

## Teacher Evaluation in Determining Ability Minimum Completeness Criteria Subject First High School Mathematics

Estu Subekti ✉, Ani Rusilowati, M. Khumaedi

Universitas Negeri Semarang, Indonesia

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### Abstract

KKM determines a measurement of the quality of learning in the educational unit. Carrying capacity, intake, students, and teachers use the complexity of determining the subjects of mathematics so KKM in education units can be different. This study aimed to evaluate the ability of teachers to include suitability procedures, enabling and inhibiting factors as well as the enforceability of the process in determining the KKM. The study used a survey method. CIPP evaluation model using the model. The sampling technique using techniques Slovin. The subjects are mathematics teachers of junior high school in Cirebon. Content validity of the instrument based on the judgment of experts using a formula Aiken's V and reliability testing using the formula Ebel. Content validity was tested by three experts. Data is collected using interview techniques, documentation, and questionnaires. Data were analyzed quantitatively and qualitatively. The ability of teachers by 83% with a very high category. Suitability procedures by 85% with a very high category and is not by following under accordance with the procedures as much as 15% lower categories. Supporting factor of 92% with a very high category and a limiting factor of 8% with the lower categories. The supporting factors include improvements to the learning process with the fulfillment of infrastructure, making document 1, 2 and 3, the achievement of KKM conducted jointly, their results are difficult KD analysis, moderate or easy, proactive learners, participating in learning activities and tasks that have been designed educators, KD producing appropriate evaluation questions. Inhibiting factors there is no standard minimum completeness criteria format that is produced through MGMP. Implementation process by 79% with a very high category.

✉ Correspondence Address:  
Kampus Pascasarjana UNNES Jl Kelud Utara 3 Sampangan  
Semarang, Indonesia  
E-mail: [bektiestu@gmail.com](mailto:bektiestu@gmail.com)

## INTRODUCTION

Educators or teachers are the most important component in the development of education. Teachers were able to create a situation that can support the development of student learning included in cultivating students' motivation (Bachelor & Khayati, 2016: 382). Teacher duties and functions in a professional manner by implementing a code of ethics teacher correctly. Teacher professional identity has four indicators: 1) put themselves in connection with the student's learning process, 2) reflect the development of a model of learning, 3) integrate and extend learning model, and 4) increase in terms of educating students ability (Bjuland et al., 2012: 405).

Student success can be determined by the ability of students to achieve minimum competency. Students strive to achieve goals in the direction of capable immature maturity with help and guidance from professional teachers (Trimo 2011: 31). Achievement of minimum competencies students to complete the learning outcomes called minimum completeness criteria. One indicator of student success in learning is that if the average results of learning has reached a specified minimum completeness criteria (Khumaedi, 2015: 23). Minimum completeness criteria into a common reference between educators, students and parents so that parties interested in the assessment at the school are entitled to know. Teachers as the main actors in the implementation of education programs in schools have a very important role to achieve educational goals (Juhji, 2016: 52).

The ability to determine the minimum completeness criteria for educators is very important because a minimum completeness criteria is a measure of the quality of learning in the educational unit. Educational unit has the function of arranging the teaching and learning process in the classroom (Palma et al., 2019: 145). Educators must be able to identify aspects in determining the minimum completeness criteria and their weighting proportionally. To achieve success educators should fully understand the material being taught and demanded to know exactly where to position the knowledge of students in the early follow certain materials (Setyawardani et al., 2012: 6),

Research result Mariama (2017: 21) concluded that the school action research activities through working groups of teachers can improve the ability of teachers to prepare and establish the minimum completeness criteria by following under the Ministerial Regulation no. 20 of 2007 on education assessment standards. Minimum completeness criteria set at the beginning of each school year. Teachers set a minimum completeness criteria of subjects taking into account three criteria: the complexity aspect, carrying capacity and capability (*intake*) Students. The development of student potential is very dependent on the learning process in the classroom involving teachers and students to improve learning outcomes (Ismalaranti et al., 2014: 37). The third aspect of minimum completeness criteria was given a score between 0-100 and then calculated the average value for each indicator, the average every basic competencies and on average every standard of competence, to determine the value of a minimum completeness criteria subjects.

