Analysis of the Impact of SISPENA-Based Technology Literacy and Assessor Competence Assessment on Accreditation Quality

Ahmad[1(✉)], Ratih Permata Sari[2(✉)], M. Ishaq[1], Edi Widianto[1], and Khoirul Nadir[1]

[1] Universitas Negeri Malang, Malang, Indonesia
ahmad.fip@um.ac.id
[2] Institute of Islamic Religion Al-Qolam Malang, Malang, Indonesia
ratih@alqolam.ac.id

Abstract. This explanatory quantitative study aims to analyze the effect of SISPENA literacy and Assessor Assessment Competency on the quality of PKBM accreditation either partially or simultaneously. Specifically, the purpose of this study is to analyze: (1) The effect of SISPENA literacy and Assessor Competence on the quality of PKBM accreditation in East Java. (2) The Effect of SISPENA Literacy on the Quality of PKBM Accreditation in East Java. (3) The influence of the KPKA assessment on the quality of PKBM accreditation in East Java, and (4) The effect of the visitation assessment on the quality of PKBM accreditation in East Java. This study involved 51 people from 60 PKBM cluster assessors in East Java. The sample selection was carried out by Proportional Random Sampling. The research data was collected by distributing questionnaires to all assessors, but 51 questionnaire packages were returned and filled in completely, while the other 9 questionnaire packages did not return. The research questionnaire used a Likert scale. The data that has been collected is then analyzed using the Multiple Regression technique using Jeffrey's Amazing Statistics Program (JASP) application version 15.00. The results of the study include: (1) There is a significant effect of SISPENA literacy and Assessor Assessment Competency on the quality of PKBM accreditation in East Java. (2) There is a significant influence of SISPENA Literacy on the Quality of PKBM Accreditation in East Java. (3) There is a significant effect of the KPKA assessment on the quality of PKBM accreditation in East Java., and (4) There is a significant effect of the visitation assessment on the quality of PKBM accreditation in East Java. This study concludes that partially or simultaneously assessor SISPENA literacy and assessor competence greatly affect the quality of PKBM accreditation results in East Java.

Keywords: SISPENA literacy technology · assessment competence · assessor · accreditation quality

1 Introduction

Becoming an Assessor of the National Accreditation Board for Early Childhood Education and Informal Non-Formal Education (BAN PAUD and PNFI) is an ideal profession

S. Sumarmi et al. (Eds.): ICSKSE 2022, ASSEHR 696, pp. 347–366, 2022.
https://doi.org/10.2991/978-2-494069-63-3_31

in 2018, marked by the massive acceptance of assessors nationally, reaching 5,705 assessors, but there was a reduction in assessors in 2019 as many as 1,422 assessors so that totaling 4,283 assessors [1]. This phenomenon is stressed because the registered assessors are unable to carry out their duties properly, including failing the test to increase the competence of assessors, in addition, a small number of them have resigned. The results [2] showed that there was a positive relationship between assessor competence and the assessment results. This step to do is to obtain the standardization of assessors to have an impact on improving the quality of the institution [3–5].

The reduction of assessors is a commitment of BAN PAUD and PNFI to maintaining the quality of accreditation results because, with their competence, assessors can work professionally. In principle, the task of the assessor is to assess the performance/quality of the institution that refers to the criteria of national education standards such as graduate competency standards, content standards, process standards, education assessment standards, education personnel standards, facilities, and infrastructure standards. Management standards; and financing standards [6].

To produce excellence accreditation, the implementation of institutional performance assessment is carried out in stages, acquiescently, involves many elements, and is carried out fully online [7]. First, the tiered implementation begins with the institution/assessment applying for accreditation while going through the data integration process from the Basic Education Database (DAPODIK) of the Ministry of Education and Culture of the Republic of Indonesia, and the Education Management Information System (EMIS) Database of the Ministry of Religion of the Republic of Indonesia, the foundation completes general requirements, special requirements, filling out self-evaluation forms, assessors assessing the Accreditation Eligibility Application Classification (KPKA), assessors conducting field visitation assessments, validation assessments, and even verification of accreditation results as material for the meeting to determine accreditation results. However, in this article, the competence of the assessor assessment is only limited to the KPKA assessment and the Visitation Assessment. Second, the implementation of accreditation is carried out openly, it is intended that the accreditation process is part of the community's needs, so that all information related to accreditation can be obtained and directly involved. Third, it is done completely online. This activity is by the data mining schedule for a maximum of eight effective working hours in the zoom cloud network [8].

The facts show that during the KPKA assessment process and visitation assessment, assessors not only work for 8 h but even days. This occurs because of two possibilities, including: (1) the assessor is less skilled in making decisions according to his level of expertise, and the assessor is incomplete in attaching supporting documents so that there is an offer of an extension of time in completing the assessment [9].

To maintain and update the understanding of assessors, every year an assessor competency test is conducted with the main material related to policies, mechanisms, accreditation procedures, SISPENA-based assessment techniques starting from the institutional self-evaluation stage, assessment of classification of application for accreditation eligibility, visitation assessment and even validation assessment and verification of accreditation results. The series of accreditation activities must be adapted by each assessor

to be literate to be able to operate the Accreditation Assessment System (SISPENA) online.

Literacy is not only discussing reading and writing problems but also related to proficiency and skill in operating computer devices, skilled in maximizing digitally integrated assessments through SISPENA, skilled in documenting assessment findings in digital storage folders, and proficiency in operating applications other than SISPENA such as zoom, recorder images, file converters which are all digital based, able to utilize online and digital media in perfecting the assessment results, as well as being able to solve problems based on information and communication technology [10]. Digital literacy helps in the development of knowledge and improves one's skills in using technology and being able to interact well between users and recipients of the information [11, 12].

