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Performance Assessment with Multiple Intelligence Differentiation to Measure Communication Skills: Application of Many Facet Rasch Model

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Abstract: This research aims to determine the characteristics of the PABMMSB instrument. Comprising seven task types and assessment rubrics measuring communication skills across four indicators. Employing a Mixed Methods Exploratory Sequential: Instrument development model with purposive sampling, the study involved 39 prospective physics teacher students. Data was obtained from 5 types of assignments that were selected and then assessed by seven raters and the result was that IKK01 did not meet the ZStd score criteria with a value of -2.2. However, because the MnSq (0.82) and PtMea (0.59) values have met the criteria, the ZStd value can be ignored and IKK01 is still declared valid, and for IKK02, IKK03, and IKK04 all have met the criteria and all indicators tested have met the criteria and are declared valid to measure communication skills. Apart from that, a reliability value of 0.87 was obtained and was included in the Very Good criteria.

Keywords: characteristics, performance assessment, multiple intelligences, communication skills, rasch model, facet.

Abstrak: *Penelitian ini bertujuan untuk mengetahui karakteristik instrumen PABMMSB. Instrumen yang dikembangkan terdiri dari tujuh jenis tugas dan rubrik penilaian untuk mengukur keterampilan komunikasi dengan empat indikator. Penelitian ini menggunakan Mixed Methods Exploratory Sequential: Instrument development model dengan teknik purposive sampling. Uji coba dilakukan kepada 39 orang mahasiswa calon guru fisika didapatkan data dari 5 jenis tugas yang dipilih kemudian dinilai oleh tujuh orang rater dan didapatkan hasil bahwa IKK01 tidak memenuhi kriteria nilai ZStd dengan nilai -2.2. akan tetapi karena nilai MnSq (0.82) dan PtMea (0.59) sudah memenuhi kriteria maka nilai ZStdnya bisa diabaikan dan IKK01 tetap dinyatakan valid, dan untuk IKK02, IKK03, dan IKK04 semuanya telah memenuhi kriteria dan seluruh indikator yang di ujikan memenuhi kriteria dan dinyatakan valid untuk mengukur keterampilan komunikasi. Selain itu, didapatkan nilai reliabilitas sebesar 0.87 dan termasuk kedalam kriteria Bagus sekali.*

Kata kunci: *karakteristik, penilaian kinerja, kecerdasan majemuk, keterampilan komunikasi, rasch model, facet.*

▪ INTRODUCTION

This vast universe is still very interesting to study because it holds many secrets that have not been revealed. Earth and Space Science is a combination and synthesis of Physics, Biology, Chemistry, Geology, Oceanography, Climatology, Meteorology, and other sciences that study life, Earth, and sky. With the help of IPBA, it is hoped that students will be able to describe natural phenomena and their physical relationships with the effects they have in everyday life, especially on the sub-theme of the Sun as a star which is the opening material in the Stars Chapter because it is very contextual. In practice, minimal star material is provided in junior high school, namely in the chapters on the Earth and the solar system. Meanwhile, in high school, star material is given in

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Geography lessons on the subject of the Solar System and the Universe with less depth of material (Liliawati et al, 2014). Apart from the lack of in-depth study of the material in the Earth and solar system, recently there have been conditions that have hampered students' understanding of the material being studied, where students often misinterpret, modify or deny the scientific assumptions used about how and why something happens, which is known as with the term misconception.

Based on the results of research in 2020 (Liliawati et al, 2020), the IPBA diagnostic test was given to 93 students of the Physics Education study program at 6 universities in the western, central, and eastern regions of Indonesia. The results obtained showed that 54.55% (n= 51) of students fell into the category of lack of knowledge (LK), meaning that students did not understand the knowledge of IPBA material. Only 17.70% of students understood the concept (n= 16) and 21.02% of students experienced misconceptions. What is even more ironic is that of the 63 students who had attended IPBA lectures at their university, 56.37% experienced LK, 15.94% understood the concept, and 20.87% had misconceptions. Misconceptions originating from learning factors can originate from the failure of lecturers to support the process of constructing students' scientific conceptions. Another thing that might be the cause of misconceptions about these students is that the learning methods used are not appropriate or in other words cannot facilitate the type of intelligence or type of learning of each individual who takes part in the learning, so that the material provided is not absorbed optimally.

