Development of Islamic Education Teachers' Competence in Preparing Valid and Reliable Tests at an Islamic Junior High School in Mojokerto Regency

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Abstract: One oddity in the implementation of learning evaluation is the lack of a test step on the evaluation instrument (test) used to measure student learning success to obtain a valid and reliable tool. This assistance is intended to increase the competence of MTs PAI teachers in Mojokerto Regency in developing valid and reliable tests. In preparing this Valid and Reliable Test, the method used in the community service program to develop PAI MTs Teacher Competence in Mojokerto Regency is service-learning, with preparation, service, and evaluation stages. As a result of this assistance, PAI teachers’ commitment has changed, as has their capacity to prepare valid and reliable tests, resulting in an improvement in the quality of the PAI learning evaluation.

Keywords: PAI Teacher, MGMP, Test Preparation

Introduction

The values provided by the teacher following the execution of the learning evaluation can be used to determine students' learning success. Each teacher must evaluate after completing the previous two stages of learning, namely planning and implementing learning. Learning evaluation educates instructors, students, parents, and other stakeholders on students’ understanding of the subjects taught and their high capabilities after participating in learning activities.

As a result, one of the essential components of learning that education stakeholders must address is learning evaluation. Learning evaluation also gives information on how well education is delivered; the stronger students' knowledge of a subject and competency, the higher the quality of education. Despite efforts to assist instructors through certification allowances, complaints about educational quality persist.
The teacher welfare program based on certification allowances is founded on the premise that teachers are the primary key to enhancing educational quality, hence teachers must be prospering for them to have a strong dedication to giving great education.

To develop teacher competency, many tools such as training and mentoring and possibilities for further study are used. This program to boost welfare and teacher competency is projected to promote educational quality, particularly learning evaluation quality. The lack of testing steps on evaluation instruments (tests) used to measure student learning performance, including success in acquiring Islamic Religious Education (PAI) subjects, is one peculiarity in the implementation of learning evaluation.

Testing assessment instruments is widely acknowledged in learning evaluation theory to be valid and trustworthy. The validity of the learning outcome evaluation instrument (test) ensures the accuracy or precision with which students' ability or competence is measured. The instrument’s dependability is required to have trust that the assessment instrument (test) may be known for its reliability so that it can be used not only for students in one school, but also for students in other schools and on different occasions or times. A teacher does not need to be a measurement/assessment expert, although fundamental measurement/assessment abilities, such as validity and reliability tests, are essential.1

Although the test assesses learners' cognitive abilities, PAI teachers must recognize that those abilities contribute to building attachment, a key domain of Islamic Religious Education.2 The effectiveness of students' faith and moral formation, which is the purpose of PAI topics, is also determined by their comprehension and reasoning abilities. Learners cannot have a healthy faith and religious attitude if their thinking does not operate.3 As a result, PAI teachers cannot neglect to measure cognitive characteristics through tests, including validity and reliability issues.

There is a controversy in the evaluation of PAI learning about whether PAI Subjects own the three learning domains (cognitive, emotional, and psychomotor). The first two categories, cognitive and affective, are indisputable, however some experts say that PAI does not include the psychomotor realm because the conduct demanded by PAI Subjects is not a profession that requires complex or sophisticated morotic movements.4

Body movements required by PAI Subjects in wudlu, tayamum, or prayer activities are not yet classified as psychomotor.

The two characteristics mentioned above, teacher dedication and expertise in carrying out learning evaluations, particularly instrument formulation, need to be enhanced if quality education is to be expected. This community service program aims to provide training and assistance to teachers in Mojokerto Regency who are members of the Islamic Religious Education (MGMP) Islamic Religious Education (PAI) Madrasah Tsanawiyah (MTs) Deliberation to increase teacher commitment and competence, particularly in the implementation of learning evaluation.

Method

In Mojokerto Regency, a method was employed in the community service program for Teacher Competency Development PAI MTs. They compiled this Valid and Reliable Test through preparation, service, and evaluation stages.