The results of UNESCO research, digital literacy has an important point in understanding technology, information, and communication. It includes competencies that are variously referred to as computer literacy, ICT literacy, information literacy, and media literacy. It was specifically stated that people who have digital literacy must have technical skills that allow them to be actively involved in community activities through the development of a digital-based public service culture [13]. Furthermore, digital literacy is divided into two categories, namely technological literacy, and information literacy by maximizing knowledge in mapping, identifying, processing, and using digital information to the fullest. These competencies must be possessed by assessors in assessing the performance of the institution. However, the fact is that there is still a high number of appeals by institutions based on the performance of assessors. In 2022, there will be 20 cases of appeal [14]. The proportion is relatively small, but it can be said that the assessors are still not performing optimally. This is relevant to research that accreditation can trigger an increase in the quality of graduates [15].

Based on this opinion, in carrying out their duties, an assessor must be able to apply adaptive skills with information and communication technology. Essentially it is known by assessors in carrying out their functions at least to understand the elements of digital literacy as follows: (1) Relating to a culture where understanding is diverse in context for digital users, (2) thinking in assessing content, (3) Constructive were creating something expert and actual, (4) communicative, namely understanding the performance of networks and communications in the digital world, (5) responsible self-confidence, (6) Creative doing new things in new ways, (7) Critical in responding to content, and (8) Socially responsible [16].

Because it has become a professional demand, the assessor must be a professional person, have methodological competence, have personality and social skills, and be capable of operating computers and all other devices in the SISPENA Technology-based accreditation assessment, in this paper termed SISPENA literacy. By having competent assessors, the quality of the institution is guaranteed. This is relevant to research, that the existence of supervision from both inside and outside the institution will have an impact on improving the quality of the institution [17, 18].

When referring to the definition of assessment competence, is the knowledge, skills, and positive attitudes possessed by assessors in thinking and evaluating the performance of the institution. On that basis, an assessor must be able to make an assessment based on his level of understanding and field of expertise [19]. Although it was found that there

were still assessors who had difficulty in providing an assessment based on considerations of their expertise [5]. This happens because the assessors do not master the substantive and methodological information collection, in addition, the assessors are not capable of mastering information and communication technology, have not been able to conduct in-depth data mining with various data mining methods, and have not been able to analyze the data to produce an objective assessment conclusion.

This study aimed to: (1) analyze the effect of SISPENA literacy and Assessor Assessment Competency on the quality of PKBM accreditation in East Java. (2) Analyzing the influence of SISPENA Literacy on the Quality of PKBM Accreditation in East Java (3) Analyzing the effect of the KPKA assessment on the quality of PKBM accreditation in East Java, and (4) Analyzing the effect of the visitation assessment on the quality of PKBM accreditation in East Java.

2 Literature Review

2.1 Learning Center (PKBM) Accreditation Quality

PKBM is a non-formal education unit that provides community education services in the form of equality programs, literacy, reading gardens, life skills programs, Early Childhood Education, and other non-formal programs. Therefore, PKBM is identified as an educational unit that has many programs, many goals, and many benefits for the continuity of community learning. Therefore, PKBM is a vehicle (vehicle) for independent learning as a new variety of educational institutions in Indonesia [20].

Given the many services developed in PKBM, accreditation is needed as a quality instrument so that it has an impact on improving the reputation of the institution in the community. Law number 20 of 2003 in article 60 paragraph 1 explains that accreditation is carried out to determine the feasibility of programs and educational units including non-formal education at every level and type of education [21]. Furthermore, Government Regulation number 57 of 2021 concerning National Education Standards Chapter 34 states that the development of National Education Standards and monitoring and reporting on their achievements nationally is carried out by an agency that carries out the duties and functions of standardization, assurance, and quality control of education. Furthermore, Chapter 43 states that the evaluation of the national education system is carried out by the central government, regional governments, and independent institutions [22]. The purpose of this regulation is to ensure quality assurance of education so that it can meet the needs of the community in obtaining educational services and outcomes from institutions. Accreditation is an assessment of the feasibility of a program or institution based on standard criteria that measure the quality/performance of the program/institution [23, 24].

Therefore, accreditation is an effort to ensure the implementation of quality education services and empower partners to produce graduates by established standards. Because the institution does not only belong to the Foundation but is part of the community's property. On that basis, there is a need for community participation in the process of planning, implementing, evaluating, and utilizing graduates, which can be done both physically and non-physically, In addition, the community also has a responsibility in

developing the institution in the form of giving a high reputation to the institution [18, 24].

On that basis, it is an institution's obligation to use the reference to national standards as a minimum quality instrument, this is a form of the institution's commitment to providing educational services that are open to the community [25]. Referring to the Regulation of the Minister of National Education Number 49 of 2007, the management of PKBM includes the management of planning, implementation, and development of units, management of students, management of educators and education staff, management of the ecosystem of educational units, management of partnerships and management of programs and activities of institutions whose estuary is to provide the best service to the community.

2.2 Accreditation Assessment System (SISPENA) Literacy

SISPENA is an online accreditation application/assessment system developed in 2018. This kind of application can provide an overview of the quality of the institution [26]. Literacy SISPENA in this paper is aligned with the use of the term Digital Literacy. An assessor must adapt to digital information and communication technology in completing the assessment task at each stage of the accreditation assessment. Specifically, literacy skills are divided into (1) the ability to read and write, (2) the ability to create or be creative, (3) the ability to communicate, (4) the ability to identify, the ability to calculate, the ability to understand, the ability to use print and written media, the ability to interpret, and the ability to solve technology and information problems [27–29].

Digital literacy is a person's ability to understand and use information in various forms from various sources that are accessed through computer devices. Bawden argues that digital literacy is the root of computer and information literacy which emphasizes a person's technical skills in accessing, compiling, understanding, and disseminating information [30, 31].

