Impacts of Monitoring and Evaluation, Active Role of Lecturers, Classroom Interaction, and Government Policy on Teaching Productivity

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Abstract. Lecturers as university educators are main player and determinant of successful educational efforts. Their roles are getting challenged when their productivity is highlighted. They face challenges which come from three sources, i.e: (1) university standards; (2) education measurement; (3) issue of balancing between government standards and higher education institutional plan. However, there is a gap that lecturers’ efforts in improving teaching productivity are rarely observed especially in higher education institutions. The purpose of this study is to determine whether programs that have been run by the institutions have achieved the expected goals. This study observes institutional preparation and evaluation to measure their lecturers’ roles in teaching and classroom interaction. Our study has found that Monitoring & Evaluation (M&E/Monev) and lecturers’ active role can bring impacts on teaching productivity. We have also found that attempts of lecturers and higher education institutions in complying with government education policies can improve institutional ability to develop their institutional plan.

Keywords: monitoring and evaluation, higher education, education measurement, teaching productivity, institutional development planning.

Abstrak. Pengajar sebagai tenaga pendidik di universitas adalah pemakin utama dan determinan keberhasilan upaya pendidikan. Perannya mendapatkan tantangan ketika produktivitasnya mendapat sorotan. Mereka menghadapi tantangan yang datang dari tiga pihak: standar universitas, pengukuran pendidikan, serta isu penyeimbangan antara standar kerja pemerintah dan rencana pengembangan lembaga pendidikan tinggi. Namun, terdapat kesenjangan dalam hal ketiadaan observasi atas usaha pengajar dalam meningkatkan produktivitas pengajar masih jarang dilakukan terutama di lembaga pendidikan tinggi. Tujuan study ini adalah untuk mendeterminasi sekarirnya program-proogram yang dijalankan kampus telah mencapai tujuan-tujuannya. Kajian ini mengobservasi persiapan dan evaluasi lembaga dalam rangka pengukuran peran para pengajarnya dalam pengajaran dan interaksi kelas. Studi kami menemukan bahwa monitoring dan evaluasi (M&E/Monev) dan peran aktif para pengajar dapat berdampak pada produktivitas pengajaran. Kami juga menemukan bahwa usaha para pengajar dan lembaga pendidikan tinggi dalam memenuhi kebijakan pemerintah dalam bidang pendidikan dapat berdampak pada kemampuan kelembagaan untuk mengembangkan perencanaan kelembagaannya.

Kata kunci: monitoring dan evaluasi, pendidikan tinggi, pengukuran pendidikan, kualitas pengajaran, perencanaan pengembangan kelembagaan.

INTRODUCTION

Lecturers as educators in higher education institution have been main player and determinant of high performance education (Rienties, et al., 2013). Their roles are getting challenged when their productivity is highlighted. They face challenges which come from three sources, e.g., university standards, education measurement, and issue of balancing standards with plans. (Law of the Republic of Indonesia Number 12 of 2012 of Directorate of Higher Education Article 54).

It is getting worse when their institution implements new standards of educational innovation especially curriculum change and monitoring & evaluation (M&E/Monev) measures that leads to impact on active role of lecturers (De Hei et al., 2015).

This paper measures their effort and activeness including their multiple roles to create an effective teaching and learning conditions after M & E and government’s policy is implemented. It also will measure their teaching productivity and teaching participation to improve teaching quality.

As educational standard is increased, lecturers are required to teach effectively and build interaction with their students (Laurillard, 2013). Such teaching interaction has been main part of teaching quality measures and become teaching program plan to achieve successful teaching program (Muijs & Reynolds, 2017).

The success of the program can be seen from planned target and achieved results. Even though educational planning is the main task of management division, however, lecturers also have to obtain the plan in accordance with the monitoring standard. The monitoring is intended to obtain facts, data and information about the implemented program which compared with the planned target. Furthermore, monitoring result is also used as information
for evaluation process and determine the lecturer performance (Ballou & Springer, 2015). In fact, there is diverse perspective to establish adequate monitoring efforts especially in order to meet international standards in local universities specially to support the higher education program. Therefore, this paper will find out the local universities ability to implement their international standards in accordance with the planned target and the obstacles that occur and resolved by the institution.

