

## Planning Strategy And The Use Of Information Technology In Higher Education: A Review Study In Kurdistan Region Government

Mazen Ismaeel Ghareb <sup>#</sup>, Zanyar Ali Ahmed <sup>\*</sup>, Azad Abdullah Ameen <sup>\*\*</sup>

<sup>#</sup> Computer Science Department , College of Science and Technology, University of Human Development, Sulimanya, Iraq

<sup>\*</sup>Information Technology Department, Technical College of Informatics, Sulaimani Polytechnic University, Sulimanya, Iraq

<sup>\*\*</sup>Computer Science Department , College of Education & Natural Science, University of Charmo, Sulimanya, Iraq

E-mail: Mazen.ismaeel@uhd.edi.iq, Zanyar.ahmed@spu.edu.iq, azad.ameen@charmouniversity.org

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**Abstract**— An apparently interminable scope of techniques and methodologies has developed to misuse the capability of innovation. The issue has not been a shortage of research. Actually a great many examinations identified with computer and learning has been distributed amid the recent decades. The issue has been one of comprehending the tremendous, and developing, group of accessible research. There is developing enthusiasm for utilizing the ability of new innovation in a productive and successful approach to meet the instructional and research needs of faculty and students. The utilization of data innovation is one of numerous means to accomplishing magnificence. However the recharged enthusiasm for promoting brilliance in advanced education through Information Technology has carried with it a more prominent accentuation on the requirement for high-bore administration in this limit. Capability, combination of learning, joint effort with industry, collaboration among grounds at different levels, helpful procurement endeavors, what's more, transferability of gaining starting with one organization then onto the next are immeasurably imperative components in the administration way to deal with IT in higher Education. In addition to an extensive literature review, this examination contemplate utilized a trial also, quantitative, self-planned and controlled overview instrument to decide the mentalities and qualified respondents, containing IT leaders, IT staff, also, executives in higher instructive at open and private colleges in Kurdistan Region Government.

**Keywords**— Strategic Information System Planning, Educational Institutions, Public Institute of Higher Learning, SISP methodology, Ministry of Higher education KRG.

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### I. INTRODUCTION

Improvement of information technology is a need assignment of modern society. In present day conditions the learning procedure is in consistent communication with new information complex frameworks which permit presenting new strategies and methodologies in an education system. Surely, the development of information technology involves investigating new open doors for the pragmatic use in the arrangement of development in education of later accomplishments in the field of informatics. Execution of new information technologies in the instructive condition, and in addition some other imaginative process, rolls out improvements in educational circle. Procedure of informatization of training is gone for making more agreeable conditions, both for work of the teachers, and for preparing of the students. The unique consideration in this process is paid to communication of the teacher and student. The new development coordinated into an instruction framework permit because of new methodologies in figuring

out how to coordinate also, understand the capability of future master. One of the most critical undertakings is the improvement of the student's identity, the development of aptitudes and capacities to build up a technique to address both instructional and proficient assignments. New technologies help to accomplish increment in students' innovative reasoning. Through the new openings the student turns out to be more inspired to settling of the undertaking set for her/him. The presentation of new Information Technology what's more, the development of new information frameworks in the education system has turned into a factor of dynamic improvement of world science [1]. It is imperative to Comprehend a job of informatization of arrangement of the developed education in the cutting edge world where information technology need to discover appearance in instructive and systematic buildings and projects of the higher education. It is essential to focus on arrangement of retraining of specialists and propelled preparing projects of the specialists working in a training framework. As a matter of first importance we are discussing instructors. The comprehension of the educator when

utilizing of present day innovations is vital by him in solid circumstances of instructive process. There are two primary bearings of information of instruction framework. One bearing relates to unmanaged information. Unmanaged information is completed at the activity of the instructor. Such these records are coordinated to change of the most genuine, as indicated by the instructor, parts of instructive process. Another course influences the oversight information of the instruction framework. This sort of data is upheld by material assets and as per the general standards has the idea what's more, the program [2]. Utilization of information technology in the training framework can have the diverse headings of their application. So at the present phase of development of the teacher has the chance to utilize the new innovation at relatively every phase of the instructive procedure. Data technology can be utilized in the planning of the hypothetical material, when creating data also, methodological help of order, when creating showing materials for classes, at examination of students, for gathering and the investigation of insights of development of learning.

Strategic Information Systems Planning (SISP) is a ceaseless arranging movement that guarantees Information and Communication Technology (ICT) usage in an association is adjusted with business systems, enhances hierarchical process viability, makes business openings and adds to authoritative intensity [3]. A SISP approach is particularly helpful for the unpracticed SISP engineer since it gives an efficient rule to complete the IS methodology detailing process. The primary goal of this research was to stretch out from a business situation to an open advanced education organization a very much approved SISP system. The motivation behind this paper is to report the plan of a SISP approach that is proper for the setting of Public Institutions of Higher educations. Our strategic design Design depended on the identification of the qualities of these approach. SISP technique inside the general population instructive foundation setting should feature ICT systems as a reason for helpful strategic plans, collisions and coordinated effort among the other design. These highlights, in any case, were not apparent in these systems and in addition in those grown particularly for educational institutions, for example, University of California at Berkeley [4] and Carleton University [5]. Subsequently, the motivation behind this exploration was to decide how existing SISP approaches could be adjusted to outline a rule for SISP plan out in the open instructive organizations. The accompanying segments address this issue mission to encourage schools and colleges satisfy their leadership influential position in propelling learning, innovation, and tools to make a sustainable future. To assess the ICT strategy plan we have been used readings ICT. E-readiness appraisal is an assessment instrument that can be utilized for estimating the diffusion rate of ICT [14].

