

The Simulation Oracle Database Systems

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Abstract—The purpose of this research, to develop a knowledge base system using an Oracle database Simulation can reduce the time to learn. Enhance the teaching and learning. Make learners Oracle database users a more easily understood format Simulation creating quality human resources to society, community meet the manpower needs of all sectors. And find satisfaction with the system. To enable Oracle applications easier and the students do not have to, they can use Oracle database system. The population in this research. As a student teacher used the Rajamangala University of Technology Suvarnabhumi (RUS). The sample used in this research. Sampling methods (Purposive Sampling) divided into two groups: the first group selected from undergraduate students. And the second group selected by the site administrator or associate professors.

The results were as follows: The administrators, faculty, or users. Concerned overall have averaged 4.19 and of students in most average 4.32. The showed that Knowledge base using Oracle database Simulation models built can facilitate . Reduce the time to learn Enhance the teaching and learning. Make learners Oracle database users a more easily understood format Simulation creating quality human resources to society, community meet the manpower needs of all sectors efficiently.

Keywords—The simulation oracle database, Simulation, Knowledge-based system.

I. INTRODUCTION

Government policy in promoting the development of science, technology, research, and innovation. To proceed to accelerate the development of Thailand to be social, knowledge. Database technology has developed along with the other side, technology. The system needs to use the management information system database. Whether the system, teaching, evaluation, examination system, government agencies, the private sector, or in the business enterprise.

The RUS has partnerships with the A-Host Company about cooperative education, which the company wants students with ability. Work effectively in the database Oracle directly sent staff to educate students in to help prepare the cooperative education For 1 semester, which costs are very high. And the use of computing resources for the high into the Oracle database.

The researcher is the concept, in the development. The Simulation Oracle database systems (SOD) which result in many aspects can reduce the time to learn. Optimize the teaching. The students easy to understand by simulation Preparation of cooperative education. Create a good human resources for society, community and people in all sectors.

II. LITERATURE REVIEW

To develop and evaluate the satisfaction of the user database model of the knowledge-based system many interesting articles as follows.

The integration of interaction and simulation in e-learning systems represents a milestone in educational research and supports the student's learning process in innumerable ways. Nevertheless, current standards do not provide appropriate mechanisms to treat simulations as learning objects, which makes their integration into e-learning systems a hard task. This work proposes an architecture as an extension to SCORM which includes a Tutoring Module for Simulations (TMS). The main objective consists in providing mechanisms to track and "observe" the student's actions while interacting with a simulation, thus enabling the TMS to take decisions or intervene when necessary, and/or to modify the simulation course [1].

A multivariate modeling approach was developed by Istituto Motori to model and predict vehicle real-world emissions. Complex driving kinematics is represented by two blocks of variables, which require the development of a hierarchical multiblock emission model, where the two blocks of variables represent overall and instantaneous features of each driving cycle associated to a trip. The multiblock model was applied to analyze and model emissions of the large database built in the ARTEMIS project. In this database we collected emission measurements performed in European laboratories relative to real driving cycles which are statistically representative of many European traffic/road conditions from congested to rush hour traffic in urban, rural and highway roads. Data concern a varied fleet of vehicles differing in technology and class. To develop a tool useful for mobility analysts for traffic environmental impact assessment, a knowledge base was envisaged to integrate the data warehouse and the model base to build a user interface for driving cycle kinematics and emission analysis. In this paper, the modeling approach is presented together with overall emission and driving kinematics characterization based on experimental results, as well as functional analysis of the knowledge base structure and the information tool [3].

Competing in a highly competitive global market requires the commercialization of knowledge and technology to produce better, faster, cheaper, multi-functional, flexible, and intelligent products. Engineers involved in the product realization process must master technology as it develops and quickly integrate it into products well ahead of the competition. Robotics, being an interdisciplinary engineering subject, plays a key role in achieving this goal. Thus, robots have been a recurring theme in engineering education. Many educators have developed a variety of pedagogical tools and curriculums to increase the ability and competence of students. Project-based learning provides opportunities for interdisciplinary learning in the traditional classroom. The emergence of the Internet has reformed the concept and methods of engineering education. This paper presents interactive e-learning environment to enhance student participation, motivation, and learning effectiveness. This research developed inquiry modules to allow students to

present their queries in natural Chinese language fashion and through engineering graphics. In addition, this study developed interactive learning platforms including mechanism design, assembly and simulation, manufacturing processes, and mechatronic integration. Quantitative and qualitative methods such as questionnaires and interviews were used to evaluate the effects of the developed system. Findings showed that inquiry modules were able to facilitate investigation and planning activities on project developing stages. The results also showed that there were significant improvements in the participants' integration ability of technologies. Furthermore, participants with higher initial computer skills were also found to show higher performance as compared to those with lower computer skills. Generally, the online interactive e-learning environment is beneficial to the participants and ought to be given the attention it deserves as an alternative to traditional classes [4].