This study also seeks explanation about the recent situation which preventing local universities to implement international standard instrument as good control tool in the monitoring process. It finally observes common problems that occurred and hindered local universities in the process of monitoring and evaluation. It also compared the monitoring process which conducted by internal parties for internal supervision purposes.

The research problem stated in this paper are the barriers faced by local universities, such as: (1) difficulties in implementation of the standards; (2) unconstructed of international standard; (3) deviation of the planned target with the result. This study determines which programs that have been run successfully by local universities to achieve expected goals.

This research also attempts to find the right instrument to evaluate the achieved result (output) in compliance with international standards. Finally, this paper explain the reason why the universities avoid to implement international standards due to internal and external barriers.

The problem stated above is incurred from an interplay between lecturer’s role, government policy on higher education standard, and teaching productivity. Sucess of a monitoring program can be seen from what is planned with achieved goal using certain standard instrument (Boulmetis & Dutwin, 2014). To be able to measure the performance through the monitoring, certain plans must be set in accordance with the planned goal to obtain facts, data and information. the implementation of the program become activities carried out to examine the monitoring results (Heyer, et al., 2014). It is an activity to measure program effectiveness and also the implementer’s performance to overcome their obstacles. However, there is a situation that monitoring of institution and classroom performance can be overlapped especially among lecturers due to their dual role as managers and educators. It impacts on biased monitoring process which tends to subjective result.

Lecturers have main roles to develop teaching-learning methods, maintain classroom collaboration, and student interactions (Laurillard, 2013). In the teaching-learning tasks, it can be grouped into active pre-tasks, interactive assignments, and post-active tasks (Oxford, 2016). The tasks are further detailed as follows: a) encouraging student’s learning process by having known the structure and background of the scenario/case as a discussion/ block book; b) explaining lesson materials that have been prepared by the planning group or curriculum developers; c) obtaining a clear picture of the prior knowledge of the students; d) motivating discussion process which consistent with the learning objectives; e) estimating student cognitive process by means of developing student group members and participation including the possibility of conflict in student team; f) facilitating student learning, among others by asking questions, using analogies and metaphors, or clarifying concepts; g) bring “challenges” and “solution” to student in terms of reasoning, critical evaluation of emerging ideas, and hypotheses; h) diagnosing barriers in learning process and expanding student conceptual change; i) diagnosing misconceptions through classroom elaboration of ideas; j) observing student logics and reasons and the possibility of problem-solving (within the framework of problem-based learning); k) reducing the occurrence of problem and barrier in classroom interaction to synthesize superficial “findings”; l) encouraging students to perform student-directed learning; m) building self-aware to encourage student mathematics processes and calculation; and last but not least; n) evaluating student satisfaction with the ongoing classroom process and collecting suggestions for improvement.

Efforts to improve the quality of human resources cannot be separated from efforts to improve the quality of education that are currently in the spotlight and hope of many people in Indonesia. The form of the most real educational process in the field and in direct contact with the target is the form of teaching and learning activities at the level of educational units. The quality of teaching and learning activities or often referred to as the learning process of course will affect the quality of education output of human resources.

Learning activities is a process of transforming educational messages in the form of learning materials from learning resources to learners. In the learning process occurs communication to convey messages from educators to learners with the aim that the message can be received properly and affect the understanding and changes in behavior. Thus, the success of learning activities depends on the effectiveness of the communication process that occurs in the learning.

Besides the role of lecturers in increasing higher education quality, the government has issued policies in order to overcome the increasingly complex educational problems, although in the implementation the policy has not run in accordance with expectations since it needs more budget and longtime evaluation. One of the main components of education is the problem of lecturers quality that remains an unresolved problem till now (Wilmot, 2017). The low quality of graduate competencies, the gap of teaching quality and community demand, unstandardized lecturers training and professionalism become the work of the government till today. The low quality is rooted in issues of lecturers competence, limited funds, lack of facilities and infrastructure, learning environment climate, and community support (Richardson & Mishra, 2017).