### **Introduction to SISP Methodology?**

Approach is by and large a rule for taking care of an issue, with particular segments, for example, stages, undertakings, strategies, systems and apparatuses [6] [7]. Technique benefits chiefs by giving data to plan, survey and control ventures. By and large approaches are included the accompanying four components: giving a sentiment of what

should be settled, characterizing methods on what must be done and when to do it, encouraging on the most proficient method to deal with the nature of expectations or items, and giving a toolbox to encourage the procedure [7]. A SISP technique can be seen as a dynamic framework outline that capacities to change hierarchical information sources, (for example, business system, evaluation of current IS condition, and hierarchical impact) into an IS Strategic Plan as a yield. When executing the SISP process, the unique framework configuration is connected with regards to different human action frameworks (HAS) including the SISP partners (engineers and customers) [6]. This techniques can be ordered into two classes; specifically, general and particular to setting philosophies. Three settings were broke down in the last class; to be specific, business setting, government setting and instructive setting . While there are various techniques, methodologies and structures, the greater part is situated for business and generation based associations, and isn't appropriate to direct this strategy plan in administration arranged enterprises and government [7]. The business procedure demonstrate and a college methodology show are diverse regarding time span, agreement, esteem framework, clients and setting [8]. Thus, business-setting systems are not reasonable to manage this definition out in the open instructive establishments and government organizations since they center basically around the arrangement of ICT techniques to the business goal of benefits and rivalry. Government offices on the definition of ICT methodologies to enhance benefit conveyance to the subject and country instead of profitability and competition [8,9]. Although numerous of this techniques give a diagram of how to build up a SISP, the strategies, procedures and instruments to direct of it detailing process are not determined. The methodology commencement approach, the group, and the arrangement of errands, exercises and devices are not suited to the instructive organization condition [9]. Hence, the essential target of the ISP-IPTA Procedure configuration was to archive targets and undertakings in each stage, and also the strategies and procedures that can be utilized to actualize the errands. The strategies and systems are complimented by a mechanized toolbox that that can encourage the SISP plan process [11].

## **II. LITERATURE REVIEW**

college and Institute show supportability development and administration in many years, including their way to deal with strategic planning. their objectives and execution set imperative preconditions for exhibiting maintainability explore discoveries on campus, and utilizing the campus as a training device to open understudies to supportability issues and show particular abilities. Key manageability arranging inside institution also fills in as a tested for development, and permits campus to wind up living labs where understudies, analysts, educators, and tasks can work together on a common supportability target. As a center segment of campus supportability, strategic planning comes in numerous structures, from campus-specific manageability intends to atmosphere activity designs and additionally coordinated college wide vital plans that incorporate the more extensive network. Generally, schools also, colleges with vital supportability designs take a comprehensive,

grounds wide way to deal with building up their objectives and activities, showing the community oriented, synergistic nature of this kind of strategic planning.[16]

for that reason, the models regarded from ICT strategic making plans inside the associated literature want to be tailored to this context. Of the numerous models determined inside the literature, the model proposed by using the data technology aid management system (SISP) (2010) turned into chosen as the place to begin of this research for being specifically evolved for the maximum diverse kinds of public organizations with the finest sort of functions, together with ministries, universities and hospitals. [17] ,Strategic making plans IS/it's far a method of identifying a portfolio of pc-based software so that it will help organizations inside the implementation of enterprise plans and realizing its business goals.[18] Each association, either colleges, governments or organizations, has a dream to be achieved. There is a test to accomplish the vision of the associations in light of the fact that the vision is a future that has not occurred. The vision can be accomplished by taking a gander at the current conditions and anticipating future conditions [19][20][21]. Vision can be acknowledged and turned into a reality if each capacity has a decent comprehension of the framework, the activity to grow, a promise to accomplish the vision and ready to buckle [22]. The colleges in creating nations that have a dream and purposes, deliberately need to develop and have upper hands. The job of data innovation (IT) to accomplish the vision and the goals of the associations is extremely critical. The current states of IT at colleges in creating nations have not run well due to mind-boggling expense, IT proficiency issues, and the IT is utilized just as a device of the authoritative populace, not as a methodology to accomplish the vision[23][24].

### III. METHODS AND MATERIALS

The strategy utilized in writing survey is Systematic Literature Review. The Systematic Literature Review is a technique to lead the way toward recognizing, assessing and translating significant research and as indicated by the theme territory, phenomenon, and applicable intrigue. The Systematic Literature Review will play out an investigation of how information is gotten and created [12]. The advancement of the audit writing is done to outline the consequences of the investigation and distinguish the status for the ISSP implementation. The inquire about inquiries depended on Population, Intervention, Comparison, Outcome, and Context [12], [23].The criteria and extent of research questions are demonstrated as follows:

Research Question 1: How to investigate the investigation of the preparation of ISSP execution in Higher education in Kurdistan Region Government?