And other research: E-Learning by design gaming, teaching and learning: an interview with Kurt Squire [2], Application of Cloud Technology, Social Networking Sites and Sensing Technology to E-Learning [6].

From research of above, showing the importance and implementation of an information system to be used to collect, access, teaching and data education to support the speed of the work for effective e-learning. Has been applied to the evaluation of preparing Cooperative education of students in the university.

III. METHODOLOGY

In this study, the populations was undergraduate students from Faculty of Science and Technology, RUS. The samples were sampling by Purposive Sampling method [5]. The instrument in this research consist of SOD, and the SOD user satisfaction surveys. Then perform the research, collected the data, and analyze the results.

The system is divided SOD user 2 groups, students, and instructors. Students can use as follows: edit the passwords, e-learning, exercises simulation, test, show level results score, web board. Instructors can use the following member system, management the exercises simulation system, the post-test system, the scoring system, web board system.

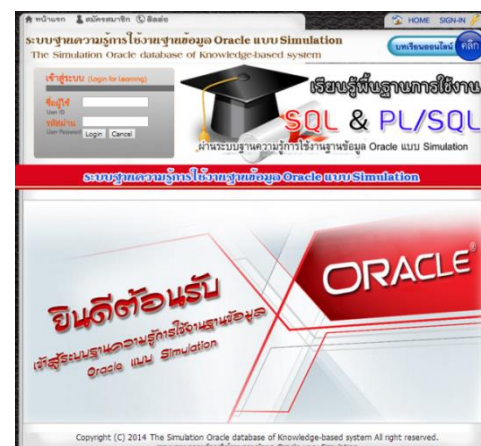


Fig 1. Introduction pages of website

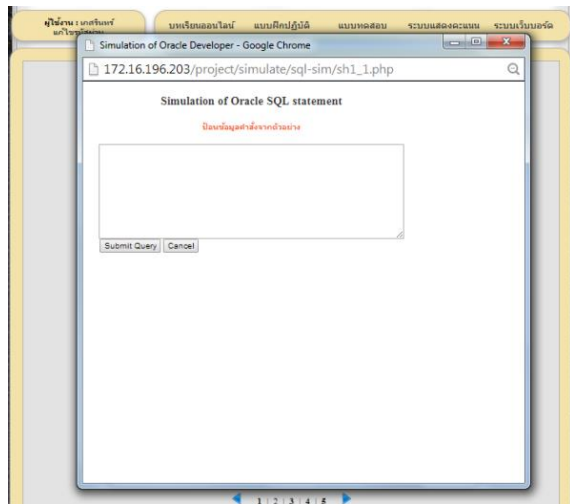


Fig 2. The pages exercise simulation



Fig 5. The pages of Administrator Management



Fig 3. The pages VDO E-learning

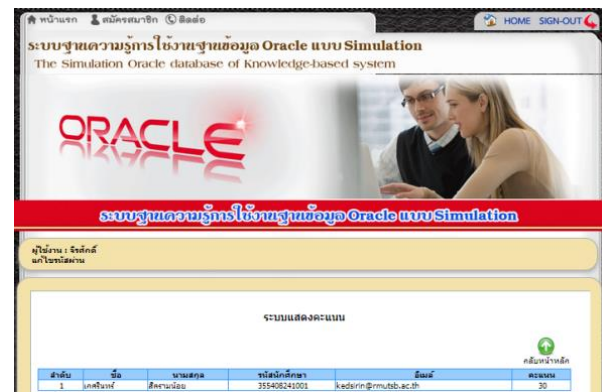


Fig 6. The pages of score system



Fig 4. The pages test

IV. RESULTS AND DISCUSSION

The results of SOD user satisfaction were collected from undergraduate students and instructors from Faculty of Science and Technology, RUS, Suphanburi campus. The results of all user satisfaction are at a very good level.

