

PROCEEDING

INTERNATIONAL CONFERENCE ON EDUCATIONAL RESEARCH AND EVALUATION (ICERE)

"Assessment for Improving Students' Performance"

May 29 – 31 2016
Rectorate Hall and Graduate School
Yogyakarta State University
Indonesia



Proceeding

International Conference on Educational Research and Evaluation (ICERE) 2016

Publishing Institute

Yogyakarta State University

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Yogyakarta State University

ISSN: 2407-1501

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Foreword of the Chairman

Assalamualaikum wr. wb.

Good morning ladies and gentlemen.

Praise be to Allah who has given abundant blessings so that we can hold this international conference.

This conference is aimed at improving the quality of assessment implemented in schools and other institutions. The quality of assessment determines students' ways of learning, so that it is hoped that the quality of education improves. Besides, this conference is a means of information exchanges in the forms of seminars dealing with results of research in educational assessment and evaluation. The expectation is that there is always improvement in educational assessment and evaluation methods, including in it is the instrument – both cognitive and noncognitive instruments.

The participants of this conference are the lecturers and teachers who teach educational assessment and evaluation, practitioners of assessment and evaluation, and researchers of assessment and evaluation. This conference can be held in cooperation with the Graduate School, Yogyakarta State University, Association of Educational Evaluation of Indonesia (HEPI), and Centre for Educational Research, Ministry of Education and Culture of Indonesia, supported by the Australian Council for Educational Research (ACER), Intel, Intan Pariwara Publisher, and many other institutions. For this reason, on behalf of the Organizing Committee, I would like to thank the Rector of Yogyakarta State University, Prof. Dr. Rochmat Wahab, M.Pd., M.A., and the Director of Graduate School, Yogyakarta State University, Prof. Dr. Zuhdan Kun Prasetyo, M.Ed., and all other institutions for their assistance and contribution that have made this conference possible. I would like to thank HEPI's Local Coordination Unit and all sponsors for supporting this conference and also all the audience for participating in this conference.

To the committee members, both in Jakarta and Yogyakarta, I would like to thank them for the hard work they have performed and for the togetherness so that this conference can be held.

Last but not least, we apologize for all the inconveniences you might encounter during this conference. Please enjoy the conference.

Wassalamu'alaikum wr. wb.

Prof. Djemari Mardapi, Ph.D.

Foreword of the Chairman of Himpunan Evaluasi Pendidikan Indonesia (HEPI)

Assalamu'alaikum Wr. Wb.

Indonesian Association for Educational Evaluation (HEPI) is a professional organization in education holding in the high esteem the principles of professionalism and knowledge development in the field of educational and psychological measurement, assessment, and evaluation. HEPI was established in November 19, 2000 in Yogyakarta, with a vision to become a professional organization that excels in the field of evaluation and measurement in education and psychology in Indonesia. Its mission is to develop up-to-date methodologies of evaluation, assessment, measurement, and data analysis in education and psychology, as well as studies of policies and technical implementation of the field for improving Indonesian education quality.

As a professional organization, HEPI brings together experts, practitioners and interested persons in the field of evaluation, assessment, and measurement of education, psychology and other social sciences. HEPI is open to anyone who has the interest the field with no restriction in terms of educational background and working experiences. Hopefully, through HEPI, members of the association can sustainably develop themselves as professionals. The existence of HEPI is also expected to contribute to the improvement of the quality of national education through research, consultancy, seminar, conference, publication, and training for members of the organization and for public audiences.

HEPI organizes annual workshop and conference in cooperation with the Regional Chapter of HEPI and universities. In 2016, for the first time HEPI organized **International Conference on Educational Research and Evaluation: Assessment for Improving Student's Performance** in May 29-30 2016 in Yogyakarta. This conference is jointly organized by HEPI and Yogyakarta State University and supported by the Center for Educational Assessment the Ministry of Education and Culture, Australian Council for Educational Research (ACER), INTEL Indonesia, and Intan Pariwara Publisher.

