

## **The Comparative Analysis Of Learning Outcomes Using Norm-Referenced Test And Criterion-Referenced Test In Islamic Education**

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### **Abstract:**

*To measure whether test participants have successfully completed the test given by the examiner or not, an assessment technique or approach is required. In this case, an examiner can use two types of assessments, namely norm-referenced assessment and criterion-referenced assessment. Most of the teachers who teach Islamic Religious Education at SDN 5 Syamsudin Noor Banjarbaru only use criterion-referenced assessment. Therefore, this research is conducted to help explain both approaches while providing practical analysis using Microsoft Excel or manual calculations. This research uses a qualitative method with a descriptive-quantitative approach, where the data is obtained from the field, using documentation as the data collection technique. The results of this study show that the achievement of Class 1 A students at SDN 5 Syamsudin Noor in the Midterm Assessment (PTS) revealed that when using the Norm-Referenced Assessment with manual calculations in the subject of Islamic Religious Education, 13 out of 25 students were declared not to have passed. Meanwhile, when using the criterion-referenced approach model, in manual calculations for the Islamic Religious Education grades, with the passing grade set at 75, it was found that 8 students were declared not to have passed*

**Keywords:** *Norm-Referenced Test; Criteria Referenced Test; Learning Outcomes*

### **Introduction**

Providing a score is not the final stage of assessment. Generally, the score alone is insufficient to provide significant information for making decisions within the educational context. Therefore, the raw score obtained must be processed so that the value can serve as a guideline in educational decision-making.

In terms of terminology, a score can be understood as the result of a process of assigning numbers, obtained by adding up the values for each part of the test questions that were correctly answered by the test participants, taking into account the weight of the correct answers.<sup>1</sup> A value can be interpreted as a number or letter, which is literally the result of summing scores with other scores using certain standards and then being converted. Therefore, a value is often considered a standard score. Value aims to evaluate the extent of

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<sup>1</sup> Sukiman, *Pengembangan Sistem Evaluasi* (Sleman: Insan Madani, 2012), 252.

a student's progress in understanding the material or subject matter being tested<sup>2</sup> in line with the basic competency formulations and indicators used. Assessment can be expressed in the form of numbers, letters, or categories.<sup>3</sup>

Student performance assessment is a crucial aspect of the education system, which not only functions as a tool to measure students' understanding and skills but also serves as a basis for making decisions related to curriculum development and teaching strategies. One innovative approach that is gaining attention in student score assessment is the normative reference approach.<sup>4</sup> Assessment techniques are essential to determine the scores obtained by students according to the teacher's needs, but each technique has different approaches and objectives, so it is important for teachers to determine the appropriate approach as a way to set standards for students in learning.

An ever-present factor in every measurement is error. Empirically, not all measurement results have a high level of accuracy, which leads to measurement errors. Dali Santun Naga explains that many factors can cause errors in measurement. Errors can occur with the respondent, during the measurement process, or with the measuring instrument. During the measurement, the respondent's condition is not always stable or good. Disturbances can arise not only from the respondent but also from physical or environmental factors. Sometimes the measuring instrument used is ambiguous or unclear to the respondent. These conditions are potential sources of error in measurement.<sup>5</sup> An appropriate and accurate evaluation technique is key to a teacher's success in processing student work results in line with the desired objectives. In the era of competency-based education, teachers are required to ensure that student assessments do not merely assign numerical scores but also reflect students' abilities, skills, and understanding of the material.

Additionally, in decision-making processes—whether for curriculum development, lesson planning, or evaluating educational policies—the data generated from student assessments serve as the primary foundation. Therefore, it is essential to process raw scores into data that can be significantly utilized to support strategic decisions. The use of proper techniques can also help avoid potential errors and biases that may occur in the field. Observations in practice indicate that errors still occur in the evaluation process, whether due to measuring instruments, student conditions, or assessor subjectivity. Structured and standardized approaches, such as Criterion-Referenced Test (CRT) and Norm-Referenced Test (NRT), can help minimize potential errors and biases. Experts in Europe refer to it as Norm-Referenced Testing, which has the same meaning: the determination of scores is based on performance within a specific group or the level of understanding of the material in the

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<sup>2</sup> Khairuddin Alfath, 'Teknik Pengolahan Hasil Asesmen: Teknik Pengolahan Dengan Menggunakan Pendekatan Acuan Norma (PAN) Dan Pendekatan Acuan Patokan (PAP)', *Al-Manar* 8, no. 1 (1 June 2019): 3, doi:10.36668/jal.v8i1.105.