Research Q2: How to know the recognize factors utilized for ISSP execution in Higher education Kurdistan Region Government?

Pursuit online is done on a distributor database or computerized library, for example, IEEEXplore, Google Researcher, Emerald, EBSCO, Elsevier, Science Direct, Proquest and computerized grounds library or proficient affiliations. The outcomes are as research from Journal, Proceedings, proposition reports and scientific books. The

fundamental watchwords for inquiry are "Data System", "Data Technology", "Strategic Planning", "Readiness of Infrastructure Communication Technology ", and "Higher Education". For improvement and precision of database list items (title, conceptual and metadata), Boolean rationale "AND" and "OR" are included. Year of pursuit is begun from 2011 to 2018 on articles in English. Toward the start, around 85 important articles were found. Subsequent to exploring the titles and modified works, around 25 articles that were viewed as applicable to the theme of ISSP availability were found. The consequences of article survey are then gathered by related criteria. In the wake of perusing and checking on the appropriate and pertinent articles, 9 inquire about articles are acknowledged for the union of SLR. In light of research results, papers, journals, books and research theses on the status of ICT application have been finished by specialists and experts. This is fortified by the quantity of writing thinks about on the preparation of the use of ICT to associations. Here are the aftereffects of research dependent on the advancement of Research Questions. The outcome is a blend of the Systematic Literature Review that is the elements influencing the availability of ISSP execution. According [15], there are a few systems and instruments to evaluate the preparation of ICT execution. Through SLR, several instruments used to quantify ICT preparation can be distinguished. Instruments can quantify the availability of ICT activities in associations. In this manner, this system can be utilized to quantify the availability of the ISSP usage in the associations. Table 1 below explains all the results with factors and measurements of readiness applied for each ICT project.

TABLE 1  
LIST OF TECHNIQUES TO EVALUATE READINESS IN ICT

Readiness Measurement techniques	feature	principle	References
Green ICT implementation based on G-readiness framework implementation.	a. Technology b. Attitude c. Policy. d. governance	Implementing conceptual Green ICT readiness	[25]
Readiness influence factors on ICT readiness in primary schools.	a. Ease of use technology b. Technical assistant. c. Leadership Assistant d. Accessibility of ICT	Developing a teaching model to integrate technology in teaching	[26]
Large organization assessment using E-readiness in a Development countries	a. Security and policy b. IT security Infrastructure c. Culture and Leadership	The measurement of model using internet to assess organization ability to develop their staff or team.	[27]
Industry project measurement of readiness of IT	d. Work Environment e. People f. Infrastructure g. Work process	Development of model of IT readiness implementation	[28]
Readiness measurement model for	a. ICT Human Resources b. ICT Hardware	Deliver a tool to evaluate readiness of	[29]

private and public organization in developing countries	c. and Software ICT infrastructure	ICT in public and private organization sector.	
Measurements of institutes adoption Information system using readiness techniques	a. Attributes of Change management b. Factors of change targets. c. Leadership support* d. Information Technology support	Evaluate and measure the amount of readiness before apply information system adoption	[30]
Government IT Readiness measurement for all organization	a. Infrastructure b. Process c. Architecture	Evaluation the framework infrastructure and architecture	[31]
Readiness assessment for technology	a. Technology b. Practice readiness evaluation c. Governance	Green ICT adoption based on readiness methods	[33]
E-Readiness assessment for non profit organization	a. Work commitment b. Employees Awareness. c. Resource management	Evaluation e-readiness of these non profit organization	[32]

Universities in developing countries need to rearrange their business procedures, individuals and innovation. These three components can be adjusted by changing business methodology and relationship between them. The primary components of ICT usage in creating nation colleges are process, people and Technology.

These factors that affect People and Process and Technology are Place of Work [19] [21] [28], Infrastructure [25] [26] [27], change management [33], leaderships [19] [21] [26], Culture[19] [27] [31], Security [26] [27] [33], Awareness and Resources[27] [30].

#### IV. CONCLUSION

Research on Strategic Information Systems Planning which is for the most part done by scholastic and specialists particularly about the readiness of Strategic Information Systems Planning in colleges or organizations is as yet constrained. This demonstrates investigate on this subject will add to higher education to quantify its Information Technology/SI execution in colleges. In view of elements identified with preparation in Strategic Information Systems Planning, process and innovation are the most predominant variables to quantify the readiness of Strategic Information Systems Planning usage on associations, while some exploration articles do exclude the general population factor as the affecting component for the Strategic Information Systems Planning on the associations. Subsequently, with the end goal to deliver an availability show for the execution of Strategic Information Systems Planning at colleges completely, the future research needs to include a status factor that can enhance the job of the general population factor by adding the factor of arrangement to measure the readiness of colleges to actualize and adopt Strategic Information Systems Planning.

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