It is important to note that the choice of the HEPI 2016 conference theme is driven by the fact that the quality of our national education is still under expectation as shown by the results from School National Exam and international surveys conducted by some international agencies. HEPI believes that a number of factors contribute to the low quality of national education, including low teacher's knowledge and skills in classroom and school assessment. Therefore, improving the competence of teachers in classroom and school assessment is urgently required. In this context HEPI as a professional organization and individual members of the organization have to play an active role in improving teachers' competence in quality learning assessment.

In line with 2016 conference theme, HEPI invited two respected guest speakers, namely, Professor Geoffrey Masters, Ph.D., Director of the Australian Council for Educational Research (ACER), who presented a paper on Assessment to Improve Student Competency and Professor Frederick Leung, Ph.D., from the University of Hong Kong, who delivered a paper on the International Assessment for Improving Classroom Assessment.

As a tradition, in 2016 conference HEPI organized two pre-conference workshops. The first workshop is on the conceptual introduction of Rasch model by Jahja Umar, Ph.D., senior lecturer at the Faculty of Psychology, State Islamic University Jakarta and the second workshop was delivered by Heru Widiatmo, Ph.D., researcher at American College Testing (ACT) Iowa, United States on Measuring Higher Order Thinking Skills (HOTS).

On behalf of HEPI, I would like to express my heartfelt gratitude to Rector of the Yogyakarta State University, invited speakers, resource persons, HEPI regional chapters, sponsors, speakers, participants, invited guests, and organizing committee who have worked hard in making this international conference a success. Thank you very much for your participation and support and we are looking forward to seeing you in the next conference.

Last but not least, we hope that all of us get much benefit from this conference for enhancing Indonesian quality education through quality assessment.

Wassalamualaikum wr. wb.

Chairman,
BAHRUL HAYAT, Ph.D.

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INDICATOR DEVELOPMENT OF LEARNING MODEL EVALUATION INSTRUMENT

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Abstract—Professional educators are required to develop a learning model that was based on a constructivist understanding. This study aimed to obtain the indicators needed to measure a learning model developed by educators in all types and levels of education. Indicator is intended to evaluate the components of a learning model.

The method used in this research is quantitative descriptive. Data was collected by the Focus Group Discussion (FGD) with three steps; a preliminary investigation, design, and realization / construction. It was involving six experts and four practitioners. Validation of the construct is in the form of expert judgment. The opinions of experts and practitioners were analyzed descriptively, while the reliability of the instrument was analyzed by Cronbach's Alpha.

The results showed that there were 7 indicators of learning model developed from five aspects; rational theoretical (2 indicators and 11-item criteria), syntax (1 indicator and three item criteria), the principle of interaction (1 indicator and 7 item criteria), social systems (1 indicator and three item criteria) and the impact of learning (2 indicators and criteria item 7). The measurement results were using 3-scale models of learning; 1 (= if the indicator is less good / less logical), 2 (= if the indicator is good enough / illogical) and 3 (= if the indicator is good / logical). Assessment categories were grouped into three; No Good (TB), Good (B) and Very Good (SB). Reliability value questionnaires are rational theoretical aspects of 0.89, the syntax of 0.81, 0.93 interaction principle, the social system and the impact of learning 0.86 0.84. Based on reliability testing all aspects of the value of Cronbach's Alpha of 0.94, thus all items contained in the questionnaire are reliable and all indicators internally consistent because they have a strong reliability.

Key words: five aspects, learning model, seven indicators

I. INTRODUCTION

Professional teachers in all types and levels of education are required to have professional competence, pedagogical, social and personality. One of the accomplishment in the learning process, teachers are required to provide education in an interactive, inspiring, fun, challenging, motivating the students to actively participate and provide enough space for innovation, creativity, and independence in accordance with their talents, interests, and physical development as well as psychological learners

Moreover, in the process of learning, educators should prioritize the planting of the character values in addition to the transfer of knowledge and skills. Therefore, educators must design the advanced needs of the students, as the outlined in lesson planning. Instructional design promotes character education and encourages students to think high to achieve learning goals effectively and efficiently, if the design is embodied in the learning model. Educators can design their own model of learning and use learning model that has been designed by experts or other practitioners.