To resolve the issues, Directorate General of Higher Education of Indonesia has formulated the Protocol of Self Evaluation College of teaching evaluation then becomes one of the instruments in the implementation of Education Quality Assurance System. The protocol
is based on management evaluation as college’s internal self-evaluation process which involving stakeholders. It measures the performance of college based on Minimum Service Standards and National Standards which the results are used as Higher Education Development Plan (HEDP) and as input for municipal education plan.

Private higher education institution also faces pressure in managing the College Self Evaluation program (Macfarlane, 2015). To handle the issues, the management evaluation process is directed to organize and develop a variety of superior sectors to become a mainstay of college. With the evaluation of management, college should know what areas of priority to be improved and developed. However, lecturer’s competencies and experience in teaching vary as they are resulted from divergent work productivity.

Lecturer work productivity is the potential or power generated by the individual (lecturers) is used maximally, to achieve output (output) more, creative, generative, and generate profit or usefulness (Yusuf et al., 2017). Measurements of the productivity are made through sub-variables: (1) planning and implementation of learning, with three indicators (e.g., instructional design, semester program and annual program); (2) academic achievement, with two indicators (e.g., academic work and monumental work); (3) professional development work, which includes three indicators (e.g., article writing, media creation and use, and learning tools); and (4) participation in scientific forums, with four indicators (e.g., workshops, training, speakers, and seminar participants).

Based on this concept, lecturers are faced with huge challenge to manage classroom, students, research and also scientific research activities. It needs planning, implementation, evaluation, and enrichment. The task is not easy to do, it needs a good working professionalism and their dimension to get adequate work productivity. The concept of work productivity can be seen from two sides of individuals and organizational dimensions (Alvesson & Sveningsson, 2015). The individual dimension sees productivity as result of individual personality characteristics that arise in the form of mental attitudes and implies the desires and efforts of the individual who always strives to improve the quality of the lecturer’s life. While organizational dimension has been explained as lecturer productivity within the framework of the technical relationship between the input (input) and the output (output) results (Australia, 2014). Therefore, in this view, the increase of productivity is not only seen from the aspect of quantity, but also can be seen from the aspect of quality.

**METHODOLOGY**

This type of research is field research as direct observation to the studied topic, e.g. monitoring and evaluation, teaching participation, and government policy, all together on teaching productivity. This research includes quantitative research in which researchers can determine only a few variables of the object being studied which arranged as an instrument to measure the studied topic (Brannen, 2017). This research uses Structural Equation Modeling (SEM) approach and the data is estimated by using IBM SPSS AMOS 21 software package. The theoretical model is described in the path diagram to be analyzed based on the obtained data. There are 200 collected questionnaires.

| **Figure 1. Characteristics of respondents in this study** |
|----------------------------------------------------------|
| **Respondents by gender** | **Person** | **%** |
| Men | 111 | 55.5% |
| Women | 89 | 44.5% |
| **Respondents based on Faculty Majors** | **Person** | **%** |
| Faculty of Economics and Business | 97 | 48.5% |
| Faculty of Economics Accounting | 29 | 14.5% |
| Faculty of Psychology | 26 | 13% |
| Faculty of Law Science | 21 | 10.5% |
| Faculty of Mathematics and Natural Sciences | 13 | 6.5% |
| Faculty of Computer Science and Information Technology | 14 | 7% |
| **Respondents by age** | **Person** | **%** |
| 25-30 years old | 15 | 7.5% |
| 30-35 years old | 49 | 24.5% |
| 35-40 years old | 87 | 43.5% |
| 40-45 years old | 25 | 12.5% |
| 45-50 years old | 16 | 8% |
| > 50 years old | 8 | 4% |
| **Respondents based on education level** | **Person** | **%** |
| S1 | 27 | 13.5% |
| S2 | 112 | 56% |
| S3 | 24 | 12% |
| Phd | 37 | 18.5% |