The preliminary step is carried out by identifying challenges encountered by specific targets and interventions, followed by a practitioner engagement process. Then collectively agreements are made to facilitate the targets with the implementation of the agreed interventions. As a result, to maximize a firm, a proper marketing strategy is required. Data is also required to analyze whether methods should be chosen or utilized.

The stages of this service strategy are carried out in the following order: The initial step in the preparatory stage is to do a study of preliminary. This work was carried out by recognizing the unique challenges PAI Madrasah Tsanawiyah Teachers (MTs) in Mojokerto Regency when preparing valid and reliable examinations. The problem was identified through interviews and discussions with the Head of MGMP PAI Madrasah Tsanawiyah (MTs) Mojokerto Regency.

The team also conducted a pre-test using Questionnaire Distribution and Analysis to strengthen data connected to the problem of teacher skills of PAI Madrasah Tsanawiyah (MTs) in Mojokerto Regency to generate valid and reliable data assessments.

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Professionals and experts are needed to take advice and consideration in developing strategies for enhancing the working circumstances of PAI Madrasah Tsanawiyah (MTs) teachers in Mojokerto Regency. Experts in the evaluation of PAI learning are among those in doubt. Furthermore, practitioners of learning evaluation came from the MGMP management of the PAI Madrasah Tsanawiyah (MTs) subject to Mojokerto Regency.

Second, there is the service stage. This level consists of (1) training and simulation and (2) mentoring. At this stage, the team’s primary priority is to refresh the teacher's knowledge and skills in conducting the test for the validity and reliability of the test, followed by practical training and simulation. The training method involves delivering validity and reliability test materials and examples or demonstrations of the use of the Point be Serial and KR 20 formulas. The simulation was carried out in groups, with raw data provided before the activity, ready to be analyzed to assess its validity and reliability by PAI Madrasah Tsanawiyah (MTs) teachers.

The team then engages in Live Mentoring. Teachers who have mastered the theory and practice of validity tests and reliability use them to prepare joint questions, specifically end-of-semester assessment (UAS) questions governed by MGMP. In this situation, service implementation is carried out by assisting teachers of PAI Madrasah Tsanawiyah (MTs) who are the target of activities, particularly those linked to the implementation of validity tests and reliability tests for PAS questions. Mentoring activities are carried out in a variety of ways, including group and individual discussions. The current discussion is both structured and unstructured. Furthermore, assistance with these diverse activities is provided both in person and online.

The third stage is evaluation. This stage is carried out by conducting consistent evaluations. Allegations are mentioned in the context of evaluating the process of activity as well as the outcomes of activities. The evaluation results will be utilized as a basis for reflection and future activity planning. The assessment of the results is carried out in the implementation of this service by giving a number of written questions in the form of questionnaires given to teachers who are the target of the activity to be answered and returned to the service implementer. This technique is used to assess changes in features of PAI Madrasah Tsanawiyah (MTs) teachers' dedication and skill in preparing valid and reliable PAI question examinations. Teachers are urged to be able to simulate PAI question preparation activities directly in order to learn the effects of strengthening teacher abilities in carrying out the preparation of valid and reliable PAI question tests.

**Mentoring Results**

The accompanying team's program activities include conducting a pre-assessment to learn more about the needs of assisted partners, followed by activities to increase the capacity of teachers in the form of training and additional assistance, and concluding with
a post-test to determine the changes that have occurred in assisted partners as a result of the mentoring process carried out by the Assistance Team.

**Condition of Assisted Partners: MGMP PAI MTs Mojokerto Regency**

MGMP PAI Madrasah Tsanawiyah Mojokerto Regency is a group of PAI teachers from several madrasahs working under Mojokerto Regency’s Ministry of Religious Affairs supervision. At the Mojokerto Regency level, MGMP PAI is organized around four state tsanawiyah madrasahs: MTsN 1 Ward, MTsN 2 Sambiroto, MTsN 3 Mojosari, and MTsN 4 Dawarbladong. This service’s mentoring partner is MGMP, coordinated by MTsN 2 Sambiroto and includes private MTs in Sooko, Trowulan, and nearby areas.