According to Arends (2008) learning model has four characteristics; (1) rational theoretical, has a foundation to think how the nature of learners can study well, (2) learning objectives,

namely what is the purpose of students learning, (3) the syntax, that is how sequence patterns of behavior of learners with educators, and (4) how to support the learning environment. Meanwhile, according to Bruce Joyce and Weil (2009), learning model is as a conceptual framework that describes a systematic procedure for organizing the learning experience of students.

In detail, Bruce Joyce and Weil (2009), explains the components of learning models, namely: (1) rational theoretical, as a basis to think how the nature of learners can study well, (2) syntax, how the sequence pattern of behavior of learners with educators, (3) the principle of interaction, how educators positioned themselves against educators and learning resources, (4) social system, how do you view among components within a social community, (5) support system, how a supportive learning environment, and (6) the impact learning, namely how the results and impact of the expected good learning instructional impact (instructional effect) and the impact of Bridesmaids (nurturant effect).

Since it is lack of an evaluation tool that can be used by teachers to measure the design of learning model by themselves or other experts, it needs to develop the indicators of evaluation instrument. So the evaluation instrument to measure a learning model is available.

The problem of this study is how the development of the indicator of learning model can provide information about a model of learning. The objective of the study is to get the instruments indicators on learning model. The advantage of the study is teachers can use a set of indicators to evaluate a learning model which is designed by themselves or other experts.

II. THE METHODS OF STUDY

This type of study is development research. The steps are preliminary investigation, design, realization/construction, test, evaluation and revision, and implementation (Plomp, 1977). The steps are adjusted with the development of a learning model evaluating indicators, it is only up to the stage three.

The first stage is introduction; preliminary study activity and collection of information are taken due to the learning model that is often used by teachers. It is intended to seek information about the weaknesses and strengths of the learning model. It is also to examine theories of learning models, as well as the assessment of the relevancies of previous studies. Second step is the design phase; the development of components and aspects of learning and the planning model evaluation base on the grid instruments of data collection. The third step is the realization/construction phase; the construction is validated by expert in order to know whether the indicators of learning model evaluation instruments appropriate to the theory/construction.

This activity is done by 6 experts in Focus Group Discussion (FGD) to analyze if the indicator was suitable to the construction. In this step, Review of practitioners is performed by 4 senior teachers. After FGD and review were done, the indicators were revised to repair and to take other inputs Cronbach's Alpha.

III. THE RESULT AND THE DISCUSSION OF STUDY

Based on the result of FGD of experts and practitioners, it is released the indicators of learning model evaluation instruments to be used to measure a learning model. The result of the study is available on Table 1.

Table 1. The Result of Indicator Development of Learning Model Instrument.

| No. | Aspect | Indicator | Criteria |
|-----|----------------------|--|---|
| A. | Rational Theoretical | There are theories relate to the character of subjects | The dimension clarity of cognitive process to be achieved |
| | | | The dimension clarity of knowledge to be achieved |
| | | | The clarity of competency level to be achieved |
| | | | The clarity of affective domain level to be achieved |
| | | | The clarity of affective domain type to be achieved |
| | | | The clarity of psychomotor domain level |

