ENHANCEMENT OF DIFFERENTIATED LEARNING EFFICACY VIA ACADEMIC SUPERVISION IN SENIOR HIGH SCHOOL SETTINGS: A COMPREHENSIVE OPTIMIZATION APPROACH

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Abstract. This research constitutes a two-cycle School Action Research involving 29 teachers at SMAN 1 Jawilan, Serang, Banten. Employing data collection methods such as observation, field notes, and documentation, coupled with a comprehensive analysis utilizing both descriptive qualitative and quantitative approaches, this study aimed to discern the impact of academic supervision on teachers' pedagogic competency in developing differentiated learning strategies. The data analysis demonstrated a discernible progression in pedagogic competency scores over the cycles. In the pre-cycle, scores were recorded at 44.17 with an average of 1.52, which subsequently increased to 65.44 with an average of 2.26 in cycle 1, and further elevated to 77.43 with an average of 2.67 in cycle 2. Similarly, an analogous advancement was observed in teachers' pedagogical competency scores for differentiated learning against predetermined standards, ascending from 38% in the pre-cycle to 69% in cycle 1, culminating in 97% in cycle 2. These findings substantiate the assertion that academic supervision plays a pivotal role in augmenting teachers' pedagogical competence, particularly in the context of developing differentiated learning methodologies.

INTRODUCTION

The Ministry of Education, Culture, Research, and Technology, within the government's oversight, has introduced the Independent Learning Policy, with Episode 15 specifically addressing the Independent Curriculum and the Independent Teaching Platform, underscoring the significance of the Independent Curriculum (Sumandya et al., 2022). In the successful execution of this curriculum, teachers play a crucial role in addressing the challenge of accommodating diverse student needs and learning styles, giving rise to the concept of differentiated learning (Putra, 2021). This pedagogical approach aims to tailor teaching methods to meet individual student needs, optimizing their learning potential. However, the effective implementation of differentiated learning requires specific competencies in teachers.

To enhance teacher competence in differentiated learning, this article explores the role of academic supervision, a vital tool for elevating the quality of education. Academic

supervision provides a systematic approach, aiding teachers in identifying strengths and weaknesses in differentiated learning, offering constructive feedback, and the necessary support to enhance teacher skills (Wiryasana, 2022).

The research focuses on assessing the optimization of differentiated learning through academic supervision at SMAN 1 Jawilan, Serang, Banten Regency. In differentiated learning, teacher competence is paramount in developing effective learning, emphasizing the management and assessment processes that significantly influence education quality. Assessments should transparently reflect the quality of learning, conducted objectively to prevent instances of dishonest assessments or grade manipulation. Dishonesty in this context can be elucidated through the Fraud Triangle, involving pressure, rationalization, and opportunity as the three main factors. This comprehensive approach aligns with the overarching goal of ensuring the effectiveness and integrity of differentiated learning practices.

The issue of academic dishonesty poses significant challenges to the educational realm, impacting both students and the broader educational system. On an individual level, students engaged in dishonest academic behavior face potential sanctions, ranging from reprimands to potential expulsion from educational institutions (Jatmika et al., 2022). Within the legal framework, as outlined in Law No. 14 of 2005 concerning teachers and lecturers, educators are recognized as professionals with the primary responsibilities of educating, teaching, guiding, directing, training, and assessing students across various educational levels. To qualify as professionals, teachers must possess a skill set that aligns with specific requirements, necessitating a comprehensive understanding of education and teaching, supplemented by diverse knowledge cultivated and developed through formal education or pre-service training.

The efficacy of the educational process is gauged by the attainment of predefined pedagogical objectives meticulously formulated by educators to delineate the trajectory and methodology of learning, all converging towards the realization of educational outcomes. The academic achievement of students in educational contexts is contingent upon multifaceted determinants, many of which lie beyond the sphere of influence of the student (Avnet et al., 2019). Furthermore, the discernible impact of school culture, learning interest, and motivation on the outcomes of science education has been empirically substantiated (Purnadewi et al., 2023). Within the pedagogical milieu, the accessibility and adequacy of learning facilities and infrastructural resources assume a pivotal role as instrumental tools facilitating pedagogical endeavors (Yahya et al., 2023). Consequently, the triumphant realization of the learning process is contingent upon the judiciously designed educational objectives by instructors, influenced by factors extraneous to students' agency. Remarkably, the substantive impact of school culture, learning interest, and motivation on the outcomes of science education is underscored, while the indispensable role of accessible learning facilities and infrastructural support emerges as a linchpin for the efficacious execution of teaching and learning activities.