<sup>3</sup> Mujahidin Almubarak and Rahmat Rahmat, 'Tehnik Pemeriksaan Dan Pengolahan Hasil Asesmen', *JURNAL PENDIDIKAN ISLAM AL-ILMI* 4, no. 1 (11 May 2021): 118, doi:10.32529/al-ilm.v4i1.916.

<sup>4</sup> Herman Darmawan, Nuril Huda, and Dina Hermina, 'Norm Referenced Test Sebagai Metode Penilaian Berdasarkan Kelompok Kelas', *Katalis Pendidikan : Jurnal Ilmu Pendidikan Dan Matematika* 1, no. 2 (19 June 2024): 2, doi:10.62383/katalis.v1i2.393.

<sup>5</sup> Dali Santun Naga, *Teori Sekor Pada Pengukuran Mental* (Jakarta: PT. Nagrani Citrayasa, 2013), 72.

teaching-learning process. In this context, all students in a group become the basis for evaluation.<sup>6</sup>

The term "norm-referenced Test" or "criterion-referenced Test" was first introduced by an American educational psychologist named Robert Glaser.<sup>7</sup> This instrument uses the term "norm" to indicate the quality or capacity of a group's performance. The group here is defined as a collection of students or test participants in a small area (class) and a larger group (school/general), or even broader.<sup>8</sup> In another context, a norm-referenced Test (NRT) is an evaluation based on group standards. This means that the scores obtained by students are compared to the scores of other participants in the same group.<sup>9</sup> Norm-referenced Test is used to evaluate a student's performance by comparing their scores with other students in the same population. This means that a student's performance is assessed based on how they rank within a broader group.<sup>10</sup>

Norm-referenced Test evaluates a student's abilities relative to a larger group. Instead of evaluating based on fixed criteria, this assessment looks at how a student's performance compares to their peers. This is useful for understanding a student's relative position within the group, providing an overview of how they perform compared to their classmates. Norm-referenced Test is generally applied at the end of the learning process to determine achievement levels, rankings, and classifications of students. According to Bond, classification here refers to ranking students from the highest to the lowest in terms of overall achievement, allowing evaluators or stakeholders to create programs such as remedial or advanced programs if needed. Thus, Norm-Referenced Test plays a crucial role in differentiating students.<sup>11</sup> Furthermore, it is essential to understand that NRT evaluates a group following the context, as Crocker and Algina explain. The normative sample must be described in detail concerning demographic characteristics (e.g., gender, race or ethnic background, community or geographic region, socioeconomic status, and educational background) to enable test users to assess whether it is meaningful to compare an individual's performance with their norm group.<sup>12</sup> Crocker and Algina seem to emphasize that when we have a test or assessment, we need a group of people representing diverse backgrounds (such as gender, ethnicity, place of residence, income level, and education) to serve as a comparison or standard.

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<sup>6</sup> Dewi Nur Annisa Aliyan and Fifin Dayanti, 'Implementasi Pendekatan Penilaian Acuan Normatif (PAN) Dan Pendekatan Penilaian Acuan Patokan (PAP) Dalam Mengevaluasi Hasil Belajar Siswa (Studi Kasus Siswa Kelas XI Sma Gema 45 Surabaya)', *At-Ta'lim : Media Informasi Pendidikan Islam* 20, no. 2 (2021): 185, doi:<http://dx.doi.org/10.29300/attalim.v20i2.2839>.

<sup>7</sup> Shafaat Hussain, Tessema Tadesse, and Sumaiya Sajid, 'Norm-Referenced and Criterion Referenced Test in EFL Classroom', *International Journal of Humanities and Social Science Invention* 4, no. 10 (October 2015): 25.

<sup>8</sup> Almubarak and Rahmat, 'Tehnik Pemeriksaan Dan Pengolahan Hasil Asesmen', 122.

<sup>9</sup> Mad Sa'i and Chairul Anwar, 'Penerapan Penilaian Beracuan Norma Dan Penilaian Beracuan Kriteria Pada Mata Pelajaran Pendidikan Agama Islam Di SDN Ganding 1 Sumenep', *MUBTADI: Jurnal Pendidikan Ibtidaiyah* 4, no. 2 (9 February 2023): 181, doi:[10.19105/mubtadi.v4i2.7629](https://doi.org/10.19105/mubtadi.v4i2.7629).