According to Bawden, someone who already has digital literacy is identical to (1) Having reliable knowledge in applying all information from various sources, and (2) Having a critical way of thinking in assessing any information obtained, so that the validity of the information can be accounted for, (3) Able to read and understand the material that is not sequential and dynamically, (4) Remain aware of the values of local wisdom despite digital changes, (5) Realize that a good partnership can help in all aspects, (6) Able to filter all information well, and (7) Comfortable in publishing and communicating information and techniques to access it [30].

Digital literacy as the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and accurately through digital technology to support work [32]. According to Unesco digital literacy can be developed if it meets the principles of understanding, interdependence, social factors, and curation [13], while according to Mayes and Fowler (2006) the development of digital literacy is tiered starting from digital competence which includes skills, concepts, approaches, and behavior, second, digital use which refers to the application of digital competencies related to digital contexts, thirdly digital transformation that requires creativity and innovation in the digital world [33].

From this view, in general, digital literacy is described as follows: (1) Identical to the role of a person related to information about a person's competence to create and communicate, in addition, (2) Digital literacy involves interacting with information, and interacting with information is about validity, credibility, and reliability of the information. And (3) Digital literacy describes a person's specific skills in using and producing useful information [32].

Based on these concepts, digital literacy is the knowledge and skills to adapt, use and develop digital technology, technological instruments, information, and communication in assisting in the process of planning, implementing, producing, finding, and evaluating information intelligently, wisely, and accurately. According to the needs.

So, digital literacy will be able to create a society with a critical and creative mindset and view, able to optimize aspects of knowledge and skills to use digital media, communication tools in finding, evaluating, using, creating information, and utilizing it in a healthy, wise manner, intelligent, careful, precise, and law-abiding to foster communication and interaction in everyday life.

2.3 Assessor Competence Assessment

Competence is a characteristic of someone who is shown by skills and knowledge in completing the work given to him. By having competence, you can achieve good performance in completing each job. Assessors at work should observe, record, and evaluate the performance of the institution using a standardized rating scale. The results showed that the assessor's skills in assessing were very important for the success of any assessment process, both qualified and unqualified assessments [34].

Competence is a combination of knowledge and skills obtained from the learning process needed to do certain jobs. Assessor assessment competence is very much needed in the assessment with SISPENA, especially with pandemic conditions like this, it is very helpful in presenting objective assessment results. Assessor assessment is a process of assigning value to something being assessed [35].

The results of a literature review by Sillat, Tammets, and Laanpere said that the biggest challenge of digital assessment is related to the accuracy and level of confidence of the assessment results, therefore a systematic and continuous assessment is needed to measure the context of digital assessments [36].

To assess the performance of the institution, accreditation with SISPENA is not only to assess the existence and completeness of the institution's documents but rather to measure the performance of the institution in implementing the programs that have been planned, then compared with its achievements. Usually, the assessors in assessing the performance of the institution, use various methods and techniques of collecting field data such as interviews, observations, careful document analysis, and cross-country involving various assessors.

Assessors in assessing the performance of the institution, provided with work guidelines by the assessment stages, are intended to direct the assessors to work according to the available rubrics. The results of Pool and colleagues' research on the activity of assessing student learning portfolios were assessed by eight different assessors in the assessment process, involving three assessment cycles using various data collection

techniques, portfolio analysis, and interviews, but the completeness of the portfolio is expected to be useful for assessors in making decisions. Assessment [37].

Based on the conceptual framework, the hypotheses of this study include:

H0: There is no influence of SISPENA literacy and Competency Assessor Assessment of quality.
PKBM accreditation in East Java.
H0: There is no influence of SISPENA Literacy on the Quality of PKBM Accreditation in East Java.
H0: There is no effect of the KPKA assessment on the quality of PKBM accreditation in East Java.
H0: There is no effect of visitation assessment on quality of PKBM accreditation in East Java.

3 Methods

This quantitative research approach with this type of explanatory research was carried out in the province of East Java which was carried out for six months starting from May October 2021. The reason is that East Java province is the second barometer region in Indonesia. In addition, the characteristics of the assessors are relatively homogeneous with the same level of competence. The population of this study was all assessors, and the sample was 60 people taken by proportional random sampling with the considerations: (1) assessors had passed the competency test, (2) had served in the stages of the KPKA assessment and field visitation assessment. The research data use a questionnaire that already has a high level of validity and reliability because previously the content validity test has been carried out, and the validity of field trials on research instruments involving 100 respondents, and the results of these trials with content validity values above 0.40 and level reliability above 0.874 with Cronbach's Alpha criteria. Research data collection was carried out by distributing questionnaires to all assessors, but 51 questionnaires were returned and filled in gradually, while the other 9 questionnaires did not return. The research questionnaire used a Likert scale with 5 measurement scales. The data that has been collected is then carried out with Multiple Regression Analysis using Jeffrey's Amazing Statistics Program (JASP) application version 15.00 [38–40].

4 Results and Discussion

4.1 Characteristics of the Respondents

Based on the results of data collection involving 51 PKBM assessors in East Java, it can be described as a table.

Table 1 shows that 76% of assessors have met the expert/professional element with a professional grade of 31 people and 8 subspecialists. This is important to convey considering that work as an assessor is a professional job that requires experts in the field of non-formal education.

Table 1. Respondents' distribution

	Gender		
Educational Qualifications	Man	Women	Total
Bachelor	6	6	12
Doctor	6	2	8
Master	23	8	31
Total	35	16	51

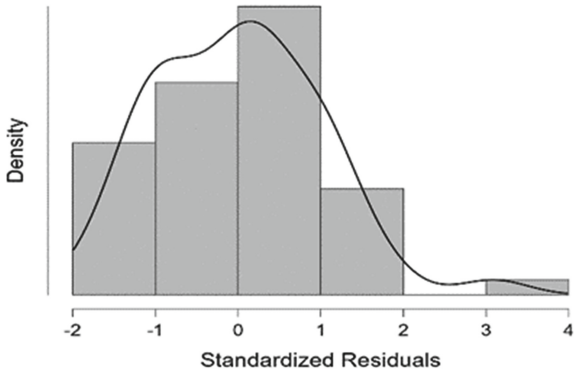

Fig. 1. The results of the resudial normality test

4.2 Residual Normality Test

As a requirement of multiple regression analysis, it is necessary to carry out a residual normality test, this is useful to see or confirm whether the residual value in the regression equation is normally distributed. The results of the residual normality test are shown in Fig. 1.

