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Student Relation Management on Cloud Technology for Academic and Internship Counseling Model in Rajabhat University

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Abstract

The purposes of this study were: 1) to design a model of student relation management system on cloud technology for academic and internship counseling in Rajabhat University and 2) to assess a model of student relation management system on cloud technology for academic and internship counseling in Rajabhat University.

The research methods were of 2 stages: 1) the model design stage in which 1.1) documents, textbooks and related literature were reviewed and analyzed, and 1.2) the model was designed, using elements and guidelines obtained from those documentaries together with the Front-end Analysis of needs, learners, environment and technology; and 2) the model assessment stage which included 5 steps, namely, 2.1) constructing instruments for model assessment, 2.2) having 9 experts to assess the instruments, 2.3) analyzing the data obtained from the assessment, using mathematic mean ($\bar{x}$) and standard deviation (S.D.), 2.4) improving the model according to the experts 'advises, and 2.5) presenting the model.

It was found that the designed model was made up of 3 main components: 1) student relation management which consisted of 1.1) data base, 1.2) cloud technology, 1.3) creating relation, and 1.4) maintaining relation; 2) student relation activities of the management system on cloud technology that comprised 2.1) filtering teacher students' demographic data, 2.2) connecting the data from the university with the university system, 2.3) publicizing information and news, 2.4) formulating academic counseling plan, 2.5) carrying out academic counseling, and 2.6) following up and evaluating; and 3) academic and internship counseling which was composed of 3.1) registration, 3.2) orientation, 3.3) supervision planning, 3.4) supervising, 3.5) academic counseling, following up the academic counseling, and 3.6) evaluation. The study revealed that the developed model was very appropriate to be used for academic and internship counseling.

Keywords: student relation management, cloud technology, telecom cloud, academic and internship counseling

1. Introduction

Rajabhat University is a higher education institution for local development with the objectives of producing and developing teachers and educational personnel, promoting academic, strengthening teaching profession to meet the quality and standards set by Rajabhat University Act 2004 where an extreme importance was put on the development of education in Thailand.

Training of professional experience in Rajabhat University is a very important process of producing qualified teachers to serve the country. It provides the students with actual duties as a teacher in an authentic environment. It enables them to apply what they have studied in both theory and practice to the real situation, to understand teachers' role, to choose appropriate teaching techniques/ methods, and to have positive attitude towards the teaching profession. Training of professional experience is, however, facing many problems including teaching preparation, management, teaching technique/method usage, doing action research for classroom problem solving, etc.

Academic counseling is a process in teaching professional experience practice. While doing the training of professional experience in educational institutions, students may encounter some academic problems that can obstruct or affect their study. To solve those problems, the university appointed supervisors to take care of the

students and to give them various academic advices e.g., how to plan lessons, select teaching techniques, do action research, as well as to help them solve various problems. Supervisors are, therefore, very crucial for teacher students during their profession experience training. They have to stay close to the students. They are one of the factors contributing to the success of producing teacher graduates.

Cloud technology via the Internet in the university can be used to improve the efficiency of academic counseling by employing available resources. According to the concepts of cloud processing, virtual technology allows the use of resources via IT infrastructure for physical processing (Vulić, Barać, & Bogdanović, 2011) The researcher, consequently, applied the concept of cloud technology to academic counseling system and professional experience training which can be accessed anywhere and anytime.

Business process concepts in customer relationship management (CRM) have been applied to educational administration and management of student relation. Such concepts include marketing, relation and satisfaction creation, customer data collection. They are used via efficient management to maintain positive relationship with customers and their loyalty (Dorf & Rogers, 2005).

Modern education system depends very much on ability to increase strong relationship with students, which is believed to be a very important mission in education process. Presently, students use smart phones, social media, and modern technology to exchange data and knowledge Student relation management (SRM) is considered to be the best way to improve communication and collaboration between the university and students as well as promoting university services and activities **(**Radenkovic, Despotovic-Zrakic, Bogdanovic, Labus, & Milutinovic, 2013) This gives the researcher an idea to design a model of student relationship management system on cloud technology for academic and teaching professional experience counseling in Rajabhat University to promote students' success in professional experience training process in the 21st century.

