

ERP System for College Automation Using Quick Response Code

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ABSTRACT

An enterprise resource planning system (ERP) is a method used by almost all businesses today due to its ability to incorporate various domains and fractions of work. The ERP method atomizes the majority of the manual work performed internally in each of these units, as well as combining the total work output, allowing for a better overall view of the company. The education field, which also has several fractions that need integration, uses the same high-quality ERP framework. Paperwork in the education sector has long been a concern, owing to the ease with which errors can be made when work is performed manually. This proposed framework entails using Quick Response Code to introduce an ERP system for college automation. The use of a QR Code tag allows each student to be assigned a unique ID, which is then used for automated college process labeling. This framework consists of a series of integrated software modules that provide real-time support for the college. From the director level to the student level, several modules are built to serve each fraction of the institution. When this method is implemented, there is no paper work and no data inconsistency. It has many advantages for administrators, teachers, and students. In terms of deployment and maintenance, this is a low-cost system.

Keywords : Quick Response (QR) Code, Multiple modules, Enterprise resource planning (ERP).

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I. INTRODUCTION

In today's atomized world, where everyone desires a quick and easy life, it is important to create a structure that allows students and teachers to simplify their working methods. An ERP system goes a long way toward assisting students and teachers in atomizing all of the tasks they must complete. Quick Response Code was used in the proposed framework to automatically mark up all of the students' work and

generate a report for each of them. Teachers have had less work to do, and the system is less susceptible to mistakes as a result. Additionally, a student-teacher chat system for guidance and counseling is an add-on to the system, making colleges more flexible and usable. Modules such as automated report creation, event creator, admission fees and record management, sharing of learning tools, attendance update, chat system, and library section have aided and simplified these time-consuming tasks.

II. LITERATURE SURVEY

1) Paper Name: A Cognitive Theory of Multimedia Learning: Implications for Design Principles.

Authors: Richard E. Mayer and Roxana Moreno
University of California, Santa Barbara

Description: Research on educational innovations, ranging from motion pictures to computer-based tutoring programs, reveals a discouraging history of bold promises for emerging technology accompanied by large-scale implementations that ultimately struggle (Cuban, 1986; Mayer, in press). For example, in 1922, Thomas Edison, the famous inventor, predicted that "the motion picture is destined to revolutionize our educational system and that it will supplant...the use of textbooks in a few years" (cited in Cuban, 1986, p. 9). Despite this, Cuban (1986, p. 17) concluded that "most teachers used films in classrooms infrequently" after analyzing the presence of motion pictures in schools throughout the decades after Edison's grand predictions. Similarly, in the 1970s, the game-like computer assisted instruction (CAI) systems that were heralded as the wave of the future in education ultimately proved to be no more successful than teacher-based modes of instruction, fifty years later (Cognition and Technology Group at Vanderbilt, 1996). Today, similar arguments about the potential of multimedia learning environments are being made.

2) Paper Name: Cognitive principles of multimedia learning: The role of modality and contiguity (1999).

Authors: By Moreno, Roxana; Mayer, Richard E.

Description: Students watched a computer animation showing the lightning strike. In Experiment 1, they listened to a narration while simultaneously viewing on-screen text displayed close or far from the animation. In Experiment 2, they watched on-screen text or listened to a narration at the same time, showed on-screen text after or before the animation, or listened to a narration after or before the animation. Retention, conversion, and matching

assessments were used to assess learning. In Experiment 1, students understood better when visual and verbal materials were physically close together. Students learned more when verbal feedback was interpreted auditorily as speech rather than visually as text in both studies. Two cognitive concepts of multimedia learning are supported by the findings. (c) 2012 APA, all rights reserved.) (PsycINFO Database Record (c) 2012 APA, all rights reserved.)

3) Paper Name: Efficiency in Learning: Evidence-Based Guidelines to Manage Cognitive Load (2011).

Authors: Ruth C. Clark, Frank Nguyen, John Sweller

Description: Efficiency in Learning provides a roadmap for the most efficient use of the three primary forms of training communication: graphics, written text, and audio. The book's methods can be easily extended to your lesson presentations, handouts, reference guides, or e-learning screens, regardless of how you deliver your training materials—in the classroom, in print, through synchronous or asynchronous media. Efficiency in Learning's guidelines are clearly demonstrated with real-world examples, making it a practical resource for all instructional professionals.

4) Paper Name: Facilitating Learning (March 2016).

