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Development and Validation of a Teacher Competency Assessment Instrument Using Confirmatory Factor Analysis

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Abstract: Development and Testing of Teacher Competency Assessment Instruments with CFA (Confirmatory Factor Analysis) and Profiles of State Madrasah Teachers. Objective: The study was conducted with the aim of producing a teacher competency measurement instrument in accordance with valid and reliable standards. This needs to be done because the instruments currently used do not have empirical evidence, the instruments are very long, and are not yet practical. This study also aims to provide an overview of the competency of teachers involved as research objects. **Methods**: The study was conducted on 124 state madrasah teachers at MAN 1 Malang, MAN 2 Malang, MAN Kota Batu, MTs N 2 Malang, MTs N 3 Malang, and madrasahs in Batu City, namely MTs N Kota Batu and MAN Kota Batu. The study was conducted by developing an instrument that was tested with CFA to obtain empirical evidence in the form of instrument validity and reliability. **Finding:** The results showed that the developed instrument met the goodness of fit criteria with an RMSEA index of 0.110; CI 0.0937 - 0.126; and CFI 0.926. The results of the study showed a very good instrument quality with a reliability of 0.950. The tested instrument was then used to measure teacher competency in madrasahs. The results show that teachers have 51.75% professional ability, 44.88% pedagogical ability, 44.46% social ability, and 66.56% personality. The majority of teachers' work experience is more than 10 years as much as 62.99% with the same percentage for teachers with educator certification. **Conclusion:** From this study it can be concluded that teacher competence needs to be measured periodically as a form of performance evaluation. The results of teacher competency evaluation are the basis for mapping and planning teacher competency improvement programs that will be visible to institutions and individual teachers so that they are able to present quality learning for students.

Keywords: assessment instrument, teacher competence, CFA, reliability.

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INTRODUCTION

The competencies possessed by teachers must be truly measurable and the results can be trusted. One effort to realize the credibility of teacher competency measurement results is to use instruments that meet quality and are tested both theoretically and empirically. Teacher competency measurement instruments must meet the required validity and reliability value indexes. Validity and reliability are important elements in the development of measurement instruments, including teacher competency measurement instruments (Imania & Bariah, 2019). A valid instrument ensures that the measurements taken

are in accordance with the objectives and indicators that have been set, while reliability ensures the consistency of the measurement results if the measurements are taken repeatedly under different conditions (Syahidah et al., 2024). The main component in conducting teacher competency measurement in accordance with government regulations is to include aspects of pedagogical, professional, personality and social mastery holistically. Therefore, the development of valid and reliable teacher competency assessment instruments is a requirement that must be met so that the results of teacher competency measurement can be used as a basis for evaluation and appropriate decision making (Aiken, 1988).

However, the current condition in conducting teacher competency evaluation is carried out with an instrument that does not yet have a clear identity. The purpose of this identity is authentic evidence of quality that has been tested theoretically and empirically. This fact was obtained from previous research that the instruments used to measure teacher competency are often not accompanied by open publication of the results of validity and reliability tests (Ayu et al., 2018). This is an obstacle for researchers and stakeholders to ensure the quality of the tools used. Against the credibility of the measurement results against the competence of teachers involved in the assessment activities. This condition is also exacerbated by the fact that so far the process of evaluating competence in teacher performance has only been carried out on administrative aspects with a scheme that has been set in teacher certification. This condition can raise doubts about the accuracy of the assessment results, thus potentially leading to inappropriate decisions in efforts to improve teacher competence (Kerlinger et al., 2000).

This study aims to find alternative solutions to the description of the problem through a systematic approach in the development and testing of measuring instruments used in teacher competency assessment. Efforts to obtain this measuring instrument are carried out with several steps such as testing content validity, construct validity, and factor analysis to ensure that each indicator used in the assessment has a strong theoretical basis (Sarie et al., 2023). In the process, the entire series of results including the results of the reliability test with the Cronbach's alpha coefficient must also be published transparently so that they can be used as a reference by various parties. With systematic, scientific and transparent instrument development standards, it is hoped that teacher competency assessments can provide objective policies and contribute to improving the quality of education as a whole (Cresswell, 2014).