<sup>10</sup> Dilek İlhan Beyaztaş and Derya Çakıcı Eser, 'Öğretmen Adaylarının Gözünden Bağıl Değerlendirme: Öğrenme Yaklaşımları İle Sosyal-Duyuşsal Özelliklere Etkileri Ve Değerlendirme Beklentileri', *Uluslararası İnovatif Eğitim Araştırmacısı* 3, no. 2 (2023): 249, doi:[10.29228/iedres.64712](https://doi.org/10.29228/iedres.64712).

<sup>11</sup> Linda Bond, 'Norm- and Criterion-Referenced Testing', PDF, *Practical Assessment, Research, and Evaluation* 5, no. 1 (2 January 1996): 1, doi:[10.7275/DY7R-2X18](https://doi.org/10.7275/DY7R-2X18).

<sup>12</sup> Linda Crocker and James Algina, *Introduction To Classical And Modern Test Theory*, 327th ed. (United States: Cengage Learning, 2008), 431–32.

Essentially, according to Bachman as quoted by Hussain, NRT informs us of a student's position relative to other students in their performance and is only useful for making specific types of decisions, such as IQ tests, developmental screening tests (used to identify learning disabilities in young children or determine eligibility for special education services), cognitive ability tests, readiness tests, TOEFL, IELTS, etc. In short, the Norm-referenced test aims to identify the best candidates compared to others, not to determine how many candidates meet fixed standard criteria. Educators use NRT to evaluate the effectiveness of teaching programs, help determine students' readiness for programs, and diagnose disabilities for eligibility<sup>13</sup>. However, in practice, NRT can also be used to classify students based on cumulative scores compared to other participants.

Meanwhile, the Criterion-Referenced Test was pioneered by Robert Glaser. This assessment, based on criteria or standards, is used to assess what test takers can do and what they know rather than how they compare to others. It involves changes to a pre-established performance level against a set of specific educational goals or outcomes included in the school curriculum.<sup>14</sup> This approach aims to indicate the extent of students' skills in achieving the set criteria or standards. However, this score is no longer related to the scores of others or other participants, whether in a group or individually.<sup>15</sup> In other words, there is a standing point of achievement for test takers. The criteria or standards referred to are levels that must be achieved in student learning outcomes (or what I referred to earlier as a standing point) as a measure of success in the learning process. For example, the standing point used is 70% or 75%. Therefore, if a test participant's result does not reach the set criteria, they are deemed unsuccessful and required to undergo remedial.<sup>16</sup>

From a procedural standpoint, the criterion-referenced approach can produce either achievement or non-achievement, completion or non-completion, and passing or failing. To determine the minimum standing point for each test taker's score, comparisons are made with the ideal value that students might achieve.<sup>17</sup> . Participants who pass the exam or meet the pass indicator are considered to have qualitatively or quantitatively understood the learning material well. On the contrary, those who fail are considered not to have met the standards set as the pass indicator in the learning process, or they have not mastered the material presented by the teacher.<sup>18</sup>

Through CRT, a teacher can easily identify which students have mastered the material and which material they have not mastered. Additionally, personal guidance can be effectively provided through Criterion-Referenced Test to help students improve their understanding

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<sup>13</sup> Hussain, Tadesse, and Sajid, 'Norm-Referenced and Criterion Referenced Test in EFL Classroom', 26.

<sup>14</sup> Bond, 'Norm- and Criterion-Referenced Testing', 1.

<sup>15</sup> Havifa Nurhijatina, Nabila Joti Larasati, and Sinta Bella, 'Analisis Classrooms Assesment: Remedial, Pengayaan, Pendekatan Acuan Patokan (PAP) Dan Pendekatan Acuan Normatif (PAN)', *Didaktik : Jurnal Ilmiah PGSD FKIP Universitas Mandiri* 09, no. 9 (2023): 3224, doi:<https://doi.org/10.36989/didaktik.v9i5.2276>.

<sup>16</sup> Yessy Nur Endah Sary, *Buku Mata Ajar Evaluasi Pendidikan* (Yogyakarta: Deepublish, 2015), 104–5.

<sup>17</sup> Yessy Nur Endah Sary, *Buku Mata Ajar Evaluasi Pendidikan*, 106.