| No. | Aspect | Indicator | Criteria |
|-----|--------------------------|---|--|
| | | | to be achieved |
| | | There are theories relate to the character of students | The clarity of learners' early competency |
| | | | The clarity of learners' learning motivation |
| | | | The clarity of learners' interest |
| | | | The clarity of learners' socioeconomic background |
| | | | The clarity of learners' multiple intelligence |
| B. | Syntax | The sequence of learning steps that must be done by teachers when going to use certain learning model | The clarity of the sequence of learning steps that must be done by teachers |
| | | | The clarity of the approaches, strategies, methods, techniques and tactics that available in a model |
| | | | The clarity of both hierarchical sequence of steps or procedures |
| C. | Principle of Interaction | The patterns of interaction both learners and teachers in the learning and assessment | There is educational interaction between learners and educators |
| | | | Educational interaction between learners and learners |
| | | | Variation of interaction between learners and educators |
| | | | Variation of interaction between learners and learners |
| | | | The interaction between students and other learning resources, which are designed and utilized |
| | | | The frequency or more or less the turn of the action between teachers and learners |
| | | | The frequency or more or less the turn of the action between learners and learners |
| D. | Social System | The design of collaboration between learners and teachers in learning | Learners' participation in individual learning |
| | | | Learners' participation in group learning |
| | | | Teachers' participation in learning |
| E. | Instructional Effect | The effect of direct learning (Instructional Effect) | The increasing of learning achievement of cognitive process dimension |
| | | | The increasing of learning achievement of psychomotor dimension |
| | | The effect of indirect learning/supporting (Nurturing Effect) | The increasing of soft skill of value affective dimension |
| | | | The increasing of soft skill of motivation affective dimension |
| | | | The increasing of soft skill of value affective manner |
| | | | The increasing of soft skill of value affective emotion |
| | | | The increasing of soft skill of value affective interest |

Based on the analysis of experts and practitioners, to evaluate a learning model there are five aspects and 7 measurement indicators, and developed criteria as a measure of each indicator. Table 2 shows the number of indicators and criteria from each aspects.

Table 2. The Number of Indicators and Criteria of Learning Model

| No. | Aspects | Amount of Indicators | Total of Criterion |
|-----|------------------------------|----------------------|--------------------|
| 1. | Rational Theoretical | 2 | 11 |
| 2. | Syntax | 1 | 3 |
| 3. | The Principle of Interaction | 1 | 7 |
| 4. | Social System | 1 | 3 |
| 5. | Instructional Effect | 2 | 7 |
| | Total | 7 | 31 |

The result of learning model measurement uses 3 scales; 1 (=if the indicator is not good/illogical), 2 (=if the indicator is enough/illogical), and 3 (=if the indicator is good/logic). Assessment categories are grouped into three, they are No Good (TB), Good (B) and Very Good (SB). The way of calculating the category follows the opinion of Arikunto (2009), as showed on Table 3.

Table 3. Assessment Categories

| No. | Reference | Category |
|-----|---|----------------|
| 1. | $\geq (\bar{x} + 1. SD)$ | Very Good (SB) |
| 2. | $(\bar{x} - 1. SD) \leq \sum < (\bar{x} + 1. SD)$ | Good (B) |
| 3. | $< (\bar{x} - 1. SD)$ | Not Good (TB) |

Table 4 shows that the value of reliability questionnaires rational theoretical aspects of 0.89, the syntax of 0.81, 0.93 interaction principle, the social system and the impact of learning 0.86 0.84. Based on reliability testing all aspects of the value of Cronbach's Alpha of 0.94, with demikisn all items contained in the questionnaire is reliable and all indicators internally consistent because it has strong reliability, (Maier, U., Wolf, N., & Randler, C., 2016; Bonett, DG, & Wright, TA, 2015; Sebastian Rainsch, 2004).

Table 4. The reliability Indicator Score of Learning model

| No. | Aspek | Nilai Cronbach's Alpha |
|-----|------------------------------|------------------------|
| 1. | Rational Theoretical | 0,89 |
| 2. | Syntax | 0,81 |
| 3. | The Principle of Interaction | 0,93 |
| 4. | Social System | 0,86 |
| 5. | Instructional Effect | 0,84 |
| 6. | All aspects | 0,94 |

IV. CONCLUSION

The conclusion of this study is the indicator development of learning model instruments through expert judgment, FGD, and practitioners' review can be used to measure a learning model. Since indicator is based on the clear construction, so it is possible to expose a learning model.

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