Source: tabulation results of the survey

To answer the research problem, this study collected data by means a survey with random sampling technique aimed at the lecturers at five private universities in “Jakarta, Bogor Tangerang, and Bekasi (Jabotabek), Indonesia. They are perceived to be representing higher education institutions. Te survey was conducted through filled out online questionnaires conducted by asking about their demographics and topic related to monitoring and evaluation, teaching participation, and government on teaching productivity. Furthermore, the collected data are summarized to obtain a description of respondent’s characteristics consisting of gender, occupation, age, and education level. There are 200 collected questionnaires.
Based on the table above, it is known that most of the respondents are dominated by men (55.5%) and women (44.5%) representing different universities in any faculties. They are 97 people working at Faculty of Economics and Faculty of Business (48.5%), 29 people at Accounting and Economics (14.5%), 26 people at Faculty of Psychology (13%), 21 people at Faculty of Law (10.5%), 13 people at Mathematics and Natural Sciences (6.5%) and 14 people at Faculty of Computer Science and Information Technology (7%). Meanwhile, based on age, there are 15 people at age ranges of 25-30 years old (7.5%), 49 people at 30-35 years old (24.5%), 87 people at 35-40 years old (43.5%), 25 people at 40-45 years old (12.5%), 16 people at 45-50 years old (8%), and 8 people at above 50 years old (4%). The respondents have divers level of education, range from 27 people at bachelor degree (S-1/Sarjana) (13.5%), to 112 people at master degree (S-2/Magister) (56%), to 24 people at Doctorate degree obtained from national higher education institutions (S-3/Doktor) (12%) as well as 37 people at PhD (considered as a doctorate obtained from higher education institutions overseas) (18.5%).

Data is analyzed by means of testing of the structural equation modelling. The structural model is the relationship between latent variables (variables that can not be directly measured and require multiple indicators to measure them) independent and dependent (Byrne, 2013). The result of structural model test is given in Figure 1.

The structural model in Figure 1 shows a chi-square of 346.916 with a degree of freedom of 154. In Table 2, it showed that values of CMIN / Df, RMSEA and TLI match the criteria. Although CFI, GFI and AGFI values are marginal, CFI, GFI, and AGFI values are close to the recommended values, therefore, the model is still feasible to use in this study (Shamim, et al., 2016). This means that the requirement of fit is accomplished in the model, and the model is feasible to use.

The test using SEM model has been done gradually. If the model has not been obtained correctly (fit), then the proposed model should be revised. The reason for revisions of the SEM model arises from the problems contained in the study process. A possible problem is the problem of the inability of the model developed to produce a unique estimate. If the problems arise in the SEM analysis, then, it indicated that the studied model does not support the established structural model. Thus the model needs to be revised to form a new model. Analysis of data processing result at full stage of SEM model is done by...
doing conformity test and statistic test. The test results of goodness-of-fit model are described in Table 2.

**Table 2. Test result of Goodness-of-fit model**

| No | Index          | Critical Value | Results         | Model Evaluation |
|----|----------------|----------------|-----------------|------------------|
| 1  | Chi-Square     | Near zero      | 346.916/154=2.25 | Not fit          |
| 2  | Probability level | ≥ 0,05        | 0.000           | Not fit          |
| 3  | CMIN/DF        | ≤5.00          | 2.253           | Fit              |
| 4  | CFI            | ≥ 0,90         | .947            | Fit              |
| 5  | RMSEA          | ≤ 0,08         | .079            | Fit              |
| 6  | TLI            | ≥ 0,90         | .920            | Fit              |
| 7  | GFI            | ≥ 0,90         | .882            | Marginal         |
| 8  | AGFI           | ≥ 0,90         | .806            | Marginal         |

Source: data processed from research results 2017

**Table 3. SEM Test Results**

| Variables/relations | Standardised coefficients | C.R. |
|---------------------|---------------------------|------|
| Monev Compliance    | 0.501                     | 4.469|
| Auditing            | 0.507                     | 3.308|
| Accounting          | 0.548                     | 3.406|
| Explanation         | 0.624                     | 3.755|
| Evaluation          | 0.459                     | 4.029|
| PG                  | 0.734                     |      |
| PK                  | 0.704                     | 3.140|
| LO                  | 0.429                     | 5.773|
| FG                  | 0.516                     | 5.087|
| Interactive role of lecturer | 0.531                     | 6.906|
| EG                  | 0.637                     | 4.867|
| OP                  | 0.695                     | 4.518|
| P                   | 0.528                     | 3.472|
| RC                  | 0.568                     | 3.708|
| MS                  | 0.975                     | 6.029|
| MD                  | 0.715                     | 4.648|
| FM                  | 0.642                     | 3.915|
| Teacher work productivity | 0.521                     | 2.655|
| PK                  | 0.739                     | 4.771|
| KP                  | 0.705                     | 4.218|
| KF                  | 0.895                     | 5.019|