Survey was used as a research methodology in order to evaluate the user satisfaction level. The survey form is a rating scale and the scales were classified into five levels, which are summarizes the score in form of interval scale [4] as follows:

Excellent	5	points
Very good	4	points
Good	3	points
Fair	2	points
Poor	1	points

Then we calculated the average of the score and compute the significant level of user satisfaction. The calculations for significant level of user satisfaction were shown as follow:

$$(a) \text{ Range} = \text{Maximum point} - \text{Minimum point} = 5 - 1 = 4 \quad (1)$$

$$(b) \text{ Class interval} = \text{Range} / \text{number of interval} = 4 / 5 = 0.8 \quad (2)$$

The average points as follows:

- 4.21 – 5.00 mean the users have an excellent level of satisfaction to the system.
- 3.41 – 4.20 mean the users have a very good level of satisfaction to the system.
- 2.61 – 3.40 mean the users have a good level of satisfaction to the system.
- 1.81 – 2.60 mean the users have a fair level of satisfaction to the system.
- 1.00 – 1.80 mean the users have a poor level of satisfaction to the system.

Rating scale provides an effective method for measuring the user satisfaction, which are classified into five levels from highest (5) to lowest (1). For example, 5 mean that the user has the highest satisfaction to the system.

The result from satisfaction survey of instructors to SOD were summarized as follows:

TABLE I
SATISFACTION OF INSTRUCTOR TO SOD

	Topics	average points	S.D.	Satisfaction Level
1	The website has a beautiful design and appropriate function to use.	3.90	0.73	Very good
2	The website is easy and convenience to used	4.30	0.82	Excellent
3	The data in the website are reliable.	4.40	0.69	Excellent
4	The System are displays the information fast.	4.30	0.67	Excellent
5	The System is comfortable to use.	4.10	0.73	Very good
6	The System has high performance in data editing.	4.20	0.78	Very good
7	The System provides an effective solution for cooperative education and learning.	4.10	0.73	Very good
8	The data in the website is useful for teaching and learning of the users.	4.00	0.66	Very good
9	The System is useful for instructors and student.	4.20	0.63	Very good
10	The satisfaction to the online evaluation system	4.40	0.51	Excellent
	Total Mean points	4.19	0.69	Very good

Table I showed average and standard deviation (S.D.) of instructor satisfaction to SOD. The high average point of instructor satisfaction was 4.19. The instructors have the high level of satisfaction to the system in all topics. Therefore, the instructors were very satisfied this developed system (See Table I).

The Students satisfaction to SOD survey results were summarized as follows:

TABLE II
SATISFACTION OF STUDENTS TO SOD

	Topics	average points	S.D.	Satisfaction Level
1	The website has a beautiful design and appropriate function to use.	4.20	0.69	Very good
2	The website is easy and convenience to used	4.25	0.78	Excellent
3	The data in the website are reliable.	4.30	0.65	Excellent
4	The System are displays the information fast.	4.40	0.68	Excellent
5	The System is comfortable to use.	4.05	0.82	Very good
6	The System has high performance in data editing.	4.25	0.78	Excellent
7	The System provides an effective solution for cooperative education and learning.	4.40	0.75	Excellent
8	The data in the website is useful for teaching and learning of the users.	4.50	0.68	Excellent
9	The system is useful to create understanding And enthusiasm in learning of students.	4.45	0.68	Excellent
10	The satisfaction to the online evaluation system	4.40	0.68	Excellent
	Total Mean points	4.32	0.71	Excellent

Table II shown average and standard deviation (S.D.) of students satisfaction to TRMS. From Table II, the highest average point of student satisfaction to SOD was 4.32. The students have the high level of satisfaction to the system in all topics. Therefore, the students very satisfy this developed system (See Table II).

V. CONCLUSION

In this research, we developed The Simulation Oracle database systems (SOD). We also evaluated the user satisfaction to the developed system. The SOD systems can reduce the time of learning, Optimize the teaching, easy to understand by simulation. Preparation of cooperative education and can learn by self-access. The SOD were developed according to the objective and the scope of the project.

The average instructors and students satisfaction to SOD were 4.19 and 4.32 respectively. Both instructors and students have the high level of satisfaction to the system. Besides that, in the same way, This system has the ability to promote learning in web development, writing code simulation, the study has made in the same way. The students can be practice continuously. The content of the course in full. And can integrate the knowledge from the study through the system to the cooperative education, courses and knowledge applied to it in the future.

VI. FUTURE PLANS

There should be a creation and development of SOD that can connect to other e-Learning system. Developing a model of knowledge (Knowledge Based) to develop the course in other form simulation and the integrated together. And should have further proposed on the mobile operating system. To add a channel in the education of students' wide.

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