4.3 Residual Normality Test

In Chart 1 the data has been normally distributed, this is indicated by a histogram image with the distribution of the data being mostly close to zero, while the data towards the X-axis is getting less and less. Because the analysis requirements have been met, it is necessary to carry out further requirements testing.

4.4 Linearity Test

The linearity test is intended to determine the linear nature of the distribution of data between variables X and Y. This analysis is needed to determine the level of the relationship between X and Y in forming a regression model. The results of the linearity test of Digital Literacy on the Quality of Accreditation (Fig. 2-1), the results of the linearity

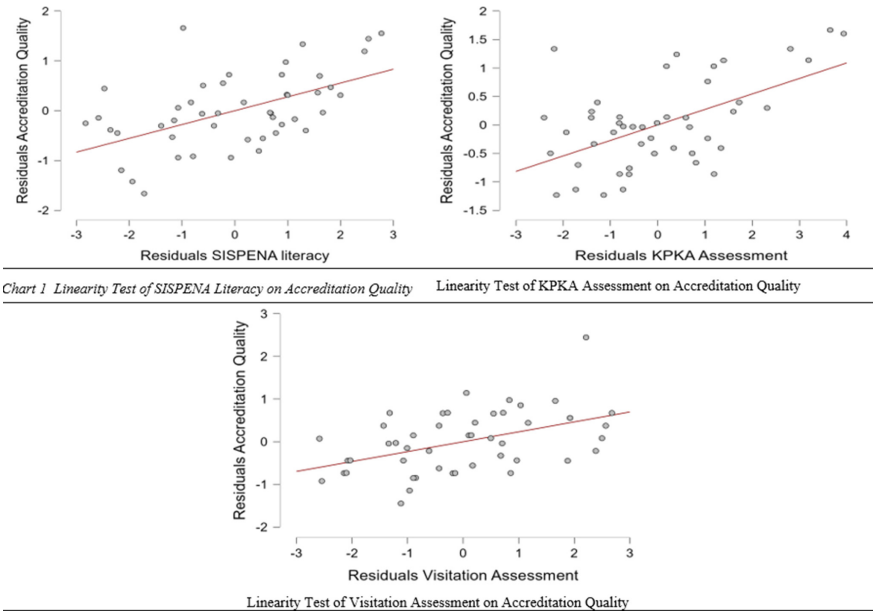

Fig. 2. The results of the visitation assessment on the quality of accreditation

test of the KPKA Assessment on the Quality of Accreditation (Fig. 2-2), and the results of the linearity test of the visitation assessment on the quality of accreditation (Fig. 2-3) are shown as follows.

Based on the results of linearity tests such as Chart 1, Chart 2, and Chart 3 in Fig. 2, overall, the data has met the linear element, so it can be concluded that the data can be carried out for further testing as a regression analysis requirement.

4.5 Multicollinearity Test

The multicollinearity test is intended to determine whether the regression model correlates with the literacy variables of SISPENA, KPKA Assessment, and Visitation Assessment. The test results are in Table 2.

The results of Table 2 show that the Variance Inflation Factor (VIF) value for all independent variables is below 10. This means that the data is filled with elements of multicollinearity between predictor variables so that further tests can be carried out using a regression model. If the VIF value is more than 10 then, in this case, there is a multicollinearity problem between the predictor variables. For the record, VIF is a factor that measures how much the regression predictor coefficient increases compared to orthogonal independent variables when connected linearly.

4.6 Regression Test

After all the requirements for the assumption test of the regression requirements are met, then a regression test is carried out with the results as in Table 3.

Table 2. Coefficients

Collinearity Statistics								
Model		Unstandardized	Standard Error	Standardized	t	p	Tolerance	VIF
H_0	(Intercept)	23.784	0.146		162.501	< .001		
H_1	(Intercept)	7.239	1.846		3.922	< .001		
	SISPENA literacy	0.277	0.062	0.417	4.489	< .001	0.880	1.136
	KPKA Assessment	0.272	0.060	0.421	4.508	< .001	0.872	1.147
	Visitation Assessment	0.232	0.065	0.316	3.576	< .001	0.972	1.029

Table 3. Model Summary—Accreditation Quality

Model	R	R^2	Adjusted R^2	RMSE
H_0	0.000	0.000	0.000	1.045
H_1	0.801	0.642	0.620	0.645

Table 4. Anova

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	35.091	3	11.697	28.139	< .001
	Residual	19.537	47	0.416		
	Total	54.627	50			

Note. The intercept model is omitted, as no meaningful information can be shown

The results of Table 3 show that the effective contribution of the SISPENA literacy variable, the KPKA assessment and the Visitation Assessment to the quality of accreditation is 64.2%. In other words, the variance of Accreditation Quality that can be explained by the SISPENA literacy variable and assessor competence is 64.2%. The remaining 35.8% is influenced by other things. To measure the significance of the effective contribution of digital literacy variables and assessor competency assessments on the quality of accreditation, see the Anova Table 4.

The results of the ANOVA test show that the value of $F_{count} = 28.139$ with p-value = < 0.001, this means that it is significant that the SISPENA literacy variable and the Assessor Assessment Competency are jointly able to predict the Accreditation Quality variable. To see the effect of the SISPENA literacy variable and the Competency Assessment of Assessors partially in predicting the quality of accreditation, see Table 5.

The test results shown in Table 5 show that SISPENA literacy, KPKA Assessment, and Visitation Assessment have a partial influence on the quality of accreditation. The regression equation can be made in the following formulation.

$$Y = B1 * X1 + B2 * X2 + B3 * X3 + C$$

Accreditation Quality = 0.277*SISPENA Literacy + 0.272* KPKA Assessment + 0.232* Visitation Assessment + 7,239.