2. Related Literature

2.1 Student Relationship Management

The study on student relation management was inspired by customer relation management (Piedade & Santos, 2008) which has been applied in organizations to develop and maintain the relationship between organizations and customers. Organizations must have knowledge about customers in ordering goods and services to develop valuable relationships with customers in terms of confidence, loyalty, and persistence. It is also necessary for organizations to develop internal strategies and competencies to establish quality of customer relations, which is an important factor that will result in the organization's competitive advantages. (Seeman & O'Hara, 2006), (Ackerman & Schibrowsky, 2007–2008).

As mentioned above that student relation management was inspired by customer relation management, this study focused on procedure and activities related to academic counselling and professional experience training (Piedade & Santos, 2008) The main objective was to promote teachers' success. Similarities of customer relation management and student relation management, could, then, be identified. For example, when customer is overdue (according to customer relation management), the administrator will send a service notification message to the customer. Based on this example and principles of student management process, student relation management system was developed, appointing a supervisor as an examiner. When the supervisor checked and found that the students' work was overdue, he/she would send a notification to the teacher student (to achieve the student relation management).

The student relation management (SRM) will, therefore, reflect the relationship established between the university and the students based on the customer relation management (CRM) concepts. Student relation management on cloud technology can help promoting the process and activities of academic counselling and professional experience training (Nair, Chan, & Fang, n.d.)

2.2 Cloud Technology

Software as a Service (SaaS) is a software provided by service providers on cloud technology where users can access it via web browser or the interface of the program from various equipment that connects to the Internet network. Cloud system can be applied to telecom cloud that can support smart phone (Mell & Timothy, **2011)**

2.3 Telecom Cloud

Telecom is multi-functional and has various networks that can be used in cloud system called Telecom cloud. Service providers can use every type of cloud technology services including infrastructure (Iaas), platform (Paas), and software as a service (Saas). Saas and Paas layers in cloud technology are closely connected to BSS/OSS operation support system. Saas layer corresponds to Telecom cloud service platform that can serve private

service providers and can be processed on cloud technology with mobile phones system (Yrjo & Rushil, 2011).

2.4 Student Relation Management with Academic Counseling

Regarding academic counseling by academic counselor, this article investigated the connection between the supervisors and the teacher students in terms of provision of academic and professional experience counseling to promote the teacher students' success, focusing on strategies to build relationship in academic counseling as well as academic advices valuable to teaching profession (Drake, Jordan & Miller, 2013)

2.5 Professional Experience Training

Before taking a professional experience training course, teacher students must have both theoretical and practical knowledge to get ready for the job as a teacher. If they do not have enough knowledge, they may transfer wrong knowledge to the students. The teacher students must not have negative attitudes that affect students' theoretical and practical learning, and skills. It is, therefore, very important to consider the teacher students' knowledge and ability before doing teaching practice. Writing skill is very crucial for the teacher students. They should be able to write about working life and mistakes so as to be able to correct their lesson plans (Ahmet PEHLIVAN, Ibrahim Seckin AYDIN , Emine KITIS, 2019)

In this article, the researcher presented the application of a concept on student relation management to provide academic counseling via Software as a service (SaaS) in a form of cloud technology to promote the success of teaching professional experience process in Rajabhat University in the 21st century.

3. Objectives of the Study

3.1 To Design A Model of Student Relation Management System on Cloud Technology for Academic and Teaching Professional Experience Counseling in Rajabhat University

3.2 To Assess A Model of Student Relation Management System on Cloud Technology for Academic and Professional Experience Counseling in Rajabhat University

4. Research Methodology

The research methods were of 2 phases as follows:

Phase 1: Model design. This phase consisted of 2 stages.

4.1 Analysis Stage

4.1.1 Literature related to student relation management in **(**Seeman & O'Hara, 2006), (Gholami, Saman, Sharif, & Zakuan, 2015), (Kongsakun, Fung, & Philuek, 2009), (Boumedyen, Yusupov, & V., 2010), (Piedade & Santos, 2008), (Ackerman & Schibrowsky, 2007–2008) were reviewed and analyzed to synthesize the components of the model.

4.1.2 Literature concerning student relation management with academic counseling in (Gopal, 2011), (Hsu & Shih, 2012), (Rejeesh E, 2017), (Zamani, 2009), (Hines, Deja, & Black, 2018) was reviewed to find guidelines for academic counseling and for organizing student relation system.

4.1.3 Literature related to cloud technology in (Vulić et al., 2011), (Radenkovic et al., 2013), (Yrjo & Rushil, 2011), (Yuan, 2011), (Mannir & Getso, 2014) was reviewed to find guidelines for choosing the one appropriate to student relation management for academic counseling.