This research was conducted without changing the essence of teacher competency assessment which pays attention to the basis of Permendikbud Number 16 of 2007 which has regulated the standards of academic qualifications and teacher competencies. Especially the four main competencies: pedagogical, professional, personal, and social competencies. Although the regulation is the main reference in teacher competency assessment (Putra, 2019) The reality of implementation in the field often faces challenges because the approach used is too theoretical and less relevant to the needs of teaching practice (Hendrik Dewantara, 2024). This creates a gap between the assessment results and the actual competencies needed to improve the quality of education in schools.

In response to the above problems, researchers took the initiative to develop a simpler but quality teacher competency assessment tool. This approach aims to formulate essential points that reflect the core competencies of teachers in an integrated manner (Nur et al., 2020). By using a shorter time when conducting assessments, it is intended that teachers do not feel burdened and the assessment process becomes more efficient. Akhmad & Azzam (2022) revealed in his research that the assessment based on essential items oriented to the results supports the improvement

of teacher professionalism. The approach used by researchers in developing teacher competency assessment instruments is carried out with CFA (Confirmatory Factor Analysis). This approach is carried out to obtain strong evidence from the initial theory developed, namely from the 4 main competencies of teachers which will be developed into several indicators that can be measured through the self-assessment survey instrument. The use of this CFA approach aims to test the functionality of the indicators that have been developed to be able to describe the testi conditions that can be obtained generalization in a group involved in the assessment process. The relationship between theories as variables built in this teacher competency will be tested related to the correlation and functionality of the indicators. By testing the correlation stated in this factor loading will illustrate evidence that the dimensions built are confirmed appropriate or then declared valid. The CFA approach used will also obtain evidence of the reliability of the instrument developed after conducting testing in direct teacher competency assessment.

This statement is strongly supported by previous research, Widana (2022) revealed that in order for the assessment to be accurate, it requires high-quality instruments through a systematic and tested development process. The instrument development model that will be carried out is the Plomp model which has three stages, namely analysis/design research, realization/ design, and evaluation and revision. This process not only ensures high validity and reliability of the instrument, but is also relevant to the measurement objectives. In this case, the stages of test development formulated by Oriondo & Dallo-Antonio (1998) become an important reference for designing instruments that can measure teacher competence precisely and accurately.

According to Oriondo & Dallo-Antonio (1998), The analysis stages include similar analysis, theoretical analysis, and policy analysis. In this study, each stage was carried out carefully to ensure that the instrument was not only theoretically relevant but also applicable in the context of teacher competency assessment. The result of this development process is a tool that can measure teacher competency comprehensively and efficiently without reducing the quality of the data obtained (Destiana et al., 2020). By integrating the Plomp model approach and the test development phase Oriondo & Dallo-Antonio (1998), This study will present valid evidence of the results of the research on the development of teacher competency assessment instruments. In addition, the assumption in this development research is to provide an important contribution in the form of a quality teacher competency assessment instrument that can be used to evaluate teacher competency individually. Thus, the results of accurate teacher competency assessments can be a strong basis for evaluating ongoing teacher competency improvement programs through various training programs (Arthur, 2018). It is hoped that this model can be widely adopted and become the standard for assessing teacher competency at various levels of education (Al-Tabany, 2017).

As a broader impact, the instrument produced in this study will contribute significantly to universities producing prospective teachers. The teacher competency assessment instrument that has been produced can also be used in the assessment process for prospective teacher students. This needs to be done with the aim that higher education organizers can evaluate learning programs that can reflect the success of the curriculum and education programs according to the needs of the world of work (Sukmawati, 2019). By understanding the strengths and weaknesses of graduate competencies, universities can make improvements to teacher education programs, for example by updating the curriculum, improving the quality of teaching

practices and strengthening the development of soft skills that are relevant to the modern world of education (Ali Mursyid et al., 2023). This is important to ensure that graduates not only meet the graduation criteria but are also ready to face challenges in the teaching profession.