To find out the partial effective contribution of each independent variable, can be assisted by the results of the analysis in Table 6.

To find out the effective contribution of each independent variable, the following formulation can be made:

- SISPENA Literacy = β * zero-order = 0.417 * 0.598 = 0.249
- KPKA Assessment = β * zero-order = 0.421 * 0.611 = 0.257
- Visitation Assessment = β * zero-order = 0.316 * 0.429 = 0.136

So, based on the results of the analysis, it is concluded that:

Table 5. Coefficients

Collinearity Statistics								
Model		Unstandardized	Standard Error	Standardized	t	p	Tolerance	VIF
H_0	(Intercept)	23.784	0.146		162.501	< .001		
H_1	(Intercept)	7.239	1.846		3.922	< .001		
	SISPENA literacy	0.277	0.062	0.417	4.489	< .001	0.880	1.136
	KPKA Assessment	0.272	0.060	0.421	4.508	< .001	0.872	1.147
	Visitation Assessment	0.232	0.065	0.316	3.576	< .001	0.972	1.029

Table 6. Pearson's Correlations

Variable		SISPENA literacy	KPKA Assessment	Visitation Assessment	Accreditation Quality
SISPENA Literacy	Pearson's r	–			
	p-value	–			
KPKA Assessment	Pearson's r	0.340	–		
	p-value	0.015	–		
Visitation Assessment	Pearson's r	0.118	0.151	–	
	p-value	0.411	0.290	–	
Accreditation Quality	Pearson's r	0.598	0.611	0.429	–
	p-value	< .001	< .001	0.002	–

- There is an influence of SISPENA literacy of 24.9% on the quality of accreditation.
- There is a 25.7% effect of the KPKA assessment on the quality of accreditation.
- There is an effect of 13.6% visitation assessment on the quality of accreditation.

5 Discussion

To obtain comprehensive information related to the results of the study, a discussion was carried out.

5.1 The Influence of SISPENA Literacy and Assessor Assessment Competencies on Accreditation Quality

SISPENA's literacy skills and Assessor Assessment competencies are very interesting concepts to be discussed in producing quality accreditation results. This is very reasonable, considering that since its inception, SISPENA has undergone both substantive and technical adjustments. Substantively refers to the change in the accreditation approach which was originally oriented towards fulfillment to become oriented towards institutional performance. While technically, it is observed in conventional ways by optimizing the Microsoft Excel application, changing it to a full online application.

With this kind of adjustment, assessors who have a substantive, methodological, assessment, and digital technology skills are needed. The results of the study illustrate that 64.2% of assessors who are literate in SISPENA are simultaneously assessors who have Assessment Competencies that can predict the quality of accreditation. This implies that the PKBM cluster assessors already have knowledge of SISPENA and are skilled in using SISPENA in assessing the quality of the institution significantly.

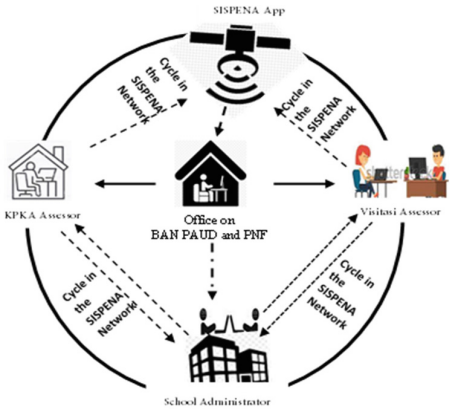

Fig. 3. Assessor Assessment Cycle with SISPENA Application

The PKBM cluster assessors have been able to provide information on the quality of the institution to all elements that require accreditation. This achievement is inseparable from the performance of BAN PAUD and PNF through BAN PAUD and PNF in East Java Province which regularly guides the form of upgrading assessor competencies either through Assessor Competency Test Training activities, Assessor Competency Refreshment, Assessor Debriefing, Trainer Candidate Training, mentoring activities and accreditation socialization that actively involves assessors. At the end of such an assessor capacity-building activity, a mapping of assessor performance information over a certain period has an impact on the mapping of the assessor level with the criteria of assessor A, assessor B, and assessor C, and ultimately has an impact on the assignment of each stage of accreditation. Assignment of assessors is entirely the policy of BAN PAUD and PNF, but according to existing rules, each assessor is required to carry out a minimum of 2 KPKA assignments, and 2 visits, while the maximum is between 10 and 30 times according to the distribution of the accreditation quota every year [41]. In carrying out their duties, assessors work in a network based on assignments from BAN PAUD and PNF. The assessor assignment cycle from the SISPENA-based assessment perspective is as shown in Fig. 3.

Based on Fig. 3, after the institution manager applies for accreditation, BAN PAUD and PNF assign assessors to carry out a KPKA assessment and visitation assessment. The KPKA assessment is intended to classify documents attached by institutional managers in SISPENA according to 8 national education standards. If the KPKA assessment is declared feasible, it will be continued at the visitation stage, and if it is not feasible, it will be returned to the institution manager. The visitation involving two assessors is intended to photograph the performance of the institution by using the zoom meeting application prepared by BAN PAUD and PNF to confirm the information on the performance of the institution by involving institutional managers, tutors, learning residents, alumni, community leaders, and collaboration partners that reflect real performance of the institution. The assessment mechanism by assessors uses the SISPENA application by using the user id and password of each assessor and institution manager. Therefore,

to obtain an accountable quality of accreditation, an assessor is required who is skilled in using SISPENA and has good assessment competence by the assessor's work standards.

