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Global Collaboration For Education Equity

The proceedings of the **2nd Asian Education Symposium (AES 2017)**
organized by Universitas Pendidikan Indonesia in collaboration with
Universitas Mataram, Universitas Islam Negeri Sunan Gunung Djati,
Universitas Pendidikan Ganesha, and Universitas Pakuan

Organized by:



AES 2017

2nd Asian Education Symposium

Bandung - Indonesia

November 6 - 7, 2017

Organized by

UPI - School of Postgraduates, Universitas Pendidikan Indonesia

In Collaboration with

UMI - Universitas Mataram, Indonesia

UIN - Universitas Islam Negeri Sunan Gunung Djati, Indonesia

UPG - Universitas Pendidikan Ganesha, Indonesia

UP - Universitas Pakuan, Indonesia

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Edited by Ade Gafar Abdullah, Ida Hamidah, Siti Aisyah, Anna Permanasari and Vina Adriany

Printed in Portugal
ISSN: 2184-335X
ISBN: Not Available
Depósito Legal: Not Available

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ORGANIZING COMMITTEES

FOREWORD

This book contains the proceedings of the 2nd Asian Education Symposium (AES 2017) organized by Universitas Pendidikan Indonesia in collaboration with Universitas Mataram, Universitas Islam Negeri Sunan Gunung Djati, Universitas Pendidikan Ganesha, and Universitas Pakuan.

Asian Education Symposium (AES 2017) is an international refereed conference dedicated to the advancement of theories and practices in education. The AES 2017 promotes collaborative excellence between academicians and professionals from Education. The conference is expected to develop a strong network of researchers and pioneers in education worldwide. The aim of AES 2017 is to provide an opportunity for academicians and professionals from various educational fields with cross-disciplinary interests to bridge the knowledge gap, promote research esteem and the evolution of pedagogy.

The AES 2017 main theme is Global Collaboration for Education Equity. The range of topics covered by in the the 2nd AES 2017 Proceeding includes the theoretical and empirical papers on: Art Education, Adult Education, Business Education, Course Management, Curriculum, Research and Development, Educational Foundations, Learning / Teaching Methodologies and Assessment, Global Issues in Education and Research, Pedagogy, Ubiquitous Learning, and other areas of education.

We would like to extend our gratitude to all parties who have given us their supports for organizing the 2nd AES including all participants from various universities and institutions in Indonesia and abroad who have participated, and the distinguished speakers including Prof. Dr. Hans Dieter Barke, Husni Mua'z, Ph.D., Prof. Dr. Razali Hasan, Prof. Jon Lovett, Ph.D., and Prof. Yamamoto Ikuro. Last but not the least, we would like to highly appreciate the organizing committee members for their hard work, commitment and efforts dedicated since the preliminary preparations a year ago. May the blessings of Allah be upon all of us. Finally, we hope that this collaborative conference event will promote further academic studies of the discipline, strengthen the partnership as well as broaden the network regionally and globally. By God willing, this collaboration hopefully will continue in the near future.

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Integration of Sitorem Method with Strategy for Action Priority Preparation to Optimize the Stipulation of Action Plan in Education Management

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Keywords: Sitorem Method, Action Priorities, Action Plans, Education Management.

Abstract: Sitorem is a Scientific Identification Theory to Conduct Operations Research in Education Management which is a method for the identification, modelling, and optimization of a system in the field of Education Management in particular and other fields in general. This paper provides an explanation of how Sitorem is integrated with the prioritized method of action so that the priority of the compiled action can be used to establish an action plan that provides a high leverage to the improvement of the system under study. The method of preparing the priority actions integrated into Sitorem is a method based on the results of initial research on the strength of the relationship or influence between the variables studied and leverage power analysis of factors or indicators of each variable and the calculation of the value of each indicator obtained from Data of research results in the field. To clarify how the method is applied, in this paper, a description of examples of action priorities is given to increase the lecturer's commitment to his profession through the development of empowerment and academic culture.