The impact of the competence of prospective teachers is not only felt by individuals, but also by schools as a place to work in the future (Ibrahim, 2024). Competent teachers can more effectively support the achievement of educational goals in schools (Maolana et al., 2023). Therefore, this study also provides recommendations for schools and related educational institutions to collaborate in developing sustainable human resource (HR) development programs. These programs can be in the form of training, workshops, or certifications that aim to improve teachers' professional skills in various aspects, including pedagogy, technology, and classroom management (Firdaus, 2024).

Thus it can be concluded that research on the development of teacher competency assessment instruments is very necessary to support the improvement of systematic education quality. As concrete evidence, this research was conducted to prove that the developed instrument is able to obtain good quality evidence through a theoretical testing process by experts and empirical evidence with the validity and reliability index of the instrument with the CFA approach.

METHOD

Research Design

This research was conducted with a quantitative approach. The research on the development of teacher competency assessment instruments was conducted using the Plomp model by accommodating the stages of test development based on Oriondo & Dallo-Antonio 1998. The development of teacher competency assessment instruments was developed based on Permendikbud number 16 of 2007. The test development stages include Analysis, Design, Evaluation, and Revision.

The analysis stage is carried out to obtain positioning, namely reviewing theoretically and policies related to the use of existing teacher competency assessment instruments and finding the advantages and advantages of developing the designed instrument.

In the second stage of development, namely design. The researcher determines the purpose of developing the instrument, namely that the instrument will be used to assess teacher competency. Then the researcher compiles the instrument grid and items according to the theoretical study that has been produced in the previous stage.

In the final stage, the researcher evaluates the quality of the instrument developed. First, the quality evaluation is carried out by involving 3 experts covering the suitability of content, construction and grammar. The qualifications of the experts involved in assessing the instrument design are a minimum of S2 education and have been active as lecturers or practitioners. The 3 experts referred to are Dr. Saymsir Sainudin, M.Pd as an expert in measurement and assessment, Mutiara Arlisyah Putri Utami, M.Pd as an expert in education evaluation, and Nuril Huda, M.Pd as an expert in education.

The second evaluation was conducted with a readability test involving 2 randomly selected madrasah teachers. From this stage, improvements will be made so that the instrument developed does not have multiple interpretations and can truly be understood by teachers. This aims to ensure that the measurement will truly accurately describe the actual competency. The final stage in the evaluation is to conduct testing as well as measuring the competency of 124 teachers.

Schematically, the following are the stages of instrument development and quality testing:

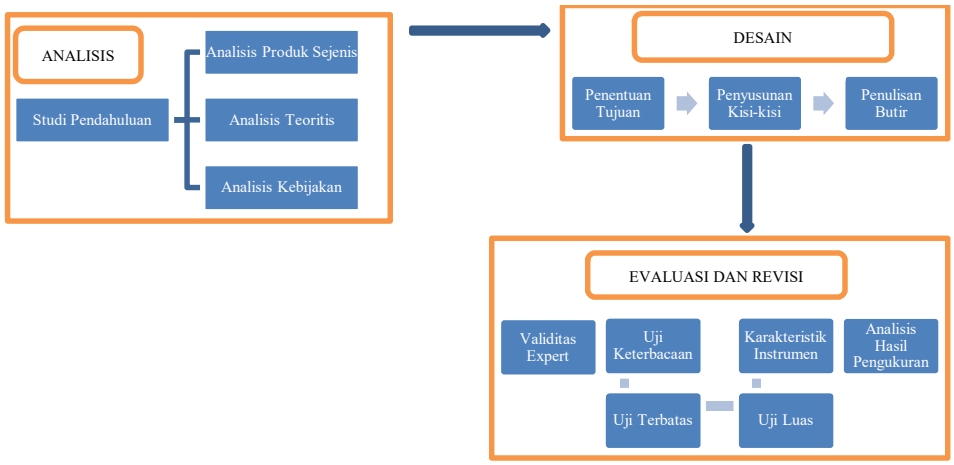

Figure 1. Instrument development stages

Participant

In the evaluation and revision stage, there is an empirical instrument testing process carried out on madrasah teachers who have been selected to represent Malang and Batu City, namely MAN 1 Malang, MAN 2 Malang, MAN Kota Batu, MTs N 2 Malang, MTs N 3 Malang, MTs N Kota Batu, and MAN Kota Batu. With a random sampling technique, 124 teachers were involved in teacher competency assessment activities to obtain information on item characteristics and teacher competencies in the population.