Authors: Robinson, Rhonda; Molenda, Michael; Rezabek, Landra

Description: Facilitating learning is often a realistic practice, regardless of whether it takes place in a classroom, at a student's workplace, or in virtual environments. High-quality teaching, learning facilitation, and growth are focused on a sufficient theoretical understanding of learning, competence building, and humans as learners and builders of their own competence.

5) Paper Name: Efficiency in learning: Evidence-based guidelines to manage cognitive load (2011)

Authors: Clark, R. C., Nguyen, F., & Sweller, J

Description: Efficiency in Learning provides a road map for the most efficient use of the three primary forms of training communication: graphics, written text, and audio. The methods in this book can easily be extended to your lesson presentations, handouts, reference guides, or e-learning screens, regardless of how you deliver your training materials in the classroom, in print, or through synchronous or asynchronous media. Efficiency in Learning's guidelines are clearly demonstrated with real-world examples, making it a practical resource for all instructional professionals.

6) Paper Name: Design and Impact of an ERP and Automation Model in the Administration Sectors

Authors: Dr.(Mrs).Ananthi Sheshasaayee, Mrs.K.Bhargavi

Description: Business source outlining is one of the most important systems used by many organizations and in a variety of functional areas such as finance, organizational efficiency, risk, decision-making, and automation. ERP systems have increasingly altered conventional methods of knowledge delivery in organizations. Organizations that have ERP systems in place can easily reduce risk while increasing efficiency, output, and benefit. ERP systems with functional and operational modules have been shown to have a greater effect on reducing organizational risk. The ERP system has a greater effect on the organization's business because it automates the decision-making system with well-organized data. The design of ERP and its automation, as well as their effect on organization finance, development, efficiency, risk management, and decision making, are discussed in this paper.

7) Paper Name: Creating Digital Collages Inspired by English Texts

Authors: Vandana Kannan, Natalia Khuri

Description: Textual data is often accompanied by images in an effort to aid the user's comprehension of the information. Taking this as inspiration, it would be fun to transform any text into a digital picture collage, or a creative graphic object. We created a

software framework that uses Natural Language Processing to summarize long paragraphs of text, retrieves images from databases, and arranges them on a digital canvas using a Genetic Algorithm. The program calculates focus factors for scaling the images in the collage, taking into account that some images might be more relevant to the user. We ran computational tests to validate each module of our framework, as well as usage studies to see how people viewed the collages.

8) Paper Name: The Best Practice of Safety performance management in Airlines

Authors: Ling Zhang, Jing Chen, d Yao Zhang

Description: The introduction of a safety management system in China's civil aviation industry has taken about ten years, and although the foundation of airline safety management has been established and practiced for many years, how to effectively assess the efficacy of the safety management system has become one of the civil aviation industry's most critical and difficult topics. The thesis is divided into three sections: first, it will demonstrate the current state of safety management approaches in the civil aviation industry. Second, it will demonstrate how SMS can be implemented in airlines. Finally, it will demonstrate how to apply safety performance management by combining risk management and project management. The aim of incorporating project management is to first identify and introduce the duty of divisions in Airlines, which is the most critical aspect of completing the mission. It will not only efficiently assess the impact of SMS in this way, but it will also advance the safety barrier and ensure whom to monitor risk, allowing airlines to continue to operate safely.

9) Paper Name: Improvised Group Key Management Protocol for SCADA System

Authors: Mrs. Vaishali Patil, Mrs. Veena Kulkarni, Mrs. Harshali Patil

Description: The SCADA (Supervisory Control and Data Acquisition System) system necessitates safe group contact between the control centre and the

remote terminal units. In SCADA system community contact, latency in the communication network cannot be accepted. Many different group key management protocols have been proposed to improve the security of group communication in SCADA systems by minimizing rekeying, storage overhead, and communication expense. Various security issues for SCADA systems, as well as various community key communication protocols, are discussed in this paper. We present a survey of different group key management protocols for protecting group communications in SCADA systems in this paper, and we suggest an improved key distribution scheme to optimize or reduce the current storage and communication overhead without sacrificing security.

10) Paper Name: Manage System of Information About Refugees

Authors: Kazuhiro Seida, Ran Yoshida, Junna Nishiyama

Description: Japan is a nation prone to natural disasters, with earthquakes wreaking havoc on the country on a regular basis. As a result of this event, network traffic surges, making it impossible to use the internet. As a result, we built a separate network using the LoRa Low Power Wide Area service. This service connects to a database where we keep track of refugee details. Each individual who arrives at a disaster refuge is identified using facial recognition, and their status is recorded in a database that can be accessed through the LoRa network.

