 2; tabl.: 1, bibl.: 5

Stating the problem. The huge number of students and higher institutes in Libya is one of the main challenges that facing the management team. Lack of mechanism for information retrieval procedures and its integrity reliance on traditional non-retinal systems where remote areas do not rely on technology. On the other hand, mother management system does not support the information system management program.

Analysis of previous research. With the increased capacity of students in a high institution in Libya, the administration team of various Institutes is finding it hard to manage the information therein due to a high number of students in the Institutes. The administration of High education In Libya is realizing the need to establish a system that could help them to manage large volumes of information for fast decision-making (Rhema & Miliszewska, 2014). The institutions need a management information system to integrate the various activities from various departments, improve information retrieval procedures, as well as checking on data safety.

The higher institutions in Libya are facing quite a number of challenges while trying to figure out how to manage and protect institution data. The specific problem facing the institutions include but not limited to reliance on traditional non-retinal systems, lack of communication network to interlink the various institutions, some institutions that are in remote areas do not rely on technology and some areas in Libya have a weak internet connection. Besides, the mother management system does not support the information system management program and large of

coordination for more than 100 institutions to obtain information.

Nowadays the use of management system can`t be overlooked because it is the epicenter of coordination not only to the higher institutions of learning but also to other sectors. The management information system provides high-quality information as well as offering the precision needed to manage the volume of details in the various institutions (Rhema, & Miliszewska, 2014). Besides, the management system provides reports for various institutions, and summarizes, and integrates information within the various antinodes. Most importantly, the MIS system can help the institutions to uplift efficiency and transparency of information in the education sector.

The Technical institutes in Libya are willing to adopt the latest development in technology in order to improve the desired goals of the institutions. However, the Institutions are not keen to consider management information system as a vital resource to in enhancing the operations of the high technical institutes of learning in Libya.

Unsolved part of the problem. Lack of real support for mother management to implement the MIS in higher education, therefore, finding ways of convincing the mother management to help supporters to achieve goals for development and enhancement of educational ranks to the levels of their kind in developed countries.

Main research material. This research seeks to offer a descriptive and accurate report about the based on the data collected; the data will demonstrate the basic accuracy of information gathered. Therefore, this

research will attempt to describe the impact of implementing the management information system in Higher Technical instates of learning in Libya. The qualitative aspect of the phenomenon will demonstrate the underlying motive of implementing the management information system. Thus, the qualitative aspect will examine the factor influencing the effectiveness of the MIS in tandem with how it influences strategic planning in the higher technical institutes of learning.

This research will use the Logical Framework approach methodology to assess, monitor, and evaluate the performance of this program. The Logical Framework Methodology is a methodology will be used to design, monitor, and evaluate the performance of this project.

The Logical Framework Approach

In further details, the Logical Framework Approach involves a systematic framework that helps to design the strategic plan of a project. When using this framework, you need to include the information that will foster monitoring and evaluation.

In a summarized way, a Logical Framework Approach is a diagnostic tool that helps a researcher to understand the reasons why some phenomena happen. In the framework, the core issues of the problem are addressed as well as revealing the options that can be used to solve the problem(Margarian, 2013).

While undertaking the framework, the log frame matrix helps to compile the key information of the project. The matrix gives a summary of the details of the project and how the objective of the project are achieved (Pezlar, 2017). Moreover, the matrix contains the monitoring and evaluation indicators to estimate the progress and success of the project. Therefore, following all the step of the process of the project design will probably solve the core problem will be solved.

Problem tree

A problem tree highlights the major causes and effect of the problems identified. Therefore, the problem tree explain the context in which the problem should occur. Once the context is understood, strategic planning is easier thus facilitating the achievement of the project objectives. In the problem tree, the causes of the problem are written in negative form. Therefore, when the reversing the problem tree, the outcome I positive because we replace the negative statement with positive statements ultimately generating a solution tree. The solution tree offers all the conventional means available that can solve the problem(Ophoff, 2013).