Instrument

The teacher competency assessment instrument was developed in the form of a self-assessment survey with a modified Likert scale of 1-4. The meaning of this scale is 4 for strongly agree, 3 agree, 2 disagree, and 1 strongly disagree. The instrument was developed with 4 main teacher competencies, namely professional, pedagogical, social, and personality competencies. Each of these competencies was then developed into indicators consisting of 4 indicators for professional competency, 6 indicators for pedagogical competency, 4 indicators for social competency, and 5 indicators for personality competency. The total number of items developed was 20 items with the assumption that 1 indicator is represented by 1 item. The grid matrix developed in this study is stated in table 1 as follows:

Table 1. Instrument grid

Competence		Indicator
Professional	A	Mastering the material, structure, and scientific mindset that supports the subjects taught
	B	Developing learning materials for the subjects taught creatively
	C	Developing professionalism sustainably by carrying out reflective actions
	D	Utilizing information and communication technology to develop oneself
Pedagogy	E	Mastering the characteristics of students from physical, moral, social, cultural, emotional and intellectual aspects
	F	Mastering learning theories and principles of educational and enjoyable learning
	G	Utilizing information and communication technology in developing students' potential to actualize their various potentials

	H	Communicating effectively, empathetically, and politely with students
	I	Conducting assessments and evaluations of the learning process and outcomes
	J	Conducting reflective actions to improve the quality of learning.
Social	K	Be inclusive, act objectively, and do not discriminate based on gender, religion, race, physical condition, family background, and socio-economic status
	L	Communicate effectively, empathetically, and politely with students, education personnel, parents, and the community
	M	Adapt to work places throughout the Republic of Indonesia which has socio-cultural diversity
	N	Communicate with your own professional community and other professions verbally and in writing, or in other forms
Personality	O	Acting in accordance with religious, legal, social, and cultural norms of Indonesia
	P	Presenting oneself as an honest person, with noble character, and a role model for students and the community
	Q	Presenting oneself as a steady, stable, mature, wise, and authoritative person
	R	Demonstrating work ethic, high responsibility, pride in being a teacher, and self-confidence
	S	Upholding the code of ethics of the teaching profession
	T	Personal Maturity

Data Analysis

The instrument is presented in a google form to facilitate the test response administration process. Item characteristic analysis as a test result data analysis is carried out using confirmatory factor analysis with Jamovi application software. The selection of this software is based on the completeness of the available analysis package resembling SPSS with ease of use. This application is paid but much cheaper when compared to the cost of the SPSS application. In addition, this application can be used either by installing it on a computer device or can be used directly in online mode on the website https://cloud.jamovi.org/. When compared to other item response analysis applications such as Lisrell or R, Jamovi certainly offers a much better user friendliness.

Data analysis was conducted by tabulating the response data of the use of the self-assessment survey instrument. Data tabulation was conducted to observe and facilitate the subsequent analysis process. After that, an analysis of the responses was conducted consisting of descriptive analysis. The purpose of this analysis was to see the identity of the respondents, including seeing the status of teachers and length of service as teachers. This is important to do to describe the profile of Madrasah teachers in Batu City and Malang Regency. The last analysis was to conduct an item response analysis using the CFA approach. This analysis will obtain the factor loading index, fit model which includes RMSEA, CFI, TLI, as a form of model suitability or instrument validity threshold and instrument reliability.