In the contemporary educational milieu, there is a discernible emphasis on pedagogical approaches centered around the student, delineating a learning milieu that prioritizes enjoyment and integrates a spectrum of diverse methods and models. Empirical evidence derived from scholarly research underscores the positive impact of the Learning Cycle model within the domain of chemistry education, manifesting enhancements in student learning activities, outcomes, and eliciting favorable responses (Sman, 2020). Furthermore, the

strategic integration of problem-based learning models, complemented by Quizizz evaluations, emerges as a consequential measure aimed at augmenting learning outcomes (Nyoman Sukartini, 2022). Thus, the current educational paradigm underscores the paramount importance of student-centered methodologies, emphasizing the efficacious implementation of the Learning Cycle model, which not only ameliorates student learning activities and outcomes but also elicits positive responses. Additionally, the incorporation of problem-based learning models with Quizizz evaluations is identified as a judicious strategy contributing to the continual enhancement of learning outcomes.

The research conducted by (Suyatno et al., 2023) delineates a discernible positive correlation between pedagogic competence and learning readiness, while discerning an absence of statistically significant impact stemming from professional competence on the latter. Moreover, the study elucidates the dual facilitative role of academic supervision in enhancing both pedagogic and professional competencies. Concurrently, findings from the investigation by (Musah et al., 2023) underscore an indirect causal relationship wherein an exemplary work culture substantively influences the performance of academic staff. Additionally, the study undertaken by (Patak et al., 2022) reports the multifaceted nature of challenges faced by supervisors, emanating from the four identified items. In synthesis, these scientific inquiries collectively accentuate the salient influence of pedagogic competence on learning readiness, the non-significant impact of professional competence, the concomitant enhancement of both competencies through academic supervision, the indirect influence of an exemplary work culture on academic staff performance, and the heterogeneous nature of challenges confronted by supervisors in connection with the specified study items.

This study delves into the assessment of differentiated learning optimization through academic supervision at SMAN 1 Jawilan, Serang, Banten. It emphasizes the pivotal role of teacher competence, particularly in the management of assessments, ensuring transparent and objective evaluation processes to counteract dishonest practices. Additionally, the study draws attention to the potential influence of teaching experience on teacher competence and its subsequent impact on learning outcomes. Notably, teachers with less than 10 years of experience exhibit a broader spectrum of responses and understanding of the learning process (Tambak et al., 2022). This underscores the need for ongoing academic supervision to continually enhance teacher competence and foster an environment conducive to optimal differentiated learning practices.

In the current educational milieu, it is imperative to furnish educators with requisite digital literacy competencies, delineated as the adept utilization of contemporary digital tools and technologies encompassing computers, mobile phones, tablets, computer programs, and online media, characterized by both efficiency and efficacy (Ussarn et al., 2022). Within the digital epoch, digital literacy assumes a pivotal role as an essential skill set for educators confronted with escalating levels of intricacy and dynamism in the educational landscape. Proficiency in digital literacy equips educators to seamlessly integrate technological modalities into pedagogical frameworks, thereby fostering elevated dimensions of student interaction and participation, concomitant with widening access to a diversified spectrum of educational resources (Widana, 2020). This underscores the non-negotiable imperative for modern educators to embody advanced digital literacy proficiencies, thereby enabling them to navigate the intricate contours of contemporary education with finesse and efficacy.

Authentic assessment, as delineated by (Sokhanvar et al., 2021) engages students in cognitively demanding tasks closely aligned with the complexities of real-world workplace

settings. Drawing from decision-making literature, as elucidated by (Mandinach & Schildkamp, 2021) is not only instrumental in rectifying identified misconceptions but also serves as a catalyst for transformative policy changes and strategically guides an extensive research agenda. The proposed instrument, subjected to rigorous scrutiny through various scale development tests, exhibits meticulous adherence to benchmark values and introduces a comprehensive taxonomy comprising seven SQ themes: teachers' profile, curriculum, infrastructure and facilities, management and support staff, employment quality, safety and security, and students' skills development (Abbas, 2020). Furthermore, Differentiated Instruction (DI) emerges as a linchpin for the efficacious implementation of instructional teaching, while the challenges of inadequate resources and teacher training are paramount in this educational discourse (Lintangsari & Emaliana, 2020).