1 INTRODUCTION

The research of doctoral students at the Pakuan University Postgraduate Program is required to produce an action plan so that the results of the research can be directly utilized and felt by the community. However, what has been happening so far, is that the researches have not fully addressed the issues raised and only stopped at the conclusion of the results of the use of the tools or research methods only. The situation can be known from the writer's empirical experience who has been an examiner on thesis and dissertation exams in the university's post-graduate program for nearly six years. For example, a researcher raises the issue of low teacher creativity (dependent variable (y)). The teacher's creativity is raised as a research topic because teacher's creativity is an important element related to the achievement of educational goals. The purpose of education in Indonesia, as stated in the law, is to educate the nation's life, or in other words, to produce good quality human resources both in terms of knowledge, skills, knowledge and personality.

The researcher then conducts his research using quantitative methods by examining the relationship

between other variables (eg x_1 , x_2 , and x_3) with the teacher's creativity (y). Such a study concludes that there is a positive relationship between x_1 and y , x_2 with y , x_3 with y , x_1 and x_2 together with y , and so on. They forget that the problem raised is about the low creativity of teachers and how to improve not the problem of relationships among variables studied, meaning that if the creativity of teachers is low then the closest result of the situation is that the learning done by the teacher will be boring so that students are less interested to follow the lesson. The nearest consequence of these circumstances is that students do not get the maximum learning so that if a graduate then the quality is not in accordance with the expected in the purpose of education.

This paper provides a description of how Sitorem is integrated with the Action Priority Preparation Method for optimizing the action plan setting. To give a clearer picture, in this paper will be given a description of an example of the establishment of an action plan in the field of education management. Overall, the research method used is a mixed or explanatory sequence method, namely the quantitative method first and then followed by qualitative methods.

2 SCIENTIFIC IDENTIFICATION THEORY FOR OPERATION RESEARCH IN EDUCATION MANAGEMENT

Sitorem is theory that describes the steps in systems analysis, modeling, and simulation. As stated in Hardhienata (2015), systems analysis is started from the real system which is to be studied, an observation or experimentation is conducted to obtain data from the real system. Based on the data from the real system, an analysis of the system is performed to build an abstract model. From the abstract model, we create a mathematical model or a simulation model which depends on the situation and steps that we choose to resolve the model. We resolve the model through a mathematical deduction if we choose the mathematical model and for the simulation model the solution is typically done by using a computer, whereas for the statistical model we resolve the solution through statistical analysis. After that we conduct optimization steps to obtain an optimal solution. The diagram below in Figure 1 depicts the steps of scientific identification theory for operation research in education management (Sitorem).

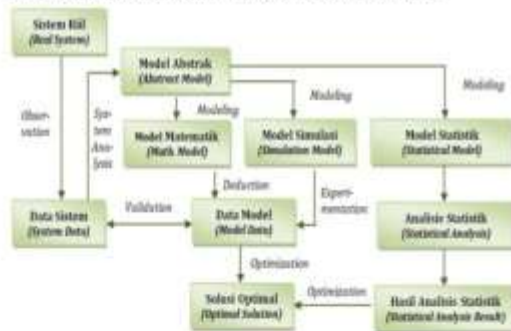


Figure 1: The steps of Sitorem Method.

3 INTEGRATION OF SITOREM METHOD WITH STRATEGY FOR ACTION PRIORITY PREPARATION

Hardhienata (2017) stated that an action prioritization strategy (APS) is a strategy that governs how research outcomes are prioritized based on the magnitude of the leverage of those actions that can have a significant positive impact on the improvement of the system under study. This needs to be done because

the resources owned by an organization are generally limited, both in terms of human resources, funding sources, facilities, materials, methods, and the information it has. By prioritizing these actions can then be determined action plan by choosing a high priority action first.