■ RESULT AND DISCUSSION

Confirmatory Factor Analysis (Validity and Reliability)

The results of the testing and analysis of the instrument characteristics were carried out using CFA (confirmatory factor analysis) testing on 4 competencies with items that have been adopted or modified in several references. CFA testing

was carried out using Jamovi application software. CFA testing aims to obtain empirical validity evidence of the suitability of aspects and indicators in the items used (Knekta et al., 2019). This model will be evaluated using the Goodness of Fit Indices (GFI) fit index, such as CFI, TLI, and RMSEA. The decision making in the CFA model is based on the factor loading value and modification indices (Vahedi et al., 2012). The results of the CFA test on the suitability of the 20-item grid on the instrument are obtained as follows:

Table 2. Factor loadings

Factor	Indicator	Estimate	SE	Z	p
Professional	A	0.814	0.0704	11.56	< .001
	B	0.777	0.0662	11.73	< .001
	C	0.612	0.0632	9.69	< .001
	D	0.586	0.0620	9.45	< .001
Pedagogy	E	0.575	0.0676	8.51	< .001
	F	0.574	0.0601	9.56	< .001
	G	0.729	0.0651	11.20	< .001
	H	0.434	0.0537	8.08	< .001
	I	0.651	0.0680	9.57	< .001
	J	0.575	0.0602	9.55	< .001
	K	0.684	0.0665	10.29	< .001
Social	L	0.825	0.0671	12.30	< .001
	M	0.816	0.0680	12.00	< .001
	N	0.530	0.0629	8.43	< .001
	O	0.669	0.0644	10.39	< .001
Personality	P	0.871	0.0698	12.48	< .001
	Q	0.846	0.0681	12.43	< .001
	R	0.884	0.0769	11.50	< .001
	S	0.809	0.0679	11.91	< .001
	T	0.845	0.0679	12.45	< .001

Based on the CFA validity test, it shows four aspects of teacher competence with 20 items. The professional aspect of teacher competence states a significance value of <0.001. Question item A has the strongest contribution in showing the professional aspect with a figure of 0.814. Furthermore, in the pedagogical aspect which is an aspect related to the principle of creating a meaningful educational process, item G is the most dominant with a standard estimate of 0.729. While item H in this aspect is the item with the lowest value of all the items tested with a value of 0.434. According to Brown (2006) The estimation of the standardized loading value shows a value greater than 0.5. The value indicated by the H aspect is less than the standard estimate. This H item is still significant but needs to be evaluated again because it does not have a large contribution to showing the pedagogical factor. In the social aspect, items L and M are the most dominant. While item O is still at a fairly good level and item N needs to be evaluated further. Finally, the personality aspect is the best aspect because all items in this aspect are above 0.8. This means that all items in the personality aspect show their construct contribution. Overall, from Table (2) it can be seen that all item indicators consisting of 4 aspects of teacher competence can function well to provide accurate data from research respondents. Several other empirical test indicators are presented in Table (3) which consists of covariance factors for fixed parameters in measurement, as well as RMSEA, CLI and fit measure values.

Table 3. Factor covariances

		Estimate	SE	Z	p
Professional	Profesional	1.000[a]			
	Pedagogi	0.945	0.0200	47.2	< .001
	Sosial	0.913	0.0239	38.3	< .001
	Kepribadian	0.954	0.0147	64.8	< .001
Pedagogy	Pedagogi	1.000[a]			
	Sosial	0.927	0.0223	41.7	< .001
	Kepribadian	0.959	0.0145	65.9	< .001
Social	Sosial	1.000[a]			
	Kepribadian	0.949	0.0150	63.1	< .001
Personality	Kepribadian	1.000[a]			

Table 3 The results of the Factor Covariance analysis show a very strong relationship between constructs, reflecting a significant relationship between the four dimensions of competence, namely professional, pedagogical, social, and personality. The covariance between Professional and Pedagogy of 0.945 indicates that increasing teacher professional competence, such as mastery of teaching materials, is closely related to mastery of pedagogical skills, namely effective teaching skills. The relationship between Professional and Social of 0.913 also illustrates that professional competence has significant relevance to social skills, such as collaboration and interpersonal communication. In addition, the relationship between Professional and Personality of 0.954 indicates that a good personality, such as a sense of responsibility and integrity, greatly contributes to the development of professional competence.