11) Paper Name: A Study on ERP System Software Selecting Evaluation Based on Fuzzy Neural Network Model

Authors: Hou Jianhua, Zhou Shugong, Zhao Guangfeng, Li Chunrue

Description: Whether the ERP framework can effectively apply and execute is a key point for realizing the artefacts of enterprise information-based construction. Because of the complexity of ERP systems, Chinese enterprises with a poor information-based foundation often face numerous challenges

when selecting and implementing ERP systems. A multiattribute comprehensive evaluation approach is the fuzzy comprehensive evaluation. Since the weight of the membership function is so subjective, the process conditionality is used. Different techniques can be objectively evaluated using the BP neural network. The fuzzy evaluation approach is combined with BP network theory in this article. Fuzzy theory and the BP network are used in the fuzzy neural network model. The paper will achieve the optimization degree of ERP system and an accurate assessment using network learning. The paper investigates how to choose an ERP system using a fuzzy neural network model.

12) Paper Name: Competitive Advantage in the ERP System's Value-Chain

Authors: Peng Zheng, Wei Zhou

Description: We present a collection of propositions related to enterprise resource planning (ERP) growth, reflections on competitive advantage, and the various roles that stakeholders play in the value-chain using the resource-based view. This will serve as a foundation for future research on ERPs and how stakeholders' desire for competitive advantage influences ERP growth, especially when it comes to the development of a more standardized or pre customized ERP framework. The propositions also serve as a basis for learning more about the challenges of designing better ERP systems.

III. EXISTING SYSTEM

The new ERP system in use at the institutions is run manually. There is an unnecessary amount of difficulty and improper operation since no equipment is used. as well as a slew of headaches There is still much too much paperwork to be done.

IV. PROBLEM STATEMENT

In today's world of atomization, where everyone craves for a simple and easy life, it becomes necessary

to develop a system which enables the students and teachers to simplify their way of working and avoid manual and papered work. To address the problem of existing system we develop a proposed system is about implementing an ERP system for college automation using Quick Response Code.

V. System Architecture

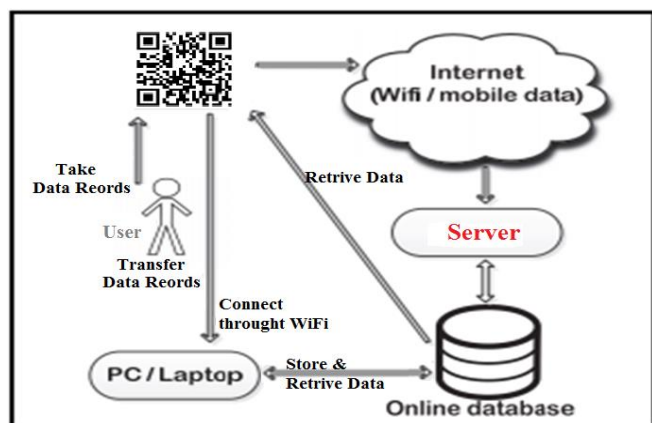


Figure 1: System Architecture

VI. ALGORITHM OF THE PROPOSED SYSTEM

Today's universities must contend with numerous issues, including employment generation, economic growth, environmental sustainability, and social resiliency. Citing these trends, it is essential that we comprehend where we are in the evolution of ERP systems.

Today's institutions are faced with various challenges, including creating jobs, increasing the economy, preserving the environment, and meeting society's needs. Planning future ERP deployments requires a lot of research to understand where we are in the evolution of the internet. We are developing the system, which is completely based on the Java platform, to aid the users in finding information that they are interested in. Our database is designed for the institute, all of the institute's records, such as assignments, attendance, publications, lab results, etc. Most of the basic demand is satisfied by the QR code module in the ERP system, and the ERP function

modules with a higher degree of automation are put in place. This system should improve the way of tracking student data in the classroom and provide a new, more accurate, and more efficient way of recording the information. This technology offers greater stability, lessens the use of time.

VII. CONCLUSION

We suggest the college EHR system, the QR code is used to gather the information on students' personal information. In particular, real-time data acquisition and disposal increases the system efficiency. Most of the basic demand is satisfied by the QR code module in the ERP system, and the ERP function modules with a higher degree of automation are put in place. This system should improve the way of tracking student data in the classroom and provide a new, more accurate, and more efficient way of recording the information. This technology provides reliability, saves time, and delivers it with great security. Administrators and instructors have full control over the student record as long as it is connected to the web. In the future, we must enhance security for the purpose of overall safety. Additional features could be added to the project, such as sending a text message each day of the attendance of students. Online exam should be more useful, efficient, dynamic, and engaging so it helps students get a better experience.

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