The idea of the integration of Sitorem with Strategy for Action Priority Preparation inspired from the following papers: Azilah and Rafikul (2015) mentioned that there has been increasing interest in the application of the analytic hierarchy process (AHP) in the educational sector. However, little effort has been made in reviewing its applications particularly in higher learning institutions. Labib, A. et al (2014) presented a hybrid model based on two operational research methodologies named Multiple Criteria Decision Making (MCDM) and resource allocation and connected it with Analytic Hierarchy Process (AHP) to formulate model which represents different factors and alternatives, assess their priorities, and provide a decision making mechanism. And also from Johnes (2014) who stated that operational research techniques have been applied in education, but it is not especially in education management. The Sitorem tries to expand the application of operations research in the field of education management.

In the Sitorem, the action plan should contain detailed steps of the action to be taken so that the user can easily understand it and carry out the action properly. In the Sitorem method, the strategy is added after the statistical analysis stage and / or after obtaining the model data to obtain the optimal solution. Therefore, the Sitorem diagram will be as shown in Figure 2 below.



Figure 2: Integration of APS to Sitorem.

The APS has the following steps: (1) Making a list of suggestions for improvement, (2) Preparation of action priorities based on a list of suggestions for improvement, (3) Determination of activities to be used as Action Plans on the basis of priority action sequence and achievement of indicator value from research results, (4) Making details of activities of the

Action Plan. To clarify the above steps the following will be given an example of its implementation.

4 ACTION PLAN DEVELOPMENT

As mentioned by Hardhienata (2017) that the study of Setyaningsih (2016) was synthesized that Professional Commitment is loyalty, engagement, and integrity of a lecturer in performing the tasks on the basis of skills, expertise, and responsibility, with indicators: Sooth, Consistency, Improvement Desire, Skills Development, and Dedication and Devotion. Empowerment is the awarding authority and responsibility of the leader to employees to carry out tasks in a creative and innovative ways, in response to various changes dynamically as the capabilities of employees, with indicators: Discretion, Authority, Creativity and Innovation, and Open Communication. While the Academic Culture is a basic assumption to understand the beliefs, responsibilities, norms, values, artifacts and spirit of academic, embraced by all campus residents and used as a basis in carrying out tasks and solving problems with indicators of Applied Values, Academic Spirit, Responsibility, Tradition Assessment, Support and Cooperation.

The objective of that research was to investigate whether there exists any direct positive effect of empowerment and academic culture towards lecturer professional commitment at the University of Pakuan, Bogor, Indonesia. A total of 135 from 337 university lecturers were sampled to collect data which was then analyzed using path analysis quantitative method.

The result shows that there exists a positive direct effect of empowerment towards professional commitment and academic culture towards professional commitment with path coefficient $\rho_{y1} = 0,34$ and $\rho_{y2} = 0,17$ respectively. This means that increasing the quality of empowerment can enhance the professional commitment and conducive academic culture can enhance the professional commitment. The implication is that to improve the professional commitment of lecturers is necessary to increase the quality of empowerment and improvement of academic culture.

Further steps are taken according to the stages of APS as follows:

4.1 Making a List of Suggestions for Improvement

From the results of the above study then made a list of suggestions of improvement based on the achievement of the indicator value of the Empowerment and Academic Culture variables. Suggestions are made based on the criteria if the indicator value is good then it is recommended to be maintained, while for indicators whose value is not good is recommended to be improved. The achievement of the indicator value for the Empowerment Variables with the scoring scores 1 - 5 with the predicate 1: very bad, 2: ugly, 3: enough, 4: good, and 5: very good. From the research obtained the following results: Authority 3.3, Discretion 3.8, Open Communication 4.2, and Creativity and Innovation 3.7). As for the Academic Culture variables the achievement of the indicator values are as follows: Academic Spirit 3.6, Cooperation Support 3.8, Applied Values 4.1, Responsibility 3.7, and Assessment Tradition 3.8.

From the results of the above values indicators can be compiled suggestions as follows. For the recommended Empowerment variable to be maintained is Open Communication indicator, while the recommended to be improved is indicator Authority, Discretion, and Creativity and Innovation. As for the Academic Culture variables recommended to be maintained is the Applied Values indicator, while that needs to be improved is the indicator of Academic Spirit, Cooperation Support, Responsibility, and Assessment Tradition.