4.1.4 Literature concerning professional experience training in (Ahmet PEHLIVAN et al., 2019), (Gopal, 2011), (Gotoh & Ikuta, 2010), (CETINKAYA, 2019), (Xu, Zhu, & Tang, 2018) was reviewed to design appropriate academic counseling for professional experience training.

4.1.5 Synthesize components of the model of student relation management for academic and teaching professional experience counseling provided in Rajabhat University.

4.2 Design

4.2.1 Use the information on student relation management, cloud technology, and academic and teaching professional experience counseling obtained from stage 1 to frame up the model.

4.2.2 Design the model on cloud technology using elements and guidelines obtained from phase 1 as a framework. Analysis of front-end, needs, learners, context of needs, and more were incorporated in the design. The designed model consisted of the following components:

4.2.2.1 Student relation management that comprised 1) Database, 2) cloud technology, 3) Creation of relation, and 4) maintenance of relation.

4.2.2.2 Organization of student relation management system on cloud technology that consisted of 6 steps, namely, 1) filtering teacher students' data, 2) connecting university's data to the system, 3) publicizing information and news, 4) establishing plan for academic and teaching professional experience counseling, 5) implementing counseling, and 6) following up and assessment.

4.2.2.3 Counseling of academic and teaching professional experience training was made up of 1) registration, 2) orientation, 3) supervision planning, 4) supervision, 5) academic and teaching professional experience counseling, 6) following up the counseling, and assessment.

Phase 2: Assessment of the constructed model. There were 5 steps in this phase.

1. Create instruments for the assessment.

2. There are nine experts with Doctorate's degree or not less than 5 years of supervision experience assess the components of the model

3. Analyze the assessment data obtained, using arithmetic mean ($\bar{x}$) and standard deviation (S.D.)

4. Improve the components of the model as suggested by the experts.

5. Present the designed model in the form of a chart.

5. Results of the Study

5.1 The Developed Model of Student Relation Management on Cloud Technology for Academic and Professional Experience Training in Rajabhat University Consisted of 3 Components As Shown in the Figure Below

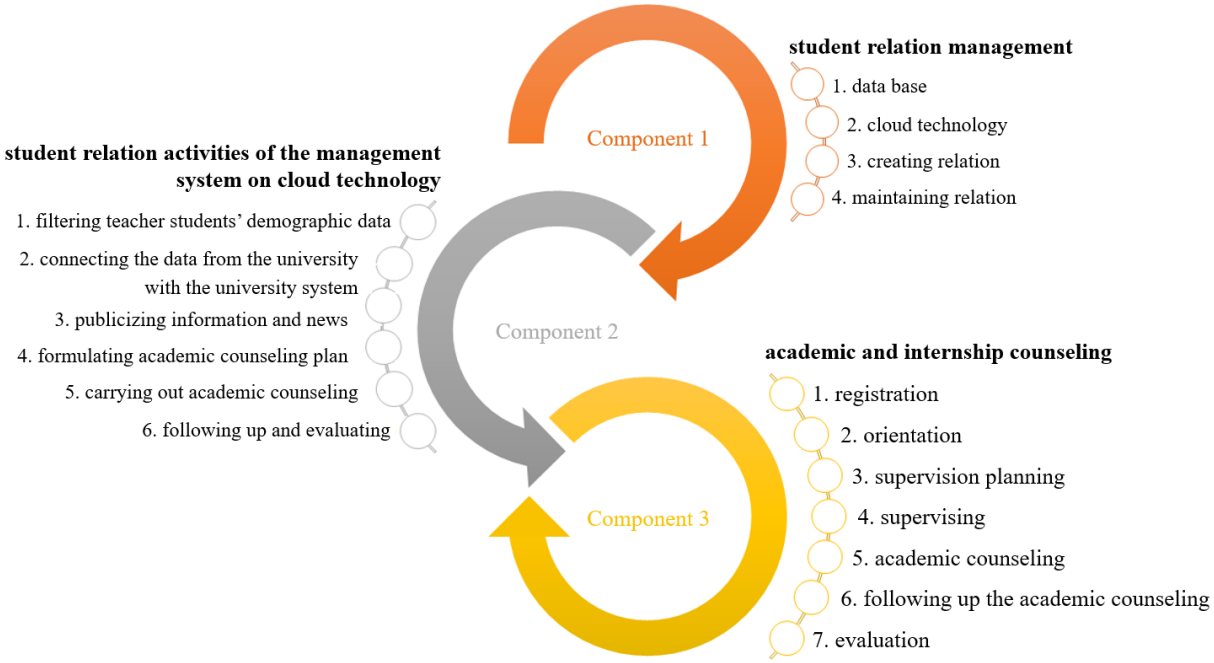

Figure 1. Student Relation Management on Cloud Technology for Academic and Internship Counseling Model in Rajabhat University