Paths:

Monev - lecturers productivity

Lecturers Active Role - lecturers productivity 0.521 4.524
lecturers ’s interactive role - teaching productivity 0.539 4.941
Government policy - productivity of teaching work 0.604 6.003

Source: Data Processed From Research Results 2017
The results indicated that the model used is acceptable. The CMIN / DF value of 2.253, the CFI of 0.947, the RMSEA of 0.079 and the TLI of 0.920 are indications of a good structural equation model (fit). Although the chi-square measurement index, probability level, GFI and AGFI are in marginal condition, however, from several model feasibility tests, the model is feasible if at least one of the requirement of the model feasibility is met (Hair et al., 1998 in Haryono et al., 2012). In an empirical study, the model not always to meet all the criteria of goodness of fit, but depends on the judgment of each researcher. This is reasonable since the value of Chi-Square in this study is 346.916. Garson, G. D. (2013) reported that Chi-Square cannot be used as the only measure of the overall fit of the model, one reason is that chi-square is sensitive to sample size parameter.

From the output of the model in Table 3 for the criterion of conformity test model, some criteria can be taken from marginal value. The marginal value is the conformity condition of the measurement model under the absolute fit and incremental fit size criteria, but it can still be passed on further analysis as it is close to the criteria of good fit (Harrell Jr., 2015).

RESULT AND DISCUSSION

Impact of Monev on lecturer productivity

Based on the result of the model evaluation in this study, it is known that the influence of money toward productivity of teaching work. It means that money there is positive influence between with productivity of lecturers. Monitoring and evaluation of the student has been implemented by the participant with following step, first doing activity planning activity (Posavac, 2015). The procedure and component of contents that will be done monitoring and evaluated are prepared, both implementation of monitoring and evaluation activity itself, and to written report form as Materials for evaluation and feedback on the programs that have been done. Monitoring and evaluation (money) is done as an effort to determine what is being done by monitoring team to support team achievement. If there is deviation from the predetermined standard, it will immediately be repaired so that all result / achievement can be in accordance with the plan to increase lecturers productivity. In addition, as lecturer’s productivity is a manifestation of understanding and application of the competence of lecturers, including professional competence. According to Tang, et al., (2016) lecturers require professional competence to have a broad and deep knowledge of the subject matter to be taught, as well as mastery of the methodology that is mastering theoretical concepts, as well as choosing the right method to use in the learning process.

Monitoring activities are more focused on the activities to be carried out. Monitoring is done by digging to obtain information regularly based on certain indicators, with the intention of knowing whether the ongoing activities in accordance with the planning and procedures have been agreed. Monitoring indicators include the essence of activities and targets set in program planning. If monitoring is well done it will be useful in ensuring that the activities are kept on track (as per program guidelines and plans). Also provide information to program managers in case of obstacles and irregularities, as well as an input in the evaluation.

In principle monitoring is carried out while activities are in progress to ensure the conformity of the process and achievements as planned, achieved or not. If found irregularities or inaction then immediately fixed so that activities can run according to plan and target. Thus, the results of monitoring into input for the interests of the next process. While the evaluation is done at the end of the activity, the result or the final achievement of the activity or program is acquired. Evaluation results are useful for the same program implementation plan at other times and places.

Based on the study result, it notes that the influence of the active role of Lecturers with teaching work productivity with value of 4.524 (p = ≤ 0.05). It means that influence between Lecturers active role toward the lecturer productivity. Lecturers with management role can occupy a strategic position in their organization to realize the goals of national education, because lecturers as educators are directly involved in the teaching process in the classroom and school. Our study showed that lecturer’s productivity can be measured by estimating their professional productivity of. It also showed a positive relationship between several attributes of teaching and lecturers productivity (Entwistle, 2013; Olorunsola, E. O., & Arogundade, 2014).