4.2 Preparation of Priority Actions Based on a list of Suggestions for Improvement

Action priorities are prepared on the basis of an analysis that a high priority action is an action that can provide a great leverage for the improvement of the system under study if the action is exercised. Based on the analysis, the following list of action priorities are obtained: Variable Empowerment (Authority 30%, Discretion 20%, Open Communication 15%, and Creativity and Innovation 10%), Variable Academic Culture (Academic Spirit 30%, Cooperation Support 25% Applied Value 20%, Responsibility 15%, and Assessment Tradition 10%).

4.3 Determination of Activities to be Made Action Plan Based on Order of Priority Action and Achievement of Indicator Value from Result of Research

Based on the above results, a table of combinations between the indicator values obtained from field research and the results of prioritizing actions as shown in Table 1 are presented. Based on the above results, a table of combinations between the indicator values obtained from field research and the results of prioritizing actions as shown in Table 1 are presented.

Table 1: Obtaining the value of indicators and outcomes of action priorities.

Variable					
Empowerment			Academic Culture		
Indicator	Value	Priority	Indicator	Value	Priority
Authority	3.3	30%	Academic Spirit	3.6	30%
Discretion	3.8	20%	Cooperation Support	3.8	25%
Open Communication	4.2	15%	Applied Values	4.1	20%
Creativity and Innovation	3.7	10%	Assessment Tradition	3.8	10%

Based on the combination of values and priorities of actions contained in Table 1 above, priority actions are developed to enhance Empowerment and Academic Culture as an effort to improve Lecturer Profession Commitment as follows: (1.) Academic Spirit, (2.) Authority, (3.) Responsibility, (4.) Cooperation Support, (5.) Discretion, and (6.) Creativity and Innovation. Therefore, action plans can be made based on the results of the above actions taking into account the state of the organization's resources, meaning any actions that can be hastened to implement the action plan.

4.4 Making Details of Activities of the Action Plan

A defined action plan, such as an action plan to improve (1.) Academic Spirit and (2.) Authority, further details are made so that the program can be easily understood and implemented by the relevant parties.

5 CONCLUSIONS

In this paper has been given a description of how the Strategy Priority Session Establishment is integrated with the Sitorem Method. Given the integration of these strategies and methods, action plans can be properly targeted considering that organizational resources are generally limited so that activities to be undertaken must be based on the priority and availability of organizational resources. In this way, the activities carried out will be able to immediately provide improvements to the system under study because the selected activities have high leverage. By using the Sitorem method as described in this paper, the deduction of the proposed research results and the determination of the action plan becomes concrete. Going forward, in order for the more accurate result of preparation of action priorities can be added using methods such as AHP (*Analytical Hierarchy Process*).

REFERENCES

- Azilah, A., Rafikul, I., 2015. The application of analytic hierarchy process in higher-learning institutions: a literature review. *J. International Business and Entrepreneurship Development*. Vol. 8, No. 2.
- Hardhienata, S., 2015. *Teori Pengenalan Ilmiah*, e-Book for e-Learning, Program Studi Ilmu Komputer, Universitas Pakuan, Bogor.
- Hardhienata, S., 2017. The Development of Scientific Identification Theory to Conduct Operation Research in Education Management. *IOP Conference Series: Materials Science and Engineering*. Volume 166.
- Johnes, J., 2014. *Operational Research in Education*, *European Journal of Operational Research*. 243 (3).
- Labib, A., Gladstone-Millar, C., Tonge, R., Smith, D., Read, M., 2014. *Formulation of Higher Education Institutional Strategy Using Operational Research Approaches*, [Online] available at: researchportal.port.ac.uk.
- Setyaningsih, S., 2016. *Pengaruh Pemberdayaan, Budaya Akademik, Kompetensi Pedagogik, dan Trust terhadap Komitmen Profesi Dosen di Universitas Pakuan*, Universitas Negeri Jakarta. Jakarta, Desertasi.



**Global
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CERTIFICATE of PARTICIPATION

This certificate is awarded to

Sri Setyaningsih

as Presenter in

The 2nd Asian Education Symposium

Lombok

6th - 7th November 2017

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