Implementation in the field related to the graduation policy, the principal instructed teachers to raise the value of the minimum completeness criteria. Teachers would not want to raise the value of the minimum completeness criteria for each subject. Teachers prepare learning device by the carrying capacity of schools and potential students (Banner et al., 2013: 330). Carrying capacity, for example, a collection of textbooks that are in the library do not meet the ratio of the number of books with students rated aspects of high carrying capacity when school is not able to meet as a result of carrying capacity to be invalid. Rated capability (*intake*) of new students is difficult to determine because the need to search for previous grade report card grades are derived from different schools. To simplify most teachers estimate the value of the ability (*intake*) students so that the value of the student's ability, especially in new students to be invalid. Not uncommon value specified minimum completeness criteria can not be met due to a lack of proper preparation and commencement (Widodo, 2009:1).

Preparation and adoption of a minimum completeness criteria are inappropriately can cause a variety of problems including: (1) a lot of students test scores below the minimum completeness

criteria; (2) the value of a minimum completeness criteria in the same report for all subjects; (3) the assumption that completeness criteria at least equal to the average value. Education assessment standards require educators to determine the minimum completeness criteria concerning student characteristics, characteristics of the subjects, and the conditions of education units (Yendarman, 2016: 123).

Often hear complaints of students who used to tell "Golly was a difficult exam once almost all classmates value below a minimum completeness criteria, almost all remedial. Students whose value is above minimum completeness criteria only a few people". Uniquely students who complain of exams difficult dominated superior school students from both the public and private sectors. Try to think clearly that KKM means minimum completeness criteria. The term "minimal" means "very little". If almost all students in a class scored below the "minimum value / smallest" can be concluded: (1) students in the school are mostly not the intention of the school; (2) the value of the minimum completeness criteria are too high; (3) teachers teaching under the standard it should be. Ball & Forzani (2009: 498) concluded that "in general agreement that the teacher is the key to student learning".

Essence minimum completeness criteria that equate to the average value by assuming that the value of a good minimum completeness criteria is highest when the value of a minimum completeness criteria is a minimum standard or the lowest score students must achieve to complete the learning process. Minimums or also called pass limit is used to look at student achievement of competence (Nurhaji & Haryanto, 2015: 180). The ideal minimum completeness criteria is very useful to analyze the student's inability to solve the learning process.

Rated minimum completeness criteria established by deliberation teachers based on intake, complexity, and the carrying capacity of the schools that result in minimal completeness criteria in a school different from other schools (Mardapi et al, 2015: 39). Students who are not able to be built to complete the minimum requirement of indicators that can be achieved within its capabilities because not all students are talented human in every subject

but still there must be a minimum standard so that they can complete the learning. The results showed that in the learning process, students' learning experience is very limited hear, see and imitate the example, while uncovering over, revealing new ideas, question the idea and others associated with the communication idea almost did not appear in the entire duration of the learning process teaching, this led to the achievement of KKM students did not meet the expectations of teachers (Syakur, 2015: 81). Minimum completeness criteria socialized education units to parents to determine the minimum limit of each subject. Values obtained by the students of the minimum limit is the achievement of mastery of subjects. For example, if the value of completeness criteria and at least 80 students received grades of 80 parents sometimes encouraged. And with the same value with minimal completeness criteria may occur students take corrective/ remedial many times or the preparation and adoption of a minimum completeness criteria not be obtained according to the procedure so that students value the same as the criteria imposed minimum completeness. But parents feel disappointed when his son scored 75 with 60 minimum completeness criteria. Whereas the value of 75 has exceeded the value of the minimum completeness criteria and minimum completeness criteria may calculated based on the aspect of carrying capacity, the intake of students and the complexity of the subjects to be studied. Teachers do the test, interpret the results and operationalize the findings to make decisions and take action in response to students' test results (Pitts & Naumenko, 2016: 1),

Seeing the importance of determining the minimum completeness criteria of subjects by teachers, the author is interested in researching "evaluation of teacher's ability to determine the minimum completeness criteria subjects junior high school mathematics".

## METHOD

This study is a survey and evaluation methods CIPP evaluation model (*Context, Input, Process, Product*). CIPP model is divided into four

components include the discussion of context to discuss the ability of teachers, teachers' input addresses corresponding ability and not according to procedure, process discusses enabling and inhibiting factors, product discussed implementation process. Subjects were 80 Junior High School in Cirebon District is divided into 8 rayon. The number of teachers in each rayon within research is 8 teachers. The total population in this study is a teacher of mathematics Junior High School in the district of Cirebon by 64 teachers. Determination of the samples was done using techniques Slovin with the following formula:

$$n = \frac{N}{1 + N(e)^2}$$

the degree of trust that is used 95% and obtained a sample size of 56 teachers. Data collection techniques used in this study using interviews, documentation, and questionnaires. In this study, the content validity of an instrument based on the judgment of experts using a formula Aiken's V. Researchers use 3 expert appraiser, The results of the study were analyzed using a formula Aiken's V with valid criteria  $\geq 0.81$ .