<sup>18</sup> Ratna Pangastuti and Kusnul MunfaAti, 'Penilaian Acuan Norma, Penilaian Acuan Patokan, Kriteria Ketuntasan Minimal di Madrasah Ibtidaiah An-Nur Plus Junwangi Krian Sidoarjo Jawa Timur', *Jurnal Tarbiyah Al-Awlad: Jurnal Kependidikan Islam Tingkat Dasar* 8, no. 2 (2022): 210, doi:<https://doi.org/10.15548/alawlad.v8i2.1606>.

of the material, as we can obtain data on their progress through the achievement of learning outcomes measured by the set standing point.

In processing assessment results, two types of standards can be used by teachers: First, the absolute standard, where the achievement of each test participant is compared against predetermined criteria. The technique commonly used to convert raw scores into values with a constant (absolute) standard is known as the Criterion-Referenced Test (CRT). The use of Criterion-Referenced Testing (CRT) in classroom assessment is crucial for decision-making based on information about student performance. CRT evaluates individual students against specific performance criteria, allowing educators to adjust instructional practices to meet defined learning outcomes.<sup>19</sup>

Second, the relative standard, where each student's achievement is compared to the norm group, i.e., the performance of other students in the same group. The approach commonly used to convert raw scores into values with a relative standard is known as the Norm-Referenced Test (NRT).<sup>20</sup> The use of the Norm-Referenced Test (NRT) in decision-making is essential for effectively comparing individual performance with peer groups. NRT provides metrics, such as percentiles, that facilitate informed decisions regarding student placement in educational settings, such as reading groups or gifted programs.<sup>21</sup> Among these two approaches, Blazenka Divjak states that the Criterion-Referenced Test is more accurate in classifying students compared to the Norm-Referenced Test.<sup>22</sup> However, the author does not focus on comparing the two approaches, but rather on implementing both approaches for first-grade students at SDN 5 Syamsudin Noor Banjarbaru.

## **Method**

This research adopts field research with a descriptive approach.<sup>23</sup> In this case, the author only conducted research focusing on the documentation technique as a method for data collection. Therefore, the author collected the test scores of first-grade students as material for practicing score processing using Norm-Referenced and Criterion-Referenced Test techniques. This research is located at SDN Syamsudin Noor in Banjarbaru City, South Kalimantan Province, focusing on the test scores of first-grade students in Islamic Religious Education and Quran Reading and Writing subjects.

This research uses the analysis method from Miles and Huberman. This analysis technique consists of three stages: data reduction, data presentation, and data verification.

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<sup>19</sup> Elena Diaz-Bilello, 'Criterion-Referenced Tests', in *Criterion-Referenced Tests* (Routledge, 2022), 63.

<sup>20</sup> Agus Sriyanto, 'Teknik Pengolahan Hasil Asesmen Penentuan Standar Asesmen, Teknik Pengolahan Dengan Menggunakan Pendekatan Acuan Patokan (PAP) dan Acuan Norma (PAN)', *AL-Lubab: Jurnal Penelitian Pendidikan dan Keagamaan Islam* 5, no. 2 (2019): 243–44, doi:<https://doi.org/10.19120/al-lubab.v5i2.3915>.

<sup>21</sup> Matthew N. Gaertner, 'Norm-Referenced Test', in *Norm-Referenced Test* (Routledge, 2022), 75.

<sup>22</sup> Blazenka Divjak, Nikola Kadoic, and Bojan Zucec, 'The Use of Decision-Making Methods to Ensure Assessment Validity', in *2021 IEEE Technology & Engineering Management Conference - Europe (TEMSCON-EUR)* (2021 IEEE Technology & Engineering Management Conference - Europe (TEMSCON-EUR), Dubrovnik, Croatia: IEEE, 2021), 3, doi:[10.1109/TEMSCON-EUR52034.2021.9488580](https://doi.org/10.1109/TEMSCON-EUR52034.2021.9488580).

<sup>23</sup> Deddy Mulyana, *Metodologi Penelitian Kualitatif: Paradigma Baru Ilmu Komunikasi Dan Ilmu Sosial Lainnya* (Bandung: PT Remaja Rosdakarya, 2020), 160.