Impact of classroom interaction on lecturer productivity

Based on the statistical testing, it known that the influence of lecturers ‘s interactive role especially their role in class discussion provide lecturers ‘s productivity with value 4.941 (p = ≤ 0.05). It means that their interactive role in classroom discussion improve the lectures’ performances especially in teaching performance. As lecturers are a media and motivators for students to look for information, they can motivate students to ask questions, discuss, express opinions, create an interactive learning environment, and provide learning media that can stimulate students to be active in the classroom session both speaking and exploration sessions. The lecturer’s role is becoming important especially as classroom facilitator so that student becomes more participative. Compared to previous research, our study is similar to Fraser, B. (2015) in that the classroom action research and teaching participation must be based on classroom discussion in order to improve lecturers ‘productivity.

Impact of government policy on lecturer’s work productivity

There are some government policies, such as improving learning, making learning tools and media, guiding students and colleagues, and participation in scientific forums (workshops, training, seminars, and discussion forums). Based on the statistical testing result, our study provide an insight that government policy can influence the teaching productivity with value of 6.003 (p = ≤ 0.05).

The teaching quality is influenced by the improvement of all components of education, such as competence and equitable distribution of lecturers location, enhanced curriculum, learning resources, adequate facilities and
infrastructure. They are become conducive learning climate which combined with government policies at the central and regional levels will improve the teaching quality (Eldor, L., & Harpaz, I. 2016). If those components can be met, then qualified human resources in education can be established. In our sampling, we use private higher education institution which implemented College Self Evaluation program. Our testing result provides that the practice of management evaluation in the college can help the institution to develop activity plan and bring the university into better direction. As many higher educations also face challenge to improve the teaching quality, colleges which continuously organize and strive to develop a variety of superior sectors will become a mainstay winner. With the evaluation of management, college are expected to know what areas of priority to be improved and developed.

Preparation of more innovative learning systems in universities such as adjustment of the learning curriculum, and improving students’ skills in Information Technology (IT), Operational Technology (OT), Internet of Things (IoT) and Big Data Analytic data, integrating physical, digital objects and human beings to produce competitive and skilled college graduates especially in data literacy, technological literacy and human literacy aspects.

Reconstruction of higher education institutional policies that is adaptive and responsive to the industrial revolution 4.0 in developing the required transdisciplinary studies and science programs. In addition, the start of the Cyber University program, as such as distance learning system, thus reduces the intensity of lecturer and student meetings. Cyber University is expected to be a solution for the nation’s children in remote areas to reach higher education quality.

Preparation of human resources, especially lecturers and researchers who are responsive, adaptive and reliable to face the industrial revolution 4.0 is crucial. In addition, the rejuvenation of infrastructure and infrastructure development of education, research and innovation is also needed to support the quality of education, research and innovation. Breakthroughs in research and development that support the Industrial Revolution 4.0 and research and development ecosystem is needed to improve the quality and quantity of research and development in universities, R & D institutions, industry and society. Breakthrough innovation and reinforcement of innovation systems would in turn increase industry productivity and improve technology-based start-up companies.

CONCLUSION

Our findings on the monitoring results showed that evaluations and follow-ups effort conducted by the colleges can improve the quality of education services. Although management evaluation is an internal/institutional self-evaluation process which has characteristics of internal management, it is necessary to involve broader stakeholders including the community to see the performance of college based on the Minimum Service Standards and National Standards Policies. The evaluation results can be used as the basis for the preparation of the College Development Plan and as input for Curriculum planner and college management auditors. Universities or colleges need to conduct a broader audit of the tools and skills to learn now and in the future and develop an assessment method that is used effectively to assess the progress of higher education management. Lecturers should be a media and motivator for students to look for information out there. Lecturers should be able to motivate students to ask questions, discuss, express opinions, create an interactive learning environment, providing learning media that can stimulate students to be active in the class both speaking and exploring.

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