5.2 The Effect of SISPENA Literacy on Accreditation Quality

The SISPENA application which is integrated with DAPODIK and EMIS is an innovation of assessment accountability, which involves many people including professional assessors. Referring to the results of the study, there were 24.9% of assessors with SISPENA literacy influenced the quality of accreditation. This result is very reasonable, considering that in the online accreditation assessment process with SISPENA, quality bias may occur, such as incomplete information provided by institutional managers regarding their performance because of a lack of understanding of SISPENA-based accreditation guidelines. There were still many assessors who did not have adequate competence, especially to carry out accreditation that prioritized performance.

The empirical results of this research are also quite reasonable because, in the last year, SISPENA has undergone a very significant change, for example, from version 2.0 to version 3.0, and even now it continues to develop according to accreditation needs. For this reason, assessors must respond quickly to these developments, actively participate in capacity-building activities such as training, and form discussion groups that are useful for increasing understanding related to SISPENA.

In addition, in 2020 there was a COVID-19 pandemic that affected the change in assessment policies from fulfilling the completeness of institutional documents to fulfilling institutional performance, marked by the adjustment of accreditation instruments, changes to the SISPENA system, and the existence of an accreditation moratorium, piloting activities that were useful for measuring the quality of accreditation instruments used developed.

The results of the 2019 evaluation, the accreditation instrument still has weaknesses and is not by the latest policies, so a new instrument was developed that aims to improve the accreditation system and improve the SISPENA 3.0 application. In addition, in 2021 the Minister of Education and Culture Regulation (Permendikbud) Number 57 of 2021 concerning National Education Standards will result in turbulence in the duties and functions of assessors, especially assessors of the course and training clusters who merge into PKBM and PAUD cluster assessors because the course and training institutions are not the target authority for accreditation by BAN PAUD and PNF. On that basis, assessors still need adjustments in carrying out their duties and functions, especially in terms of understanding and operating SISPENA properly.

5.3 The Effect of KPKA Assessment on Accreditation Quality

The KPKA assessment is an assessment activity that verifies and checks the suitability of the attached documents based on the rubric. Usually carried out by an assessor under the supervision of members of BAN PAUD and Provincial PNF. The working mechanism is to coordinate with institutions to complete documents by the demands of the indicators and evaluate all indicators referring to 8 national education standards by the manual and the results of completeness of data are eligible for visitation if they get a minimum score of 60%. The results showed that 25.7% of the KPKA assessment was able to predict the

quality of accreditation. This result is considered quite high considering that in the year before SISPENA was developed, institutions were required to prepare portfolio forms that reflected the institution's routine activities, in addition, there was a change in policy regarding personnel who would carry out KPKA originally from the technical staff of the secretariat of BAN PAUD and PNF provincial and then transferred to assessors since 2021. This change resulted in additional time for assessors to adjust and adapt in the KPKA assessment. In addition, the provincial BAN PAUD and PNF conduct mentoring and mentoring activities for assessors every time they conduct an assessment.

When conducting the KPKA assessment, the assessor is required to track the real condition of the institution, this is done to ensure whether all documents attached by the institution are believed to be the work of the institution, and the initial document selection process needs to be carried out to maintain the originality of the institution's documents. Furthermore, in this KPKA assessment, the assessor must use various ways to convince the assessor that the documents attached by the institution through SISPENA have a link between one document and another, for example, the link between the vision, mission, objectives, strategic plans, operational plans, curriculum, the master plan of the institution., lesson plans, and assessment plans, therefore an assessor of the KPKA must have the ability to see the continuity between one document and another. In addition, KPKA assessors need to confirm with the institution through the chat function in the SISPENA application or with other media such as zoom meetings, WhatsApp, and other digital media.

So, the KPKA assessment is the initial stage of the accreditation assessment carried out by assessors strictly because it will have an impact on meeting the institution's minimum standards based on national education standards. The results of this KPKA assessment reflect assessors in conducting online field visitation assessments.

5.4 The Effect of Visitation Assessment on Accreditation Quality

Online visitation assessment is a step that must be passed in accreditation. At this stage, the assessor assesses the performance of the institution referring to the visitation manual. The results of the study illustrate that the contribution of assessor visitation assessment to the quality of accreditation is 13.6%. During the visitation assessment, the assessor conducted in-depth information mining using various methods, conducted objective data analysis, and provided direct comments on the findings so that the institution could improve itself from the recommendations given.

During the visitation, the assessor collects information online by conducting focus group discussions, observations, document analysis, interviews, and tracking sources of institutional performance from various media, so that they get real performance from the institution by involving organizers, institutional leaders, tutors, education staff, guardians of participants. Students, communities, alumni, and the business world of the industrial world.

At the time of the visitation assessment, the two visitation assessors carried out carefully by ensuring the setting of the activity, determining random objects in the visitation, and ensuring that the informants presented were key instruments so that they were able to measure the performance of the institution. Referring to the concept and mechanism

of accreditation, the visitation assessment is more dominantly used by subsequent assessors in assessing the quality of accreditation. The findings are relatively small due to the transfer of PKBM cluster assessors from other clusters.

The visitation assessment is carried out for a maximum of eight hours in the SISPENA network with the provisions stipulated in the visitation guide. Initially, the assessors conducted an independent assessment to photograph the performance of the institution, after that, a group assessment was carried out, to ensure that the results of the individual assessments were not too different. After the visitation assessment has been carried out, the two assessors jointly prepare recommendations and visitation minutes which are then reported to BAN PAUD and PNF.

So, the visitation assessment is an important activity to get an overview of the quality of the institution, because it has been carried out by two assessors to measure the accuracy of cross-assessment between assessors, formatted in a group assessment. In addition, the two assessors prepared recommendations for the assessment of the visitation and the minutes of the visitation.

Once the importance of accreditation to the quality of non-formal education, so that through this accreditation provides a big picture of the performance of the institution. Through this accreditation, the quality of education can not only be seen in cities but the quality of national education has been evenly distributed in various corners of the country's villages. For this reason, the accreditation process that has been carried out by BAN PAUD and PNFI has reflected the picture of the quality of non-formal education nationally, therefore it should be fully supported by all elements of the nation, regulators, academics, practitioners, and the public.