This research indicates that the implementation of differentiated learning contributes to the improvement of science learning outcomes (Suwartiningsih, 2021). In this context, differentiated learning provides students with the opportunity to learn naturally and efficiently with the support of teachers who can align methods and approaches according to their needs (Faiz et al., 2022). Moreover, differentiated learning has the potential to support optimal learning outcomes for students, as the learning products they produce align with their interests (Herwina, 2021). Therefore, the effective implementation of differentiated learning can enhance science learning outcomes, facilitate a natural and efficient learning experience for students through the integration of suitable teaching methods, and stimulate the achievement of optimal learning outcomes based on individual interests.

The examination of the teacher's formative assessment practice, encompassing various aspects, presents empirical evidence of its substantial impact on students' self-regulated learning (SRL), aligning with established models of SRL development (Granberg et al., 2021) Survey results gauging student feedback reveal that Problem-Based Learning (PBL) outperforms traditional teaching methods, notably enhancing self-study, learning interest, teamwork, problem-solving, analytical skills, knowledge breadth, communication, and expression (Liu et al., 2019). Despite the ambitious goals of assessment for learning, challenges persist due to the prevalent use of public examinations in pivotal decision-making processes (Yan & Brown, 2021). The influence of professional learning communities on teaching practices is robust, with effects both direct and indirect through teacher learning, highlighting the significance of concepts like transformational leadership and professional learning communities (Luyten & Bazo, 2019) Consequently, the teacher's formative assessment approach not only demonstrates its effectiveness in fostering SRL but also underscores the broader impact on student outcomes, emphasizing the persistent challenges in assessment practices and the pivotal role of transformative leadership and professional learning communities.

In the execution of differentiated learning, educators are confronted with multifaceted challenges, necessitating a nuanced approach to discern and comprehend students' learning predispositions, inclinations, and profiles. Subsequent to the discernment of students' unique learning requirements, educators are tasked with formulating bespoke learning designs and curating pertinent learning resources. Mitigating these challenges involves collaborative endeavors with co-instructors within the same educational context and coordination with allied educators. The impediments inherent in the planning and execution of differentiated learning are systematically reframed as productive challenges, catalyzing educators to engage in proactive problem-solving strategies. Despite the myriad challenges, maintaining a constructive perspective throughout the implementation of differentiated learning is

paramount. Such an approach ensures the accommodation of diverse learning needs, fostering an enriched learning experience, heightened motivation, and optimal academic outcomes.

Differentiated Learning, as delineated by a repertoire of pedagogical strategies, serves the dual imperatives of cultivating collaborative group learning dynamics and tailoring individualized learning trajectories reflective of distinct student characteristics (Smets & Struyven, 2020). Acknowledged as a nuanced and multifaceted educational paradigm, the framework of Differentiated Learning accentuates the instructor's pivotal role as a pedagogical orchestrator endowed with the analytical acuity to discern the scholastic milieu and attend to students' multifarious needs. The salience of teacher pedagogy is underscored, accentuating the exigency for pedagogues to adeptly navigate differentiated learning modalities in catering to students' diverse educational requirements. Correlating with differentiated instruction, the emphasis on tailoring teaching methods to accommodate students' diverse learning styles, as highlighted by (Aprina, 2023), provides valuable insights into effective strategies for teachers to address and alleviate learning difficulties among their students.

In the context of their initial administrative roles, participants expressed pivotal concerns regarding the fulfillment of supervision and evaluation prerequisites, with a particular emphasis on time constraints for assuming instructional leadership and delivering timely, constructive feedback to enhance the instructional practices of underperforming teachers. A prevailing sentiment among participants underscored the imperative to dichotomize supervisory duties from investigative responsibilities, accentuating the requisite specialized training for supervisors in clinical supervision (Kayıkçı et al., 2017) The reported outcomes derived from an isolated validation set denote a substantive advancement in the trajectory toward the development of automated tools tailored to bolster diagnostic processes within clinical practice (Rios-Urrego et al., 2019) Notably, all generated evaluation tools and resources are ubiquitously available online, establishing a foundational benchmark for subsequent research inquiries (Huang et al., 2019) Consequently, participants' apprehensions pertaining to temporal constraints and the intricate nature of supervisory responsibilities underscore the exigency for specialized training initiatives and technological advancements in the arenas of clinical supervision and educational evaluation