The covariance between Pedagogy and Social of 0.927 shows a strong relationship, where pedagogical ability is supported by social skills that enable effective interaction with students and the learning environment. The relationship between Pedagogy and Personality of 0.959 shows that a positive personality greatly supports the mastery of pedagogical skills. Furthermore, the relationship between Social and Personality of 0.949 reflects that a person's personality, including adaptability and empathy, has a major contribution to the development of social skills.

All of these inter-construct relationships are statistically significant with p values <0.001, indicating that the relationships are reliable and theoretically relevant. High covariance values indicate convergent validity. The very strong relationships among these four aspects indicate that Professional, Pedagogical, Social, and Personality competencies complement each other, which is very relevant in the context of competency development, especially in the teaching profession.

Table 4. Test for exact fit

χ^2	df	p
348	164	< .001

Table 5. Fit measures

			RMSEA 90% CI	
CFI	TLI	RMSEA	Lower	Upper
0.926	0.914	0.110	0.0937	0.126

The results of the model fit measurement in Table 5 show that the model has a CFI (Comparative Fit Index) value of 0.926 and a TLI (Tucker-Lewis Index) of 0.914. Both of these values are above the threshold of good fit (e"0.90) as expressed by Bentler (1990), which shows that the model has a good fit with the observed data. However, the RMSEA (Root Mean Square Error of Approximation) value is 0.110 which means that the model used is not fit. However, this value is still acceptable because RMSEA depends on the df value and the number of samples. According to MacCallum et al. (1996) The RMSEA value is very sensitive to the number of samples and the complexity of the model. In the case of small samples, the RMSEA is often higher because the estimates are unstable. While in cases that have many parameters, the RMSEA value can be larger even though the model remains substantively valid. So this instrument can be said to be valid through the help of other indices, in this case, namely CFI and TLI which are not too susceptible to the df value (Shi et al., 2022). Study Jannah (2024) also found a similar case, namely the RMSEA value tended to be high, namely 0.143.

This confirms the importance of synergy between competency aspects in supporting the success of teachers' professional tasks. From the CFA (confirmatory factor analysis) test, the data tabulation of the results of the instrument analysis can be done as follows:

Table 6. Fit index

Indikator	Score
RMSEA	0.110
CI: Confidence interval	0.0937 - 0.126
CFI (Comparative Fit Index)	0.926

Tabel 7. Reliabilitas

Model Fit	
Person Reliability	
Scale	0.950

Item statistics of the rating scale model		
	Measure	**S.E.Measure**
A	-4.17	0.234
B	-3.69	0.229
C	-4.17	0.234
D	-5.66	0.227

The instrument model fit test was conducted on the Jamovi application software. The test results as evidence of the validity and reliability of the instrument empirically are as follows:

The results of the fit model analysis show that the instrument has a very high level of reliability with a Person Reliability value of 0.950. This value indicates that the instrument has good consistency in measuring individual responses, so that the data produced can be trusted to assess teacher competence. In addition, the analysis of item statistics on the rating scale model in Table 7 shows Measure values ranging from -5.66 to -3.69. Negative values on Measure indicate that these items tend to be easier for respondents to choose. The smaller (more negative) the Measure value, the lower the level of difficulty of the item. Meanwhile, the Standard Error of Measure (SE

Measure) value which is in the range of 0.227 to 0.234 indicates that the standard error rate on each item is quite low, so that the measurement estimate can be considered accurate and reliable.

Overall, these results indicate that the instrument used has met the fit model criteria, both in terms of consistency and measurement accuracy. This indicates that the instrument is suitable for use in assessing teacher competence with adequate validity and reliability. However, the results of the Measure analysis also provide additional information regarding the relative level of difficulty between items, which can be used as evaluation material in the process of further instrument refinement.