Instrument reliability is evidenced through the analysis of the Ebel formula. In the method of internal consistency using only one instrument, so that testing is only performed one time (Khumaedi, 2012: 27). Ebel formula to determine the reliability by performing calculations using general linear models using SPSS for windows release 16.0 with a significance level of 0.05. The instrument is said to be reliable if the coefficient of reliability  $\geq 0.6$  (Mulyani et al, 2017: 19). Data analysis techniques using descriptive analysis to describe, interpret and present the results of descriptive statistical calculations. Converting the average score obtained into a value corresponding qualitative assessment criteria (Anwar, 2014: 163) in Table 1 below:

**Table 1.** Categories Descriptive Analysis

No.	Percentage (%)	Category
1	1 - 25	Low
2	26 - 50	Moderate
3	51 - 75	High
4	76 - 100	Very high

## RESULTS AND DISCUSSION

The results of the evaluation instrument study evaluating the ability of teachers to determine the minimum completeness criteria which consists of 8 items aspects of context, 13 grains aspects of input, process aspects of 16 items and 10 aspects of product. Analysis of the results of validation of the contents of the experts who analyzed the formula Aiken's V shows the overall coefficient of each item  $\geq 0.81$  means the item can be considered valid (Aiken's, 1985),

Instrument reliability test evaluation of a teacher's ability to determine the minimum completeness criteria with the reliability test *inter-rater and internally consistent* reliability test. Inter-rater reliability tests analyzed using the formula Ebel reliability test by SPSS 16.0. The results of the reliability test by SPSS 16.0 by using the formula Ebel presented in Table 2.

**Table 2.** Reliability Test Results 47 Item Instrument

Source	Mean Square
Respondents	3.149
Grain	0.239
Respondents * Item	0.200

Reliability test results using the formula Ebel Ebel calculated using the average of 3 raters is

$$r = \frac{MK_B - MK_i}{MK_B} = \frac{3.149 - 0.200}{3.149} = 0.936.$$

The analysis result is calculated using values obtained Ebel reliability coefficient of 0.936. The teacher evaluation instrument in determining the minimum completeness criteria said to be reliable if the coefficient of reliability  $\geq 0.6$  (Mulyani et al, 2017: 19). The results of questionnaire analysis instruments conducted by researchers at the 56 respondents with 8 items using the context aspects of reliability test Ebel formula obtained reliability coefficient is 0.72 presented in Table 3.

**Table 3.** Results Reliability Aspects of Context

Source	Mean Square
Respondents	1.305
Grain	3.305

Source	Mean Square
Respondents * Item	0.361

The average score was 3.33 context aspects are presented in Table 4 so that a large percentage is  $(3.33: 4) \times 100\% = 83\%$ . Aspects of context ability of teachers to determine the minimum completeness criteria is equal to 83% with a very high category. The results of the analysis of the ability of teachers to determine the minimum completeness criteria in Table 4 has a distribution of contiguous data that is till c2 until c8 distribution while adjacent data items contained in c1.

**Table 4.** Grain Statistics Problem Aspects of Context

Grain Problem	Mean	Std. Deviation
c1	3.62	0.590
c2	3.39	0.779
c3	3.46	0.538
c4	3.64	0.483
c5	3.23	0.603
c6	2.93	0.912
c7	3.20	0.616
c8	3.20	0.883
average	3.33	0.723

The results of questionnaire analysis instruments conducted by researchers at the 56 respondents with 13 items aspects *input* by using a reliability test Ebel formula obtained reliability coefficient is 0.73 presented in Table 5.

**Table 5.** Results Reliability Aspects Input

Source	Mean Square
Respondents	1.358
Grain	10.291
Respondents * Item	0.363

The average score aspect *input* was 3.39 presented in Table 6 so that a large percentage is  $(3.39: 4) \times 100\% = 85\%$ . Aspects of appropriate teacher input capability 85% categorized as very high and not by the procedure 15% lower categories. The results of the analysis of the ability of teachers according to the procedure in Table 6 with the

distribution of contiguous data that is till i1 until i10 and i12 while the ability of teachers who have not been by the procedure distribution of adjacent data items contained in i11 and i13.