Modern supervision, characterized by a democratic paradigm, manifests a cooperative and comprehensive ethos involving children, educators, administrators, parents, and all pertinent stakeholders within educational institutions. The activation of participants' teacher efficacy exhibited no discernable impact on the attitudes of preservice teachers from the ethnic majority; however, it elicited a reduction in positive implicit attitudes among preservice teachers from ethnic minority groups, underscoring the imperative for a meticulous exploration of multifaceted factors influencing attitudes bidirectionally (Glock & Kleen, 2019). Supervision may be categorized under four stages; the stage before reaching the school setting, pre-observation, observation, and post-observation. In summation, modern supervision, underpinned by a democratic ethos, operationalizes a comprehensive strategy that integrates diverse stakeholders within educational institutions. The nuanced impact of teacher efficacy on attitudes, contingent upon ethnic background, accentuates the exigency for an intricate analysis of influencing factors. The systematic classification of supervision into distinct stages contributes to a structured comprehension of its implementation processes.

Peer assessment demonstrates a significant reduction in learners' dependence on instructors, concurrently fostering elevated confidence in their learning aptitude, albeit with constrained advancements in ancillary domains (Shen et al., 2020) the application of academic supervision can improve the pedagogic competence of teachers Simultaneously, the application of academic supervision is posited to harbor the potential to augment teachers' pedagogic competence, contributing to an enhancement of their overarching teaching proficiency and competence in the learning process (Mujiono, 2020). Furthermore, academic supervision emerges as a catalyst for fortifying teachers' motivational underpinnings in the development of educational materials (Febiani Musyadad et al., 2022) This intricate amalgamation is underscored by an empirical investigation into the viability of employing decision trees for the systematic analysis of data derived from comprehensive assessments, coupled with an exploration of the intricately associated factors contributing to school effectiveness (Martínez-Abad et al., 2020) Consequently, the synergistic integration of peer assessment and academic supervision proves instrumental in mitigating students' reliance on instructors, cultivating self-confidence, and advancing the pedagogical and motivational facets of teachers, thereby contributing to overall educational efficacy.

Empirical insights underscore the disparate effects of Differentiated Instruction (DI) on varying levels of reading comprehension proficiency, with the most discernible enhancements observed in cohorts exhibiting above-average proficiency (Magableh & Abdullah, 2022). These findings bear notable ramifications for the educational landscape, positing that the instantiation of DI substantially contributes to an amelioration in reading comprehension scores across diverse strata of academic proficiency. In synthesis, Differentiated Learning encapsulates collaborative group strategies and individualized learning pathways, with an emphasis on the pivotal role of educators in discerning and addressing heterogeneous student needs. The deployment of DI, characterized by its intricate educational architecture, manifests salutary effects on reading comprehension scores, particularly within cohorts displaying above-average proficiency levels.

The operationalization of differentiated learning is effectuated by facilitating student engagement in collaborative and intricate tasks, sharing common learning objectives while concurrently receiving customized support and individualized learning trajectories tailored to specific student needs (Westbroek et al., 2020). This methodology is underpinned by the recognition of substantial heterogeneity in students' educational requirements. Noteworthy is the provision of student autonomy in decision-making and responsibilities concerning the learning process. Empirical observations within this context elucidate that, notably, German educators exhibit a predilection for integrating project-based learning methodologies into the framework of differentiated learning, surpassing the prevalence of school-wide tutoring systems (Pozas et al., 2020). Hence, differentiated learning encompasses the allocation of common and intricate tasks, concomitant with shared learning objectives, supplemented by bespoke support and tailored learning trajectories, conscientious of the pronounced variations in students' needs. Additionally, research underscores the discernible inclination of German educators towards incorporating project-based learning into differentiated learning paradigms, thereby accentuating the importance of student autonomy in decision-making and responsibilities during the learning process.