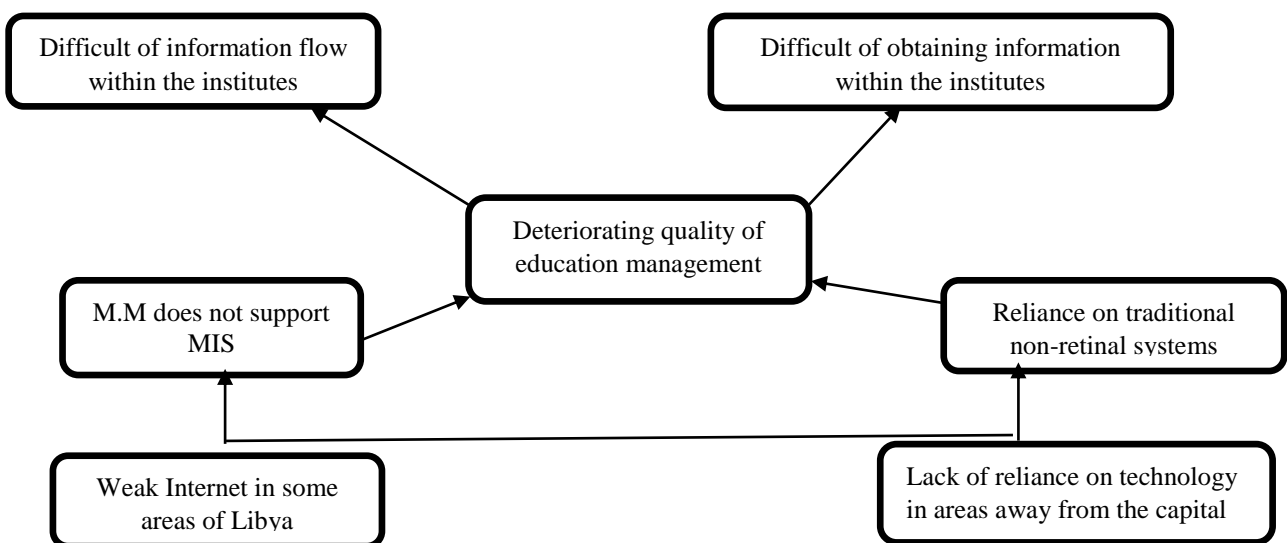For this case, the problem tree will entail the following aspects fig. 1.

Fig. 1. Problem tree (Immediate effect)

At a glance, the core problem that is identified is deteriorating quality standards of education management. Consequently, there are two primary factors causing deterioration of the quality of education management. The first cause is that mother management lacks the management information system infrastructure. Secondly, there is a lot of reliance on traditional non-retinal systems. Further, the primary cause leads to secondary causes. The secondary causes include weak internet in some areas of Libya as well as lack of reliance on technology in areas away from the capital. On the other hand, the subsequent effects of deteriorating quality education are difficult of information flow within the institutes and difficulty of obtaining information within the institutes.

As observed from the above problem tree, the analysis therein provides a robust summary of the reality that is prevailing in the higher institutes of Libya. The second, the phase is establishing the objective tree. To establish an objective tree, we follow the following steps:

There is the conversion of all the negative situations in the problem tree into positive situations that are 'SMART'

Besides, the researcher checks the means-ends relationship to check on the validity and correctness of the cause-effect hierarchy.

When we work from the bottom-up, we ensure the cause-effect relationship becomes the means-ends relationship.

Finally, the connecting lines are drawn in the objective tree to indicate the means-ends relationship as shown below fig 2.
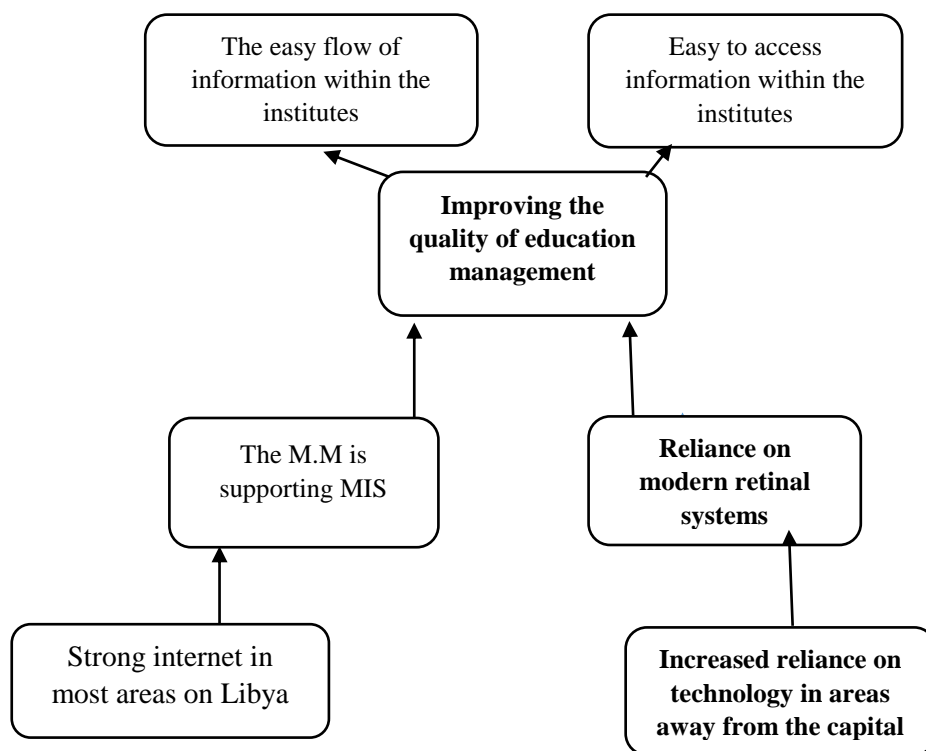

Fig. 2. Improving the quality of education management

When we conduct the objective analysis of the core problem, the objective analysis translates the negative situation into a positive situation. Moving further, the effect of the transition will affect the core problem and yield a positive result changing it to the improvement of the quality of education management in Libya. Consequently, the primary cause of the positive situation are; the mother management supporting management information systems and there will be increased reliance on modern retinal systems; subsequently, the secondary causes will transition to positive situations. For example, there will be a surge of increased speed on the internet in most areas of Libya as well as

increased reliance on technology in areas away from the capital.