Data reduction aims to simplify abstract data into a clear and detailed summary.<sup>24</sup> In data collection, the author uses the documentation technique.<sup>25</sup> The next process is data presentation. After being reduced, the data is presented in the form of a framework or diagram that is appropriate. Data presentation is the process of displaying data in a simpler form, through a narrative presentation of the research results on the Implementation of Norm-Referenced Testing (NRT) and Criterion-Referenced Testing (CRT) in the Processing of Student Learning Outcomes in class 1A on the subject of Islamic Religious Education at SDN 2 Syamsudin Noor Banjarbaru.<sup>26</sup> The final step is data verification. The processed data is then used to conclude. Conclusion-making is the process of extracting the essence of the organized data presentation in the form of concise and compact statements that contain broad meaning.<sup>27</sup>

## Results and Discussion

### Criterion-Referenced Test (CRT)

The author processes the scores of first-grade students at SDN Syamsudin Noor Banjarbaru. It is known that the class consists of 25 students, with the following score table.

Table 1. Frequency Distribution List

<b>Class Interval</b>	<b>Frequency (f)</b>
40-45	3
46-50	0
51-55	1
56-60	2
61-65	3
66-70	5
71-75	0
76-80	2
81-85	4
86-90	4
91-95	1
<b>Total</b>	<b>25</b>

Calculating the Average (Mean)

<sup>24</sup> Matthew B. Miles and A. Michael Huberman, *Qualitative Data Analysis*, Second (Sage Publication: London, n.d.), 31–33.

<sup>25</sup> Katherine Taken Smith and Lawrence Murphy Smith, 'Examining Documentation Tools for Audit and Forensic Accounting Investigations', *Journal of Risk and Financial Management* 17, no. 11 (31 October 2024): 491, doi:10.3390/jrfm17110491.

<sup>26</sup> Muhammad Arslan Nasir, ed., 'Presentation of Data', in *Introductory Statistical Procedures with SPSS*, by Hassan S. Bakouch and Farrukh Jamal (BENTHAM SCIENCE PUBLISHERS, 2022), 25, doi:10.2174/9789815039023122010004.

<sup>27</sup> Nana Sudjana and Awal Kusuma, *Proposal Penelitian Di Perguruan Tinggi* (Bandung: Sinar Baru Alngesindo, 2008), 84. Nasir, 'Presentation of Data', 12.

Table 2. Average Calculation Table

Class Interval	Midpoint (X)	Frequency (f)	fX
40-45	42	3	126
46-50	48	0	0
51-55	52	1	52
56-60	58	2	116
61-65	62	3	186
66-70	68	5	340
71-75	72	0	0
76-80	78	2	156
81-85	82	4	328
86-90	88	4	352
91-95	92	1	92
<b>Total</b>	742	N = 25	$\sum fX = 1748$

$$M = \frac{\sum fX}{N}$$

$$M = 69,92$$

The mean result of 69.92 was used as a benchmark for each student's score. If a student's average score is less than 69.92, then according to the norm-referenced criterion, they are considered not to have passed. Conversely, if the score is higher, they are considered to have passed. For example, a student who scores 40 (in the distribution table) is deemed not to have passed because they did not reach the score of 69.92. Meanwhile, a student who scores 93 (in the distribution table) has passed because their score exceeds 69.92. Therefore, it can be concluded that half of the first-grade students at SDN Syamsudin Noor Banjarbaru did not pass the PAI subject because they scored below 69.92, while the other half have been declared to have passed. Those who did not pass will undergo remedial efforts to improve their scores to meet the set criteria.