The implementation of differentiated learning helps teachers design learning by considering content, process, and product differentiation. Content differentiation involves modifying the curriculum and learning materials according to student's learning styles and learning profiles. Process differentiation pays attention to students' readiness and learning styles, which helps

them process ideas, and information, and interact with material. Product differentiation allows students to demonstrate their understanding through various methods, such as posters, writing, songs, poetry, or videos, according to their preferences (Ayu Sri Wahyuni, 2022). The importance of creating a comfortable learning environment is also emphasized, because this environment influences students' learning outcomes, thereby helping them achieve optimal learning outcomes.

Based on the opinions above, it can be emphasized that academic supervision is a series of professional assistance activities in the form of providing encouragement, guidance, and direction from the school principal to teachers to improve their ability to carry out the learning process to achieve learning goals. With academic supervision, teachers will feel more helped to overcome the problems they face when carrying out the learning process.

As for daily activities at school, the word supervision is always interpreted as academic supervision. From this description, it can be understood that academic supervision activities are efforts made by someone to achieve change for the better by increasing and improving quality, especially in improving the quality of learning in the classroom. In line with the opinions of the experts above, the researcher concluded that academic supervision is a series of activities that focus on observation activities carried out by supervisors regarding academic problems, namely matters that are directly related to learning activities carried out by teachers. Therefore, one of the principal's leadership functions is the supervisory function of teachers and other employees. Apart from managing the running of the school, the principal's duties and obligations must also be able to work together harmoniously with teachers in solving problems faced in the learning process.

METHOD

This research was conducted at SMAN 1 Jawilan. This research location was chosen because the author works at this school, so the author can carry out research without having to leave his duties. The subjects of this research were all teachers who served at SMAN 1 Jawilan. Data collection is based on a reasonable situation, as it is, without influencing or intervening in the situation. The research was carried out in two cycles, cycle 1 was carried out on 12-23 August 2022, and cycle 2 was carried out on 25-29 September 2022. Researchers entered the field directly related to the situation and subject being researched. To obtain data, observation, interviews, documentation, questionnaires, and field notes were used. Observations are carried out when the teacher supervision process activities are in progress through teacher administration data, learning implementation, assessment, and reflection on the teacher concerned. The aim of carrying out observations is to obtain data about teachers' pedagogical competence in developing differentiated learning.

RESULTS AND DISCUSSION

The researcher made observations and assessed the teacher's pedagogical competence in developing differentiated learning in the classroom by the rules of teacher supervision. Next, researchers analyze the results of observations and assessments, which are then used as the basis for implementing actions. First, the researcher studied the instruments and studied the use of the supervision application provided by the Banten Province Education Quality Assurance Center (BPMP). The following is the research data starting from the pre-cycle, cycle 1, and cycle 2 as follows:

Category	Value	Number of Teachers	Percentage
A (SB)	3-4	0	0
B (B)	2-3	11	38
C (C)	1-2	9	31
D (K)	<1	9	31
Total		29	100

Description: SB (Very Good), B (Good), C (Fair), K (Poor)

Based on these results, 11 teachers received scores according to Category A and B standards, or 38%, and 18 teachers who did not meet the standards, or 62%. Based on this, improvements were made, namely through providing reflection, continuous guidance, and providing examples of learning administration. After carrying out the entire learning process, teachers need to reflect to assess their competence so they can determine further actions regarding the research being carried out. The results of instrument analysis in implementing learning. Researchers must know the causes of unsuccessful implementation of differentiated learning so that learning improvements can be implemented that are ready to be displayed.

Based on these results, 11 teachers received scores according to Category A and B standards, or 38%, and 18 teachers who did not meet the standards, or 62%. Based on this, improvements were made, namely through providing reflection, continuous guidance, and examples of learning administration. Furthermore, to further strengthen this explanation, it can be illustrated in graphical form as follows.
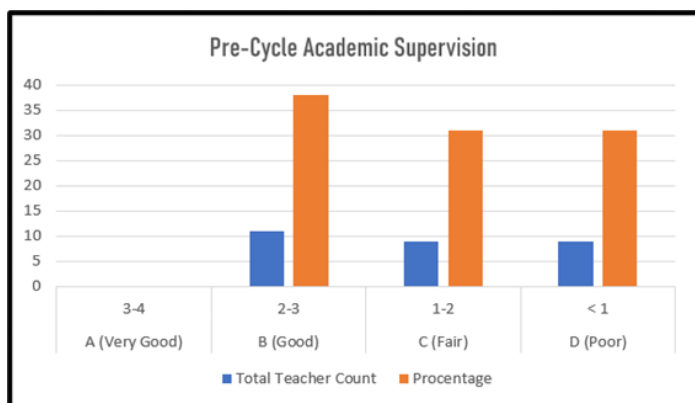

