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To cite this article: W Prima *et al* 2019 *J. Phys.: Conf. Ser.* **1387** 012016

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Validity of Information System Model of Academic Service based on Customer Relationship Management at University

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Abstrak. This research is a part of developing research model on information system of academic service based on customer relationship management at university. This research is a research and development through Borg and Gall design that has 10 phases. Nonetheless, on this research only focuses on product validity that is third phase on Borg and Gall design. The result of this research has 3 types of products. First is a book model that contains primary support model and secondary support model. Second is information system of academic service website that can be used as a supported tool to apply a model at university. Third is a guiding book that can be used to guide the process in using information system of academic service website. This result of this research also shows that product has been got is categorized very valid. It can be said that product got, can be applied for the next phase of this research.

1. Introduction

Higher education is one of formal institutions that has important role to increase human sources [1]. competitive among higher education forces the higher education to pay attention quality of education to be able to compete each other [2]. However, based on facts got in the field, quality of education both of government and private universities still have low quality. It can be proved through data got from national accreditation higher education (Indonesian term called BAN-PT) per-January 2016. based on the data got, there were few higher education that have been accredited "A" [3]. Therefore, the quality of higher education must become main priority and then it can increase human sources. One of criteria that determine the quality of higher education is the quality of management. Based on Shrode Dan Voich, the purpose of management is productivity and satisfaction [4]. Satisfaction is seen from the quality of services to customers [2]. At higher education, students are main customers [5], [6]. therefore, in increasing the quality of higher education, needs services improvement that can increase students' satisfaction as the main customers at higher education. there are 8 factors that influence the quality of higher education, that are various education, easy access, and usage of facilities, interaction between students and lecturers, results of students studies, learning process, quality of lecturers, and the ability to use technology, and then lecturers experience in teaching [7]. Among of the 8 factors, the quality of academic services is one of factors that determine the quality of higher education, because academic future higher education success depends on the ability of institutions in communicating to students in order to full fill students' needs [8]. Some



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results of researches show that there are some problems in academic services such as limited access of information thus it causes students are reluctant to ask questions [9], mistakes made, wasting time, and cost [10], little information for stakeholder [7], little information for candidate students [11], and a lot of alumni that do not have occupations [12].

Based on the problems above, it needs to be developed an information system model of flexible, dynamic academic services that relate to students needs as main customers. information system model of academic services based on CRM is one of effective models that is developed to increase the quality of higher education because concept of CRM is a combination of human process and technology that is trying to understand customers [13]. Some results of researches shows that implementing CRM can increase customers' loyalty [14]–[19], and ease to process customers' data [13], and then it can maintain organization [20]. Through CRM, it is hoped the quality of academic services at higher education can be increased, because CRM tries to get profit optimally through having relationship closely to students as main customers.

This research is research and development (R & D) through Borg and Gall that consists of 10 phases, namely; 1) Research and information; 2) Planing; 3) Develop preliminary form product; 4) Preliminary field testing; 5) Main product revision; 6) Main field testing; 7) Operasional product revision; 8) Operasional field testing; 9) Final product revision; 10) Dessimination and implementation. By having some phases on this model, thus on this research only focuses on validation test model information system of academic services model based on CRM at higher education and it also to see whether the model developed is based on strong rational theoretic, and whether components of this model relates consistently between one to another.

2. Methodology

Developing information system of academic services model based on CRM at higher education through Borg and Gall design had 10 phases. On this research, researcher only did the third phase, developed preliminary form product, doing validation test to some experts that consisted of language expert, model experts, design experts service experts, and technology of information expert.

3. Result and Discussion

Result of this research shows that the product got is categorized very valid. The following table shows result of validation done by 5 experts that consists of language, design, service, and technology of information experts.

Table 1. Result of Validation of Book Model

No	Initial Draft	Result	
		Quantitative	Qualitative
1	Supported Theory	4.48	Very Valid
2	Primary Support	4.42	Very Valid
3	Secondary Support	4.45	Very Valid
4	Implementing Services Model	4.40	Very Valid

Book of model, result of validation seen on table 1, it shows that supported theory, primary support, secondary support, and implementing services model, have criteria categorized very valid. It can be said that model book developed is based on services characteristics and then it is supported by relevant theories. Next, components developed on this model are also related and quality of services at higher education based on needs of developing information system of academic services model based on CRM.

Table 2. Result of Validation Guiding Book of Website Usage

No	Initial Draft	Result	
		Quantitative	Qualitative
1	Cover	4.20	Very Valid
2	Purpose	4.47	Very Valid
3	Language	4.33	Very Valid
4	Physical Object	4.20	Very Valid
5	Profit	4.60	Very Valid

Table 3. Result of Validation Website of Information System of Academic Services

No	Initial Draft	Result	
		Quantitative	Qualitative
1	Appearance	3.38	Valid
2	Operating	4.45	Very Valid
3	Usefulness	4.26	Very Valid

Table 4. Category Criteria of Validation Information System Model of Academic Services Based on CRM

No	Score Interval	Validation Category
1	$4 \leq VR \leq 5$	Very Valid
2	$3 \leq VR < 4$	Valid
3	$2 \leq VR < 3$	Less Valid
4	$1 \leq VR < 2$	Invalid

Guiding book of website usage, result of validation seen on table 2, it shows that cover, purpose, language, physical object, and profit of guiding book have criteria categorized valid. It can be said that the guiding book of website usage can be used based on needs.

Information system of academic services website, result of validation seen on table 3, it shows that appearance, operating, website usefulness have criteria categorized very valid. It can be said that information system of academic services website can be used well.

Referring with the explanations above, it can be said that the product got can be used to increase academic services at higher education. Based on characteristics at higher education, information system of academic services model based on CRM can increase a quality of services at higher education. It is based on result of this research that services process well can increase the quality of higher education [7], and implementing CRM in organization can increase a good relationship with customers (students) [21]–[29].

Through model book, guiding book of website usage, and information system website of academic services, it can be hoped that it can be easy for lecturers and staffs to implement information system model of services based on CRM thus it can increase the quality of academic services at higher education.

4. Conclusion

Based on the result and discussion above, it can be concluded that developing information system of academic services model based on CRM at higher education is categorized very valid. thus this product can be applied to the next phase.

Acknowledgments

The completion of the study must not be separated from the support of various parties. Therefore, the authors would like to thank:

1. Strengthening the Directorate General Research and Development of the Ministry of Research, Technology and Higher Education of the Republic of Indonesia who have given doctoral dissertation research grants to researchers
2. Prof. Ganefri, Ph.D. as promoter 1
3. Krismadinata, ST., M.T., Ph.D as promoter 2

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