6 Conclusion

The conclusions of this study include: (1) Assessors who have SISPENA literacy and high assessor competence can affect the quality of the results of accreditation of PKBM institutions in East Java. (2) Assessors who have good SISPENA literacy skills can improve the quality of the accreditation results of PKBM institutions in East Java. (3) The results of the assessment by competent assessors will improve the quality of PKBM institutions in East Java, and (4) The process of accreditation assessment using the field visitation method by assessors has a good impact on improving the quality of PKBM accreditation results in East Java. This conclusion illustrates that a systematic and sustainable accreditation process can improve the quality of accreditation and ultimately improve the reputation of PKBM institutions in East Java. The results of this study are still far from perfect, especially in showing the relatively small results of research, the level of prediction of the independent variables partially on the quality of accreditation, this could be due to the limited use of respondents, therefore it is necessary to do other research, to get better results. And contribute to decision-making in society.

Acknowledgment. We would like to thank the Institute for Research and Community Service, the State University of Malang, which has funded this research with a PNBP 2021 grant.

References

1. I. Yuliantina, "PELATIHAN UJI KOMPETENSI ASESOR BAN PAUD DAN PNF O," pp. 1–4, 2020.
2. M. J. B. Govaerts, M. W. J. van de Wiel, and C. P. M. van der Vleuten, "Quality of feedback following performance assessments: Does assessor expertise matter?," *Eur. J. Train. Dev.*, vol. 37, no. 1, 2013, doi: https://doi.org/10.1108/03090591311293310.
3. S. K. Gill, A. Dhir, G. Singh, and D. Vrontis, "Transformative Quality in Higher Education Institutions (HEIs): Conceptualisation, scale development and validation," *J. Bus. Res.*, vol. 138, no. September 2021, pp. 275–286, 2022, doi: https://doi.org/10.1016/j.jbusres.2021.09.029.
4. F. Patterson, L. Zibarras, M. Kerrin, S. Lopes, and R. Price, "Development of competency models for assessors and simulators in high-stakes selection processes," *Med. Teach.*, vol. 36, no. 12, pp. 1082–1085, 2014, doi: https://doi.org/10.3109/0142159X.2014.930112.
5. E. de Matos Pedro, H. Alves, and J. Leitão, "In search of intangible connections: intellectual capital, performance and quality of life in higher education institutions," *High. Educ.*, vol. 83, no. 2, pp. 243–260, 2022, doi: https://doi.org/10.1007/s10734-020-00653-9.
6. K. Pendidikan dan Kebudayaan, "Peta Jalan Pendidikan Indonesia 2020–2035," *Kemdikbud*, pp. 1–74, 2020.
7. BAN PAUD & PNF, "PANDUAN PEMBEKALAN ASESOR AKREDITASI (PAA) TAHUN 2021," pp. 1–41, 2021.
8. Busron and T. Rachmi, "Analisis Capaian Standar dan Pemanfaatan Hasil Akreditasi PAUD Provinsi Banten," *Ceria J. Progr. Stud. Pendidik. Anak Usia Dini*, 2020.
9. Biyanto, "Akreditasi Untuk Pendidikan Bermutu," 2018.
10. A. Restianty, "Literasi Digital, Sebuah Tantangan Baru Dalam Literasi Media," *J. Gunahumas*, vol. 1, no. 1, pp. 72–87, 2018.
11. I. M. Sudana, S. Patmanthara, D. Febiharsa, and B. Gandisa, "The Use of an Information System to Manage Vocational Assessment in Facing the 5.0 Digital Society," *J. Pendidik. Teknol. dan Kejuru.*, vol. 26, no. 2, pp. 149–154, 2020, doi: https://doi.org/10.21831/jptk.v26i2.29924.
12. H. Park, H. S. Kim, and H. W. Park, "A Scientometric Study of Digital Literacy, ICT Literacy, Information Literacy, and Media Literacy," *J. Data Inf. Sci.*, vol. 6, no. 2, pp. 116–138, 2021, doi: https://doi.org/10.2478/jdis-2021-0001.
13. UNESCO, "A Global Framework of Reference on Digital Literacy," *UNESCO Inst. Stat.*, no. 51, p. 146, 2018.
14. Badan Akreditasi Nasional Pendidikan Anak Usia Dini dan Pendidikan Nonformal, *Badan Akreditasi Nasional Pendidikan Anak Usia Dini dan Pendidikan Nonformal*, no. Juni. 2022, p. 5.
15. N. A. Medvedeva, N. G. Malkov, and M. L. Prozorova, "Professional and Public Accreditation as An Assessment of Agricultural Educational Program Quality in Russia," *Asian J. Univ. Educ.*, vol. 17, no. 1, pp. 100–111, 2021, doi: https://doi.org/10.24191/ajue.v17i1.12611.
16. M. C. Martínez-Bravo, C. S. Chalezquer, and J. Serrano-Puche, "Dimensions of Digital Literacy in the 21st Century Competency Frameworks," *Sustain.*, vol. 14, no. 3, 2022, doi: https://doi.org/10.3390/su14031867.
17. A. B. A. P. Kinjawan, C. Y. Fook, and L. S. Jamian, "The Malaysian school inspectorate as an institution of quality assurance in education through the framework of knowles' process enneagram," *Asian J. Univ. Educ.*, vol. 16, no. 2, pp. 1–14, 2020, doi: https://doi.org/10.24191/AJUE.V16I2.10285.
18. S. S. Sethy, "'Academic Freedom' in Indian Higher Education Setting," *Asian J. Univ. Educ.*, vol. 17, no. 2, pp. 39–49, 2021, doi: https://doi.org/10.24191/AJUE.V17I2.9022.