Dimentionality of Scale

These tested aspects have a mutually supportive relationship in forming the competency profile of State Madrasah teachers. In the Professional variable, it is measured through indicators that refer to the teacher's ability to master teaching materials, develop learning materials, and evaluate learning. These indicators play an important role in supporting the professional performance of teachers to ensure the success of the learning process. According to Munna & Kalam on (Mydin et al., 2024) The professional aspect of teachers has an impact on teacher performance in teaching, which in turn affects the role of teachers in improving the quality of graduates. The Pedagogical Aspect (Pdg) includes indicators related to learning planning, classroom management, use of technology, and implementation of student-centered learning. In line with the research results Permatasari et al. (2022) which states that with a 1% increase in teacher pedagogical competence, mathematics learning outcomes can be increased by 0.985. So from here it can be said that the pedagogical abilities possessed by teachers must be improved to support the quality of graduates. The Personality Aspect (Kpr) is associated with indicators that highlight the integrity, emotional stability, and moral attitudes of teachers. This indicator shows how the teacher's personal character is able to influence the overall implementation of professional duties, including in building role models for students (Mukti & Noviafitri, 2024; Safitri et al., 2021). Apart from character formation, the teacher's personality can also influence the increase in motivation in learning, where learning motivation is very much needed to achieve learning achievements (Baidowi et al., 2024). Next, the Social aspect (Ssl) involves indicators that describe the teacher's ability to build positive interpersonal relationships with students, colleagues, and the community. These indicators show the teacher's skills in communicating effectively, which is an important factor in creating a conducive learning environment (Maulina & Zumrotun, 2024; Nurohim & Winaryati, 2019).

The relationship between aspects is also seen in the results of Factor Covariances in Table 3. The close relationship between Pedagogy and Professionalism shows that teachers' ability to design and implement learning supports their professional performance in delivering material optimally. This is supported by research Nuryana Fitrianova (2020) which states that there is a strong relationship with a value of 0.76. Meanwhile, Personality has a significant correlation with Social, this shows that the integrity and emotional stability of teachers support the creation of good interpersonal relationships. (Agung, 2014; Lestari & Purwanti, 2018).

Madrasah Teacher Competency Profile

The instrument that has been proven to meet good quality based on the testing and analysis of the data above, then the next step is the instrument produced in this development research is used in assessing the competence of teachers involved in the research, namely 124 teachers in the madrasah of Batu City, Malang City, and Malang Regency. Teacher competence based on age

category and length of service is presented in the following table:

From the table above, it can be understood that the profile of teachers who participated in the study were 124 teachers from MAN 1 Malang, MAN 2 Malang, MAN Kota Batu, MTs N 2 Malang, MTs N 3 Malang, MTs N Kota Batu, and MAN Kota Batu, the majority of whom were senior teachers who had taught for more than 10 years and also had teacher certificates.

Table 8. Teacher profile

Aspect		**Result (%)**		
Years of service	< 5 years	21.26		
	5 – 10 years	15.75		
	more 10 years	62.99		
Educator Certificate	Yes	62.99		
	No	37.01		
Competence	Very Poor	Poor	Good	Very Good
Professional	10	7.45	31.21	51.72
Pedagogy	8	7.87	38.78	44.88
Sosial	9	11.27	34.81	44.46
Personality	14	1.5	17.46	66.65

However, this figure is in contrast to the competencies they have. Teacher competencies consisting of 4 main competencies as a teacher have not met 70% of the very good criteria in each aspect. With the existence of an instrument that has been tested theoretically and empirically with good instrument validity and reliability values, teacher competency needs to be measured periodically. The purpose of measuring teacher competency is as an evaluation effort in planning follow-up programs and improving competencies that will have an impact on individual quality, agency quality, and most importantly the quality in providing learning services for students.

■ CONCLUSION

The development of teacher competency assessment instruments that have been empirically tested meets the criteria of the goodness of fit index with an RMSEA value of 0.110; CI 0.0937 - 0.126; and CFI 0.926. The reliability test of the developed instrument also obtained a very high value of 0.950. The results of measuring teacher competency with tested instruments show that teachers have 51.75% professional ability, 44.88% pedagogical ability, 44.46% social ability, and 66.56% personality. From this study, it can be concluded that teacher competency needs to be measured periodically as a form of performance evaluation. The results of teacher competency evaluations are the basis for mapping and planning teacher competency improvement programs that will be reflected in institutions and individual teachers so that they are able to present quality learning for students.

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