Component 1: student relation management comprised:

1. Database that included data of students, supervisors, academic counseling, and professional experience training.

2. Cloud technology in a form of telecom cloud in SaaS layer that could be used with mobile phones.

3. Building relation with academic counseling.

4.Maintaining the relation with counseling, advising, and following up the counseling.

Component 2: Student relation management on cloud technology. This components was made up of 6 steps as follow:

Step 1: Filtering teacher students' data

In this stage, the system administrator filtered the students' data in the university database and check the students' qualification according the university criteria.

Step 2: Connecting university data and the student relation management system

After the teacher students were registered for the professional experience training course as specified in stage 1, the system administrator would create user name and password, and set the system access right for the users of student relation management system on cloud technology. A user name and a password would be sent to the users via email. The users were forced to change their password once they accessed the system.

Step 3. Publicizing information and news

In this step, the system administrator publicized related information such as registration, orientation, academic calendar, etc.

Step 4. Setting up a plan for academic and professional experience counseling

The supervisors set up a plan for supervising the teacher students to meet the university's policy and to create a good relationship among the teachers and the students.

Stage 5. Implementing academic and professional experience training counseling plan

The supervisors and the students could interact with each other via application on cloud technology. All counseling information would be stored in the system database.

Step 6. Following up and assessment

The supervisors could follow up the counselling activities via cloud technology. The system would retrieve and display all information, allowing the supervisors to see the change of the students receiving consultation. The supervisors could follow up and assess the counseling continuously. Within this stage the relationship between the supervisors and the students would be built and maintained.

Component 3. Academic and professional experience training counseling

This consisted of 5 elements as follows:

1. Registration via the university information technology.

2. Orientation for guiding the basic practice of teaching professional experience and working in educational institutions.

3. Planning the supervision during the students' course of teaching professional experience training, conforming the university's policy.

4. Supervising according to the supervisory plan.

5. Providing academic and teaching professional experience counseling during the students' practice of teaching in the educational institutions.

6. Following up the ongoing counseling.

7. Assessing the teaching professional experience training.

5.2 The Results of Model Assessment

Table 1. The results of model assessment

List to be assessed	Level of appropriateness		
	($\bar{x}$)	S.D.	Interpretation
1. Component related to Student relation management	4.86	0.05	highest
2. Component related to organization of student relation management on cloud technology	4.74	0.02	highest
3. Component concerning academic and teaching professional experience counseling process	4.83	0.06	highest
4. The model of student relation management on cloud technology for academic and teaching professional experience counseling to be used in Rajabhat University	4.74	0.02	highest
Average	4.82	0.12	highest

Table 1 showed that the developed model of student relation management on cloud technology for academic and

professional experience counseling was, as a whole, highly appropriate to be used in Rajabhat University ($\bar{x}$ = 4.82, S.D. = 0.12). The detail investigation revealed that all components of the model including those related to student relation management, organization of student relation management on cloud technology, and academic and teaching professional experience counseling process were highly appropriate as confirmed by the calculated mean and standard deviation ($\bar{x}$ = 4.86, S.D. = 0.05; $\bar{x}$ = 4.74, S.D. = 0.02; and $\bar{x}$ = 4.74, S.D. = 0.02 respectively).

6. Discussion

In developing the model of student relation management on cloud technology for academic and professional experience training counseling in Rajabhat University, the researcher introduced the strengths of SRM theory to maintain the qualitative life cycle of the relationship and chose to use cloud technology called telecom cloud that supported and applicable to mobile phone system (Seeman & O'Hara, 2006) The users of the created model were of 3 groups, namely, the system administrators, the supervisors, and the supervisees. The results of the study confirmed that the model was rather complete and could be used as guidelines for academic and teaching professional experience counseling especially in the remote areas to reduce travel expenses. In addition, the model could keep the teacher students' complete record to promote the success of the students' study itself. The model focused on strategy to build relationship valuable to teaching profession while counseling academically and professionally. (Drake et al., 2013)

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