19. J. F. Al-omari, "Quality Assurance in Higher Education Institutions," *J. Educ. Pract.*, vol. 13, no. 3, pp. 37–44, 2022, doi: https://doi.org/10.7176/jep/13-3-04.
20. Supriyono, "Karakter pkbm dan kemitraan," 2021.
21. Republik Indonesia, *UU No 20 Tahun 2003 Tentang Sistem Pendidikan Nasional pada Pasal*. 2003.
22. Menteri Hukum dan Hak Asasi Manusia Republik Indonesia, "PERATURAN PEMERINTAH REPUBLIK INDONESIA NOMOR 57 TAHUN 2021 TENTANG STANDAR NASIONAL PENDIDIKAN," 2021.
23. E. Toprak and A. N. Sakar, "Need for Accreditation Agencies as Stakeholders in Open and Distance Learning: Case of 'audak' in Turkish Higher Education System," *Turkish Online J. Distance Educ.*, vol. 21, no. July, pp. 29–48, 2021, doi: https://doi.org/10.17718/TOJDE.770904.
24. M. Pun, "Quality Assurance in Higher Education Institutions: The Case of Tribhuvan University," *Sch. J. Arts Humanit.*, vol. 2, no. August, pp. 1–13, 2020, doi: https://doi.org/10.3126/sjah.v2i0.35008.
25. G. W. Wiriasto, M. Misbahuddin, M. S. Iqbal, A. S. Rachman, D. F. Budiman, and L. S. I. Akbar, "Pemanfaatan Perangkat Lunak Sistem Informasi Akreditasi Program Studi dengan 9-Standar dalam Penyusunan Dokumen Akreditasi Berdasarkan Instrumen Akreditasi Program Studi 4.0 (IAPS 4.0)," *J. Pengabdi. Magister Pendidik. IPA*, vol. 3, no. 2, pp. 0–4, 2020, doi: https://doi.org/10.29303/jpmpi.v3i2.523.
26. J. W. Supit *et al.*, "Rancang Bangun Simulasi Akreditasi Program Studi Berbasis Web," *J. Tek. Inform.*, vol. 15, no. 3, pp. 163–170, 2020, doi: https://doi.org/10.35793/jti.15.3.2020.29669.
27. V. Milenkova and V. Lendzhova, "Digital citizenship and digital literacy in the conditions of social crisis," *Computers*, vol. 10, no. 4, 2021, doi: https://doi.org/10.3390/computers10040040.
28. D. Belshaw, "What is digital literacy? A Pragmatic investigation.," *EdD Thesis, Durham Univ. Durham, …*, p. 274, 2011.
29. S. S. Oh, K. A. Kim, M. Kim, J. Oh, S. H. Chu, and J. Y. Choi, "Measurement of digital literacy among older adults: Systematic review," *J. Med. Internet Res.*, vol. 23, no. 2, pp. 1–15, 2021, doi: https://doi.org/10.2196/26145.
30. D. Bawden, "Origins and concepts of digital literacy," *Digit. literacies Concepts, policies Pract.*, pp. 17–32, 2008, doi: https://doi.org/10.1093/elt/ccr077.
31. M. Alanoglu, S. Aslan, and S. Karabatak, "Do teachers' educational philosophies affect their digital literacy? The mediating effect of resistance to change," *Educ. Inf. Technol.*, vol. 27, no. 3, pp. 3447–3466, 2022, doi: https://doi.org/10.1007/s10639-021-10753-3.
32. S. Sujarwo, T. Tristanti, and E. Kusumawardani, "Digital literacy model to empower women using community-based education approach," *World J. Educ. Technol. Curr. Issues*, vol. 14, no. 1, pp. 175–188, 2022, doi: https://doi.org/10.18844/wjet.v14i1.6714.
33. R. Nasrullah *et al.*, "Materi Pendukung Literasi Digital: Gerakan Literasi Nasional," *Kementeri. Pendidik. dan Kebud.*, p. 33, 2017.
34. H. C. Chen, "Assessment Center: A Critical Mechanism for Assessing HRD Effectiveness and Accountability," *Adv. Dev. Hum. Resour.*, vol. 8, no. 2, pp. 247–264, 2006, doi: https://doi.org/10.1177/1523422305286155.
35. K. Smith, "Empowering school- and university-based teacher educators as assessors: A school - University cooperation," *Educ. Res. Eval.*, vol. 13, no. 3, pp. 279–293, 2007, doi: https://doi.org/10.1080/13803610701632109.
36. L. H. Sillat, K. Tammets, and M. Laanpere, "Digital competence assessment methods in higher education: A systematic literature review," *Educ. Sci.*, vol. 11, no. 8, 2021, doi: https://doi.org/10.3390/educsci11080402.

37. A. Oudkerk Pool, M. J. B. Govaerts, D. A. D. C. Jaarsma, and E. W. Driessen, "From aggregation to interpretation: how assessors judge complex data in a competency-based portfolio," *Adv. Heal. Sci. Educ.*, vol. 23, no. 2, pp. 275–287, 2018, doi: https://doi.org/10.1007/s10459-017-9793-y.
38. JASP Team, "JASP (Version 0.14) [Computer software]," *[Computer software].* 2020.
39. R. Kelter, "Bayesian alternatives to null hypothesis significance testing in biomedical research: A non-technical introduction to Bayesian inference with JASP," *BMC Med. Res. Methodol.*, vol. 20, no. 1, pp. 1–12, 2020, doi: https://doi.org/10.1186/s12874-020-00980-6.
40. A. M. N. Pasaribu, J. Candra, R. Kamsurya, Zainur, Nurkadri, and A. A. N. P. Laksana, "The relationship of motor skills with performance: Meta-analysis study," *J. Sport Area*, vol. 6, no. 3, pp. 315–324, 2021, doi: https://doi.org/10.25299/sportarea.2021.vol6(3).6647.
41. BAN PAUD dan PNF, "Kebijakan dan mekanisme akreditasi PAUD dan PNF pada pelaksanaan KPA," 2021.