**Table 6.** Grain Statistics About Aspect Input

Grain Problem	Mean	Std. Deviation
i1	3.39	0.623
i2	3.38	0.752
i3	3.95	0.227
i4	3.89	0.312
i5	3.80	0.401
i6	3.62	0.524
i7	3.54	0.602
i8	3.36	0.796
i9	3.20	0.773
i10	3.32	0.606
i11	2.27	1.053
i12	3.34	0.549
i13	3.09	0.900
average	3.39	0.776

The results of questionnaire analysis instruments conducted by researchers at the 56 respondents with 16 items in aspects of the process by using a reliability test Ebel formula obtained reliability coefficient is 0.68 presented in Table 7.

**Table 7.** Results Reliability Aspects Process

Source	Mean Square
Respondents	0.527
Grain	1.570
Respondents * Item	0.168

The average score of 3.69 aspects of the process is presented in Table 8 so that a large percentage is  $(3.69: 4) \times 100\% = 92\%$ . Aspects of process factors supporting 92% with a very high category and a resistor 8% with low category. Supporting factor analysis in Table 8 with the distribution of contiguous data that is till ps1 until ps15 while inhibiting factor with a distribution data is not contained in the item near ps16.

**Table 8.** Grain Statistics About Aspect Process

Grain Problem	Mean	Std. Deviation
ps1	3.87	0.334
ps2	3.59	0.496
ps3	3.57	0.499
ps4	3.57	0.499
ps5	3.86	0.353
ps6	3.87	0.334
ps7	3.88	0.334
ps8	3.87	0.334
ps9	3.57	0.499
ps10	3.57	0.499
ps11	3.59	0.496
ps12	3.89	0.312
ps13	3.52	0.504
ps14	3.52	0.504
ps15	3.86	0.353
ps16	3.46	0.503
average	3.69	0.462

The results of questionnaire analysis instruments conducted by researchers in 56 respondents with 10 items aspects of using the product reliability test Ebel formula obtained reliability coefficient is 0.80 presented in Table 9.

**Table 9.** Results Aspect Product Reliability

Source	Mean Square
Respondents	1.619
Grain	7.500
Respondents * Item	0.325

The average score of 3.17 aspects of the product are presented in Table 10 so that a large percentage is  $(3.17: 4) \times 100\% = 79\%$ . Aspects of product adherence to the process is equal to 79% with a very high category. The results of the analysis of adherence to the process in Table 10 with the distribution of contiguous data that is till pt1 until pt6, pt8 and pt10 while the distribution of data is not contained in the items adjacent pt7 and pt9.

**Table 10.** Grain Statistics Problem Aspects of Product

Grain Problem	Mean	Std. Deviation
pt1	3.48	0.572
pt2	3.43	0.499
pt3	3.48	0.831
pt4	3.45	0.502
pt5	3.39	0.593
pt6	3.41	0.565
pt7	3.11	0.908
pt8	3.18	0.636
pt9	2.55	0.807
pt10	3.18	0.690
average	3.17	0.754

## CONCLUSION

The results of the study that the ability of teachers to determine completeness criteria at a minimum of 83% with a very high category. KKM determine the ability of teachers to use: KD contained in the decree, the complexity of the mastery of teaching materials, the indicator in formulating the questions, assess learning outcomes on an ongoing basis for all aspects of competence, the UTS, and UAS as an instrument of learning outcomes assessment, the results of the analysis to determine the thoroughness of learning expected, the reference value learners in the assessment of subjects.

Suitability procedures by 85% with a very high category and is not in accordance with the procedures as much as 15% lower categories. The ability of teachers according to the procedure in determining KKM with the use of carrying capacity, the intake of students and complexity as a component of the assessment of each indicator in the basic competencies.

Supporting factor of 92% with a very high category and a limiting factor of 8% with the lower categories. The supporting factors in determining KKM namely: an improvement in the learning process with the fulfillment of the infrastructure of learning, making the document 1, 2 and 3, is efforts in the achievement of KKM conducted jointly by the educators, learners, leaders and parents educational unit, the KD analysis results are difficult, moderate or easy, proactive learners participating in learning activities and tasks that have been designed educators, producing a matter of evaluation/replay corresponding basic

competence. Inhibiting factor is not a format standard minimum completeness criteria generated through consultation subject teachers.

Implementation of the process by 79% with a very high category. Implementation of the process in determining the minimum completeness criteria as follows daily held in accordance with the basic competencies, each indicator represents the matter created in the daily test, the number of daily quiz about each indicator equally, level difficulty matter determined by the composition of 20% difficult, 50% moderate and 30% easy, daily tests can be made in accordance with KD on teaching materials, the UTS is used to monitor the mastery of materials, basic competence in final exams represent items.

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