The last step towards achieving these project objectives is selecting an intervention plan. The intervention plan is the final strategy to pin-down the core problem. The intervention plan, in this case, demonstrates the decision of the project team to focus on a particular strategy. In this case, the preferred intervention strategy is the use of the log frame matrix. Logical Framework Matrix (tabl. 1).

Table 1

Logical Framework Matrix

Intervention logic(This project assessed the impact of implement MIS in technical institutes in Libya)	Objectively variable Indicators(The project indicators will check whether the objectives are met whereas the standards will demonstrate the limit of performance)	Data source(Source and mean of variation) The section will indicate where the source of the information can be retrieved	Assumptions(There are proponents that are not under direct control of the project management however they are conditions that could trigger the progress of the project)
Goal The overall objective of this project is to ensure that the quality of education management in Libya is improved.	• Better quality of education management. • More rational use of technological appliances • Cooperation between higher institutes and its administration	The sources of data are the Technical institutions in Libya	No assumption for this aspect
Purpose(Specific objective) The M.M is supporting MIS. Reliance on modern retinal systems.	To implement management information systems amongst the technical Institutes in Libya	The data sample of students, staff, professors, and trainers will be collected. The procedure will adopt random sampling.	The technical institutes will support the program by engaging their resources, for example, the staff showing the willingness to change the system.
Results/Output The project members are working responsibly with minimal supervision. The members must of computer skills. the institutes' should be willing to finance the project. the project stakeholders should coordinate to achieve the best results.	The mother management is required to adopt the new modern management information system. The institutes should use modern retinal systems.	The reports from the ministry will provide the data.	The prevailing internal and external factors will not hinder the implementation of theproject objectives. All the concerned groups should participate actively to ensure the institutes adopt retinal systems.
Activities 1. Formation of working groups. 2. Training seminars for staff. 3. Formation of Centre for Education Management Development. 4. Election of the Centre management and staff. 5. Creation of the project Website. 6. Installation of purchased software and hardware	Professional skills in computer skills, management skill, and communication skills. The equipment for the project will include a qualified team of computer experts, hardware, software, and financial resources are necessary for this project. These are the inputs of the project.	The project will require 500 billion dollars to implement the MIS system. The cost breakdown entails: Hardware and software resources approximate cost is 200 billion dollars. The workforce will cost 50 billion dollars. Putting in place stable internet infrastructure in most part of Libya will cost 100billion dollars.	The project will work within a budget The project will achieve its objectives The project will be on the schedule.

A log frame matrix is a document that aligns key features in a matrix form in a concise manner to enable the project to achieve its goals (Malloch, 2013). A log frame contains 4 columns and 4 rows. The first column of the matrix contains the hierarchy of activities that should occur in order the project to succeed. The second column contains the indicators of the project. Indicators demonstrate the appropriate measure to rationale whether the project has attained its activities, outcome, and objectives. The third column highlights the data sources or the rationale to verify the indicators. The last column demonstrates the assumptions made to facilitate the occurrence of a project.

After checking on the assumptions, there is the assessment of the probability and significance of the assumptions. For the purpose of accuracy, information from various sources is assembled and analyzed using subjective approach. Therefore, the assessment will reveal the risk factor of undertaking the project.

Conclusions. Management information system is an important aspect that will help the Technical institutes of Libya to improve the quality of education management. To solve the problem, the logical framework methodology is the most appropriate approach to use. The logical framework approaches splits the activities and organize the activities in a cause-effect order. Therefore, the problem tree, solution tree, objective analysis, and the logframe matrix has facilitated the research to ensure the project attains a solution. After, following the procedure, the Logical framework made it easier to find a solution to the core problem of the research.

References:
1. Malloch, M. (2013). Crime, Critique and Utopian Alternatives. *Crime, Critique and Utopia*, 21-43. doi:10.1057/9781137009807_2
2. Margarian, A. (2013). A Constructive Critique of the Endogenous Development Approach in the European Support of Rural Areas. *Growth and Change*, *44*(1), 1-29.doi:10.1111/grow.12000
3. Ophoff, J. (2013). Towards a Method for Mobile Learning Design. *Issues in Informing Science and Information Technology*, *10*, 501 - 523. doi:10.28945/1825.
4. Pezlar, I. (2017). Algorithmic Theories of Problems. A Constructive and a Non-Constructive Approach. *Logic and Logical Philosophy*. doi:10.12775/llp.2017.010
5. Rhema, A., & Miliszewska, I. (2014). Analysis of Student Attitudes towards E-learning: The Case of Engineering Students in Libya. *Issues in Informing Science and Information Technology*, *11*, 169-190. doi:10.28945/1987

Стаття надійшла до редакції