Except for lessons of instructors typical of pesantren, such as Tajwid, who do not have MGMP, almost all PAI MTs teachers are members of MGMP. The collaboration of PAI Madrasah Tsanawiyah (MTs) teachers with their local MGMP adds flavor to learning implementation. PAI Madrasah Tsanawiyah (MTs) teachers primarily use MGMP-prepared questions in terms of learning evaluation. Some PAI Madrasah Tsanawiyah (MT) professors are also members of the Problem Drafting Team, therefore they have fairly high abilities in this subject. However, at MGMP, question preparation still does not consider the principles of learning evaluation, hence there are no validity test activities or test reliability testing.

Regarding achieving educational criteria, the MGMP question preparation methodology can be used and even provides benefits, such as being more effective and efficient. Because teachers in MGMP can compile questions faster by splitting the preparation to the team, effectiveness can be generated. Meanwhile, efficiency is attained by more efficient doubling because it is shared among madrasahs members of the KKM.

However, this cannot be pursued from the standpoint of excellence and madrasah characteristics because the questions used to gauge student learning performance are standard questions, the same as those used by other madrasahs. Madrasahs with superior vision and particular characteristics lack a measurement device to assess the achievement of the vision of excellence and its characteristics.

The accompanying team did pre-research in the neighborhood to learn more about the spouses’ health conditions. This stage consists of a preliminary investigation on the needs of PAI MTs teachers, a total of 12 people, in organizing good instruction. One of the issues that must be addressed is the failure to implement the test’s validity and reliability tests. Furthermore, the the community service program implementer creates an activity design and invites MGMP PAI MTs to agree on the implementation of this activity, or with other mentions requesting MGMP PAI MTs' readiness to become a partner of this the community service program.
The team also did a peng size komitmen and kompetens of PAI MTs Teachers in Mojokerto Regency in a survey to guarantee that this aid has a more demonstrable impact. The findings of the initial assessment of PAI MTs teachers’ commitment and competency are provided below.

Table 1. Data on commitment and competence of PAI MTs teachers before training and mentoring

<table>
<thead>
<tr>
<th>No</th>
<th>Commitment and Competency Indicators</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Good</td>
</tr>
<tr>
<td>1</td>
<td>Teacher attitudes in carrying out validity and reliability tests</td>
<td>25%</td>
</tr>
<tr>
<td>2</td>
<td>The teacher’s view of a good test taker with the quality of education</td>
<td>33%</td>
</tr>
<tr>
<td>3</td>
<td>Implementation of test validity and reliability of the test</td>
<td>0%</td>
</tr>
<tr>
<td>4</td>
<td>Teachers support the implementation of test validity and reliability of the test and do not consider</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td>the weight of the teacher’s workload</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The teacher understands the test’s validity and reliability of the test</td>
<td>17%</td>
</tr>
<tr>
<td>6</td>
<td>Teachers can distinguish the validity/reliability test of the test from the questionnaire</td>
<td>17%</td>
</tr>
<tr>
<td>7</td>
<td>The teacher can apply the test formula for the validity of the test</td>
<td>8%</td>
</tr>
<tr>
<td>8</td>
<td>The teacher is able to apply the test reliability test formula</td>
<td>8%</td>
</tr>
<tr>
<td>9</td>
<td>The teacher is able to apply the test formula for the degree of difficulty of the test</td>
<td>17%</td>
</tr>
</tbody>
</table>

Implementation of the Assessment: Capacity Building of Validity and Reliability Test of Teachers MGMP PAI MTs Mojokerto Regency

The Assistance Team can determine the needs of partners in increasing the capacity of teachers who are members of the MGMP MTs of Mojokerto Regency related to the development of valid and reliable tests through training, mentoring, and assessment once the condition of the assisted partners is known and initial coordination is completed.