NO	NAMA SISWA	JENIS	AGAMA	PTS		Rata-Rat	Nilai	Keputusan
				PAI	BTA			
1	AHMAD ARIQUL GHANI	L	Islam	30	55	42.5	E	REMIDI
2	AHMAD EFENDY	L	Islam	70	25	47.5	E	REMIDI
3	AJI MUHAMMAD SUTA	L	Islam	90	80	85	B	LULUS
4	ALIFA ALYA HANIFA	P	Islam	80	85	82.5	B	LULUS
5	AULIA ARDILA	P	Islam	85	75	80	B	LULUS
6	AYYUN SAFITRI	P	Islam	30	70	50	D	REMIDI
7	AZKA ALDRIC AQILA BRIGID	L	Islam	100	30	65	C	LULUS
8	DHAFITHA NIZZA SAUFA	P	Islam	45	65	55	D	REMIDI
9	DIMAS ILHAM PRASETYA	L	Islam	90	65	77.5	B	LULUS
10	FAISAL ABDULLAH	L	Islam	55	55	55	D	REMIDI
11	GHEA MAULIDA ZHAFIRA MANTO	P	Islam	100	85	92.5	A	LULUS
13	HENI NORAINI YASMIN	P	Islam	95	65	80	B	LULUS
14	JELITA NOOR SYARIFAH	P	Islam	75	75	75	C	LULUS
15	M. BILAL PUTRA JAYA	L	Islam	90	55	72.5	C	LULUS
16	MUHAMMAD BAIHAQI KHAIZAN	L	Islam	80	70	75	C	LULUS
17	MUHAMMAD EL RAFASYA	L	Islam	85	60	72.5	C	LULUS
18	MUHAMMAD KENZO ALFAROQ	L	Islam	80	65	72.5	C	LULUS
19	MUHAMMAD SIDIQ	L	Islam	50	70	60	D	REMIDI
20	MUKHAMAD DENDY WIRAWAN	L	Islam	85	85	85	B	LULUS
21	NAJWA SYIFA ANNIDA	P	Islam	80	75	77.5	B	LULUS
23	NEFYA SORAYA	P	Islam	50	30	40	E	REMIDI
24	NUMA AS SYIFA AZWA	P	Islam	75	70	72.5	C	LULUS
25	SALSABILA AZZAHRA	P	Islam	90	50	70	C	LULUS
26	SELVIA JULIANTY	P	Islam	70	70	70	C	LULUS
<b>Mean</b>						<b>68.958</b>		
<b>Standar Deviasi</b>						<b>14.16</b>		
<b>Pembulatan</b>						<b>68.96</b>		
						<b>14.16</b>		

Figure 1. PAN Calculation Using Microsoft Excel

The table or calculation in Microsoft Excel regarding the subject of Islamic Religious Education and Quranic Literacy shows that out of 26 students who took the Midterm Assessment, only seven students were declared not to have passed, while the rest were declared to have passed. Thus, it was decided that the seven students who did not pass must undergo remedial to improve their scores to meet the determined completion criteria, which are based on the overall average of all students or the group norm. Meanwhile, the other 19 students are confirmed to have passed and can proceed to the next stage in the learning process or, in the "independent curriculum" terminology, move up to the next phase.

### Criterion-Referenced Test (CRT)

By using the Criterion-Referenced Test (CRT) approach, we can obtain information about how well students perform

Table 3. Details of Test Items

Question Number	Question Type	Number of Questions	Weight	Score
1-25	PG	25	1	25
26-35	Isian	10	4	40
36-40	Essay	5	7	35
<b>Maximum Score</b>				100

Among all the students in Class 1A of SDN Syamsudin Noor Banjarbaru, the author attempted to calculate student grades using a Criterion-Referenced Test to determine whether the scores for the PAI subject in the Midterm Assessment among students met the referenced assessment standards or not.

Tabel 4. Converting scores

No	Name	Raw Score	Score (Rounded)	Passing Grade
1	Ahmad	30	30	Failed
2	Efendy	70	70	Failed
3	Aji	90	90	Passed
4	Alifa	80	80	Passed
5	Aulia	85	85	Passed
6	Aynun	30	30	Failed
7	Azka	100	100	Passed
8	Dhafitha	45	45	Failed
9	Dimas	90	90	Passed
10	Faisal	55	55	Failed
11	Ghea	100	100	Passed
12	Heni	95	95	Passed
13	Jelita	75	75	Passed
14	M.Bilal	90	90	Passed
15	M. Baihaqi	80	80	Passed
16	M. El	85	85	Passed



17	M. Kenzo	80	80	Passed
18	M. Sidiq	50	50	Failed
19	M. Dendy	85	85	Passed
20	Najwa	80	80	Passed
21	Nefya	50	50	Failed
22	Numa	75	75	Passed
23	Salsabila	90	90	Passed
24	Selvia	70	70	Failed

The author also convert it to a 5-Point Scale

Table 5. Conversion Results with a 5-Point Scale

Raw Score	Standard Score
91 - 100	A
81 - 90	B
71 - 80	C
61 - 70	D
< 60	E

By referencing the criterion, the calculation can be done more easily, as it does not require complex processing like normative referencing. Simply setting the agreed-upon criterion by the teacher and policymakers will become the reference for student graduation.