Image 1: Pre-Cycle Supervision Results

In this research, teachers' pedagogical competence in developing differentiated learning is measured through the implementation of academic supervision, with indicators: preparation of differentiated learning plans, implementation of differentiated learning, and learning outcomes measured through assessment. This readiness can be seen through the readiness of learning administration with all its tools, these tools include the academic calendar, annual program, semester program, syllabus, and RPP for teachers who teach the 2013 Curriculum. Meanwhile, teachers who teach in the Independent Curriculum Implementation are equipped with Learning Outcomes, Flow of Learning Objectives (ATP), Teaching Modules (MA), and student worksheets. From these results, 9 teachers have not completed learning administration and have not carried out learning supervision or assessment.

After improvements were made through activities carried out in cycle 1, the results were as follows:

Table 2. Results of Cycle 1 Academic Supervision

Category	Value	Number of Teachers	Percentage
A (SB)	3-4	0	0
B (B)	2-3	20	69
C (C)	1-2	9	31
D (K)	< 1	0	0
		29	100

Description: SB (Very Good), B (Good), C (Fair), K (Poor)

Based on these results, 20 teachers obtained scores according to Category A and B standards, or 69%, and those who did not meet the standards were 9 people, or 31%. Based on these data, there is an increase in teacher pedagogical competence in developing differentiated learning in preparing and implementing learning by 69%.

Based on these results, 20 teachers obtained scores according to Category A and B standards, or 69%, and those who did not meet the standards were 9 people, or 31%. Based on these data, there is an increase in teacher pedagogical competence in developing differentiated learning in preparing and implementing learning by 69%. Furthermore, to further strengthen this explanation, it can be illustrated in graphical form as follows.
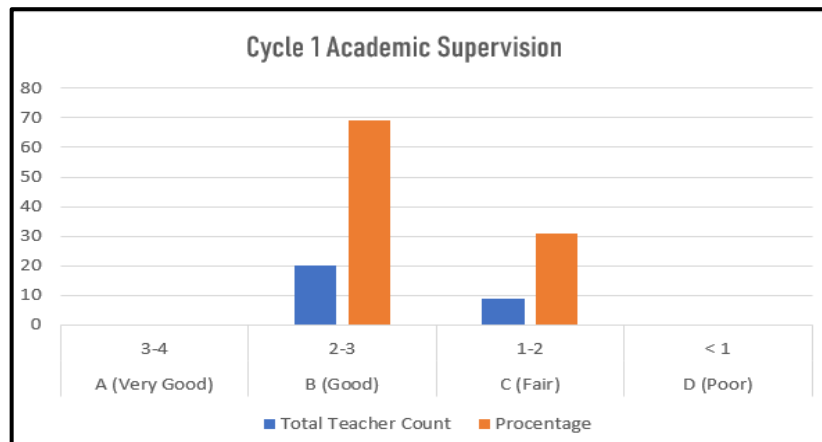

Image 2. Graph of Conformity of Teachers' Pedagogical Competency Scores

Researchers become more focused on the results of the implementation of supervision related to teachers' pedagogical competence in differentiated learning, things that are done by conveying the results of observations (academic supervision) regarding improving teachers' pedagogical competence in developing differentiated learning, holding general discussions at school meetings, announcing the results reward teacher pedagogical competence in developing differentiated learning at flag ceremonies in schools.

Further improvements were made by reflecting based on the implementation in cycle 1 so that in cycle 2 the following data was obtained:

Table 3. Results of Cycle 2 Academic Supervision

Category	Value	Number of Teachers	Percentage
A (SB)	3-4	4	14
B (B)	2-3	24	83
C (C)	1-2	1	3
D (K)	< 1	0	0
		29	100

Description: SB (Very Good), B (Good), C (Fair), K (Poor)