This stage is carried out by systematically presenting content on validity and reliability testing, supported by a demonstration of the Point be Serial and KR 20 formulae to assisted objects, notably PAI MTs teachers.

Then, for the 2020/2021 academic year, help teachers carry out the validity and reliability test for the PAS Gasal question. This assistance is required to guarantee that validity and reliability of test activities are carried out correctly and aid PAI teachers in
resolving problems. It is carried out in various steps to optimize the aid, as follows:

The first step is for the teacher to prepare the previous semester’s questions with student responses. The teacher does not need to create a new test for this activity, which would burden him and diminish his concentration while engaging in the activity. Existing questions and answers are tabulated and utilized as instrument trial data, despite the reality being the results of earlier testing.

In the second phase, the teacher runs validity and reliability tests against past test results used as data on instrument trial results. At this point, the Point be serial and KR 20 formulas have been simplified in excel form, making them easier to use than the manual method. Teachers take steps to test the test’s validity and reliability, which begins with determining the criteria. Following this activity, each teacher knows which questions are valid and invalid, as well as the dependability of the tests employed.

The third stage is for the teacher to use the test difficulty degree formula to determine which questions have high, standard, and low degrees of difficulty. Direct practice determines the degree of difficulty that the teacher knows ahead of time and determines before applying the existing formula. Du Bois’ difficulty degree formula is implemented using excel software, which makes it easier for teachers to apply. As a result, data is collected that demonstrates the degree of difficulty of the tests used in the preceding semester.

The fourth step is for the teacher to build a question bank divided into three categories: standard questions, questions of high difficulty, and questions of low difficulty. The construction of this question bank is supposed to make it easier for teachers to prepare the appropriate test questions at any time, avoiding complications for teachers. Furthermore, questions with a high level of complexity and low need to be had, in anticipation if there are students who have exceeded the standard and need to be given a test on it, on the other hand, if the student fails to take the standardized test, he may be given a test that is easier to find out his abilities.

Figure 1. Assistance Process of MGMP MTs Mojokerto Regency
Evaluation of the Mentoring Process

This step aims to determine the degree of change in the mentorship outcomes. Based on the data obtained from the questionnaire administered to PAI MTs teachers before and after the program's implementation, the commitment and competence of teachers in organizing a good evaluation can be described, both in terms of teacher commitment and changes in teacher competence in increasing the capacity of preparing valid and reliable tests, as illustrated in the following chart:

*Figure 2. Teacher Commitment Evaluation Diagram Before and After The Community Service Program*

Four measures of dedication to organizing a good learning evaluation indicate a better graph before and after program execution. These indications are as follows: (1) The percentage of teachers who support the implementation of the test validity and reliability test increased from 25% to 88 percent; (2) the percentage of teachers who believe that good tests affect quality increased from 33% to 92 percent; (3) no teacher used the validity and reliability test in compiling the test before the program; and (4) teachers who did not stutter closely to the work of the program.

This evaluation can be shown in the graph below based on the teacher's competence:
The chart above demonstrates that five characteristics of teacher competency in organizing evaluations have grown: (1) teacher understanding has increased from 17 percent to 83 percent, (2) teachers who can distinguish between validity and reliability tests amount to 17 percent to 75 percent, (3) teachers who can apply the test validity test amount to 8 percent to 92 percent, (4) teachers whose test reliability test amount to 8 percent to 92 percent, and teachers who can apply the difficulty degree formula amount to 17 percent to 100 percent.

**Discussion**

The test must be of high quality to be used as a measuring tool to measure students' learning performance. The accuracy and consistency of a test are used to determine its quality. In theoretical studies of learning evaluation, accurate measures are often considered valid, while a measure of consistency is known as reliability.

A test is considered valid if the data provided accurately provides a complete picture of the tested variables. Valid means exact, true, shahih, or legitimate. As a result, the test’s validity might be viewed as the test’s accuracy with what is measured. The learning outcomes exam is valid if it can measure what needs to be measured correctly, appropriately, shahih, or legitimately.