NO	NAMA SISWA	JEN IS	AGAMA	PTS		Rata-Rata	Nilai PAK	Keputusan PAK
				PAI	BTA			
1	AHMAD ARIQUL GHANI	L	Islam	30	55	42.5	D	REMIDI
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3	AJI MUHAMMAD SUTA	L	Islam	90	80	85	A	LULUS
4	ALIFA ALYA HANIFA	P	Islam	80	85	82.5	A	LULUS
5	AULIA ARDILA	P	Islam	85	75	80	A	LULUS
6	AYNUN SAFITRI	P	Islam	30	70	50	D	REMIDI
7	AZKA ALDRIC AQILA BRIGID	L	Islam	100	30	65	C	LULUS
8	DHAFITHA NIZZA SAUFA	P	Islam	45	65	55	C	LULUS
9	DIMAS ILHAM PRASETYA	L	Islam	90	65	77.5	B	LULUS
10	FAISAL ABDULLAH	L	Islam	55	55	55	C	LULUS
11	GHEA MAULIDA ZHAFIRA MANTO	P	Islam	100	85	92.5	A	LULUS
12	HENI NORAINI YASMIN	P	Islam	95	65	80	A	LULUS
13	JELITA NOOR SYARIFAH	P	Islam	75	75	75	B	LULUS
14	M. BILAL PUTRA JAYA	L	Islam	90	55	72.5	B	LULUS
15	MUHAMMAD BATHAQI KHAIZAN	L	Islam	80	70	75	B	LULUS
16	MUHAMMAD EL RAFASYA	L	Islam	85	60	72.5	B	LULUS
17	MUHAMMAD KENZO ALFAROQ	L	Islam	80	65	72.5	B	LULUS
18	MUHAMMAD SIDIQ	L	Islam	50	70	60	C	LULUS
19	MUKHAMAD DENDY WIRAWAN	L	Islam	85	85	85	A	LULUS
20	NAJWA SYIFA ANNIDA	P	Islam	80	75	77.5	B	LULUS
21	NEFYA SORAYA	P	Islam	50	30	40	D	REMIDI
22	NUMA AS'SYIFA AZWA	P	Islam	75	70	72.5	B	LULUS
23	SALSABILA AZZAHRA	P	Islam	90	50	70	B	LULUS
24	SELVIA JULIANTY	P	Islam	70	70	70	B	LULUS

Figure 2. CRT Calculation Using Microsoft Excel

In processing the results at SDN 1 Syamsudin Noor Banjarbaru, the author found that out of 24 students with a KKM (Minimum Completion Criteria) of 75, 8 students did not pass the midterm exam and had to undergo remedial to improve their scores, while the remaining 16 students were confirmed to have passed the midterm exam. If using a scale of 5, the breakdown is as follows: 3 students received an A score, 7 students received a B score,

6 students received a C score, 2 students received a D score, and 6 students received an E score.

Usually, when using this scale of 5, it is necessary to determine which score is the standard for a student to be considered passing. Whether the minimum is B or C, at SDN 1 Syamsudin Noor Banjarbaru, the decision standard is set at C. If a student scores below C, they are declared not to have passed and need to undergo remedial to improve their score. Just as Normative Referenced Assessment can also be calculated using Microsoft Excel, Criterion-Referenced Test can also be processed with the help of Microsoft Excel. The method can be seen in the following results. Through the Microsoft Excel calculation, using the CRT approach, it was found that 4 students out of the entire class did not pass because they did not meet the set criterion standard and had to undergo remedial, while the other 20 students successfully passed.

### **Conclusion**

In processing the grades for the achievements of Class 1A students at SDN 1 Syamsudin Noor in the Midterm Assessment, it was found that when using NRT (Norm-Referenced Test) with manual calculations in the PAI subject, 13 out of 25 students were declared not to have passed, while the other 12 were declared to have passed. In the calculations using Microsoft Excel in the PAI (Islamic Education) and BTA subjects, it was found that 7 students did not pass, while 19 others passed the exam.

As for the criterion-referenced approach (CRT), in manual calculations of the PAI grades based on the KKM of 75, it was found that eight students were declared not to have passed, while the other 16 successfully passed the midterm exam. If using a scale of 5, the same results were found: 8 students were declared not to have passed, while the other 16 were declared to have passed. In the calculations using Microsoft Excel in the PAI and BTA subjects, it was found that 4 students were declared not to have passed, while 20 others were declared to have passed. It means that norm-referenced assessment provides the broadest possible opportunities for students within a group to compete with one another. In other words, the benchmark is derived from calculations based on each group. Meanwhile, criterion-referenced assessment must follow standards that have been determined from the beginning. In other words, students must achieve the target as soon as they understand the given standard. As for norm-referenced assessment, students must wait first to conclude whether they pass or not.

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