Based on these results, it can be seen that in cycle 2 the total score was 77.43 with an average of 2.67. 28 teachers got a score according to the standard or 97%, and 1 teacher, or 3% did not meet the standard. Based on this, there is no need for repairs. Furthermore, teacher data according to standards and not suitable when expressed in graphical form are as follows.
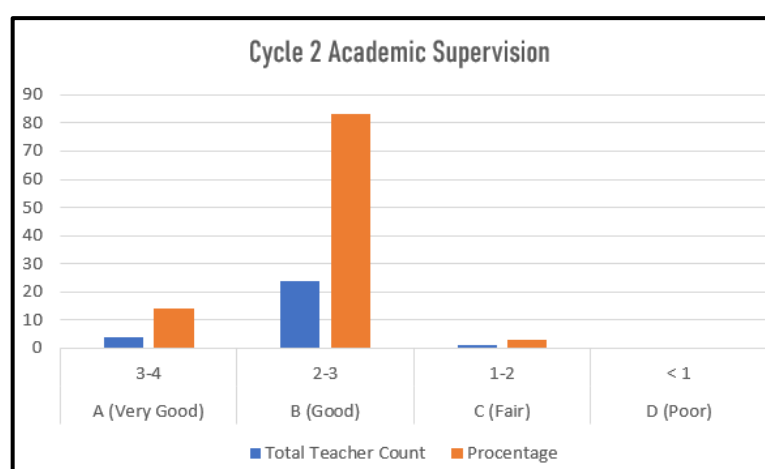

Image 3: Graph of Supervise results for cycle 2

After the school took action on differentiated learning through the implementation of academic supervision, it can be said that teachers' pedagogical competence in developing differentiated learning has increased. This can be proven by an increase in teacher pedagogical competence in developing differentiated learning, namely in the pre-cycle 11 teachers had teacher pedagogical competence in developing differentiated learning, increasing in cycle 1 to 20 teachers, and cycle 2 to 28 teachers. From this implementation, it can be seen that there has been an increase in the number of teachers who have teacher pedagogical competence in developing differentiated learning by standards, namely having a score equal to or more than 75.

Furthermore, the implementation of academic supervision can increase teachers' pedagogical competence in developing differentiated learning, namely in the pre-cycle with a total of 44.17, the average is 1.52, in cycle 1 the total value is 65.44, the average is 2.26, in the second cycle, the total value is 77.43, the average is 2.67. The complete results are summarized in the following table.

Table 4. Supervision Results for Each Cycle

Implementation	Amount	Average Value
Pre Cycle	44.17	1.52
Cycle 1	65.44	2.26
Cycle 2	77.43	2.67

After seeing the results of the implementation of supervision related to teacher pedagogical competence in differentiated learning, the things that were done by conveying the results of supervision in reflection on supervision activities with teachers at teacher meetings, enthusiasm for teaching increased due to planning readiness, the researcher held discussions with the supervision team to determine teacher assessment, mastery of learning planning applications

Based on the results obtained in cycle 2, it can be said that the implementation of this cycle has met the research requirements because teachers have a score of more than or equal to 2-4, namely 97% so there is no need to carry out the next cycle. Based on this table, there are differences in the results of supervision carried out each cycle.

CONCLUSION

The findings derived from the school action research conducted at SMAN 1 Jawilan Kab. Serang Banten yield empirical evidence supporting a causal relationship between the implementation of academic supervision and the augmentation of teachers' pedagogical competence specifically within the domain of differentiated learning at SMAN 1 Jawilan. This assertion is substantiated by the quantitative data acquired throughout distinct research phases: in the pre-cycle, the aggregate score amounted to 44.17, accompanied by an arithmetic mean of 1.52; during cycle 1, there was a discernible ascent in the total score, reaching 65.44, denoting an average of 2.26; and in cycle 2, a further incremental advance manifested, culminating in a total score of 77.43, concomitant with a mean of 2.67. The evaluative analysis of teachers' pedagogical competency scores vis-à-vis predetermined standards exhibited a marked upward trajectory, progressing from 38% in cycle 1 to 69%, subsequently achieving a pinnacle of 97% in cycle 2. This signifies a substantial amelioration in pedagogical competency among teachers engaged in the milieu of differentiated learning. Moreover, the attaining of standard scores by 97% of teachers underscores the successful realization of the predefined objective. In summation, the research underscores the constructive influence exerted by academic supervision on the pedagogical proficiency of educators, thereby contributing significantly to the efficacious implementation of differentiated learning methodologies at SMAN 1 Jawilan.

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