Validity is the degree of accuracy with which a test or scale performs its measurement function. The word accurate in this sense means precise and meticulous. If a test delivers data that is irrelevant to the measuring intent, the test is said to have low validity. In contrast, if the data generated by the test is relevant or fits what should be measured, the test is said to have high validity.

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In addition to validity, reliability is a measure of test quality. The degree of consistency between two tests (measurement devices) against the same thing is reliability (variable). We hope that when we measure learners' successes, the results will be similar to the outcomes of other people’s tests.

Although the term reliable has numerous definitions, the basic idea of dependability is trustworthiness. A test can be trusted if its findings are in the same group and are generally similar. Even if it differs, it is still within the acceptable tolerance range. However, if the difference is significant, the test can be unreliable or untrustworthy.

The technique used to examine the validity and reliability of the test differs from that of other measuring devices such as questionnaires. The validity test use Point is Serial to produce a valid test. When it comes to getting a trustworthy test, KR 20 is used.

Teacher-created valid and reliable exams can yield accurate and trustworthy data on student learning outcomes. As a result, the measurement findings can provide a clear picture of the success or failure of the learning process. If it is known that learning has been successful, as represented by the evaluation outcomes, then the learning process must be sustained. On the other hand, if it is recognized to have failed, steps can be taken to improve it. As a result, educational quality may constantly be maintained or increased.

When combined with the assistance provided, the teacher's ability to assemble assessments and conduct validity and reliability testing has risen. Teachers who participated in this program understood and applied the test validity test using point be serial and the test reliability test using KR 20. This is consistent with the findings of Lasiman et al., in the program he implemented, where participants gained additional understanding to improve student learning outcomes by taking into account the knowledge and power of different student numbers, as well as increasing the teacher's understanding of how to develop good and correct student learning outcomes test questions, be it so grains al multiple choice as well as description.

The rise in teacher commitment generated by improved competence is also consistent with Andi Sopandi's notion that teacher competency influences performance. A teacher with strong skills, including professional competence and personality, is more likely to perform well in the classroom. Learning tasks ranging from planning to teaching can be handled with greater ease, resulting in improved student engagement and achievement.

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executing and analyzing learning can be completed by their competencies. On the other hand, teachers with low competence are more likely to fail in their obligations and perform poorly. Their dedication and performance in becoming professional teachers are growing with their competencies.

Based on the outcomes of this service activity, it is possible to conclude that the theory that asserts that the commitment to carry out tasks is influenced by factors of competence, skills, or mastery of skills in the field of work is proven. Teachers have a better chance of producing accurate and trustworthy assessments due to this help, and it appears that the teachers' dedication has grown.

Conclusion

Mentoring outcomes at MGMP MTs Mojokerto Regency It can be concluded from this learning service that this assistance is capable of improving teacher commitments in carrying out learning evaluations; additionally, teachers experience an increase in performance in compiling valid and reliable tests that have been owned by teachers and have question banks that have been disaggregated into three categories; questions with a high degree of difficulty, questions with a low degree of difficulty.

The team can make the following recommendations based on the findings of the assistance provided: (1) Educational institutions must improve themselves if they want to increase the quality of their education, rather than making instructors the cause and failing to carry out their responsibilities. The madrasa's head has to know what causes are causing the teacher's duties to be poorly carried out. One of the most common occurrences is that teachers lack the necessary abilities to carry out their responsibilities, rather than being unwilling to do so. The steps that must be taken are to provide training or further education so that teachers have the required competencies, accompanied by parental assistance; (2) Teachers must always increase professional capacity, particularly in the use of pedagogical skills, because professionalism is one of the competencies that teachers must possess. Teachers must have a soul as a learning society that can serve as an example or model for their students to develop themselves constantly. Teachers must also be able to assess and evaluate learning in a valid, reliable, and ongoing manner to help all of their students meet the competency standards established in the National Education Standards.
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