Humans are born with various unique qualities and each individual brings their characteristics. However, the forms of intelligence, learning tendencies, and interests possessed by each individual are increasingly diverse due to interventions from various aspects. The learning process that can meet individual learning needs according to their needs is called differentiated learning (Tomlinson, 2017). Differentiated learning is a learning framework that takes into account the differences between each individual in creating equal learning opportunities (Tomlinson & Imbeau, 2010). The diversity or differentiation referred to in this case refers to multiple intelligences which is a theory for understanding the intelligence possessed by each individual through several aspects (Gardner, 2003). In multiple intelligence, there are eight types of intelligence that students may possess, namely linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, gesture intelligence, musical intelligence, verbal/linguistic intelligence, interpersonal intelligence, intrapersonal intelligence, and naturalistic intelligence. A student can have more than one type of intelligence so in measuring skills such as communication in certain material it is very necessary to have a tool that is appropriate to the intelligence that the student has so that the skills and knowledge that you want to measure will have maximum results because there are no children who stupid or smart, there are children who stand out in one or several types of intelligence (Gardner, 2003). Learning needs to be able to understand students' abilities personally, acknowledge their existence with all the abilities they have, and appreciate the talents and work of their students (Jasmine, 2007).

In understanding material, of course, there needs to be a discussion process in learning, one of which is by communicating the understanding obtained so that we can find out the response from other people whether the material we understand is correct or whether there are still misconceptions in it. Especially in the field of education, communication skills are a skill that facilitates individuals to express their thoughts

regarding the material they have learned to share with others. In addition, these communication skills are now considered one of the most needed abilities in the world of work. The era of industrial revolution 4.0 is an era where information technology is developing rapidly and colors every human life. The era of Industrial Revolution 4.0 is marked by the development of the Internet of Things which has penetrated various areas of people's lives today. However, in the era of the Industrial Revolution 4.0, there were shortcomings or problems created, one of which was reduced socialization between communities which resulted in aspects related to a person's social life being considered unimportant. However, recently a new human-centered and technology-based concept has emerged which was initiated by the Japanese government, namely the Society 5.0 era or what could be interpreted as Society 5.0. The concept of society 5.0 is not only limited to manufacturing factors but also solves social problems with the help of the integration of physical and virtual spaces (Skobelev & Borovik, 2017). The current focus of expertise in the field of 21st-century education includes creativity, critical thinking, communication, and collaboration, or what is known as 4C (Risdianto, 2019).

Of the four skills that are currently popular because they are a necessity for individuals to compete in the world of work due to the demands of the 5.0 era, communication skills are a very interesting thing to discuss because this skill is very relevant to the success of the 5.0 era concept. Communication skills are important because they are activities of exchanging various information and sharing experiences between one person and others in developing thinking power (Abizar, 1988). Especially in the field of education, communication skills are a skill that facilitates students to express their thoughts regarding the material they have studied to share with others. Communication skills are very important skills, especially for teachers in conveying ideas, information, and opinions to students so that they are required to have effective communication skills so that communication skills must be possessed in the 21st century by prospective teacher students to communicate effectively, efficiently, and pleasantly, especially in solving problems and making decisions in classroom learning (Makiyah et al, 2021). Communication skills are divided into three types, namely oral communication skills, written communication skills, and visual communication skills (Purwanto, 2019). Apart from these three types, there is another type of communication skill according to Muhammad (2016), namely nonverbal communication.

Oral communication skills are the ability to understand and use language well and correctly in speaking and listening (McCroskey & Richmond, 1996). Several activities can train and measure oral communication skills, one example is through activities presented in the form of presentations and interviews. According to research conducted by Kuo, et al (2014), public presentations can be used to measure oral communication skills. Interviews or what is now often known as Podcasts can be an innovative alternative learning media to increase students' insight and thinking (Rachmawati, et al, 2019; Zellatifanny, 2020). Apart from that, podcasts make it easier for students to practice listening and speaking (Fitria et al, 2015). According to research conducted by Myers and Anderson (2008), interviews can be used to measure oral communication skills.

Written communication skills are the ability to express ideas and information in language that is clear, easy to understand, and appropriate to the context and intended audience (Pinker, 2014). One of the activities that can be carried out to measure written communication skills is writing papers, where this activity can help students develop

critical and analytical thinking skills, as well as improve their ability to express ideas clearly and structured, in line with research conducted by Graham & Perin (2007) in measuring written communication skills.

Non-verbal communication skills are the creation and exchange of messages without using words, such as communication that uses body movements, posture, and vocals instead of words (Muhammad, 2016). One activity that can be done to measure non-verbal communication skills is through songs. The activity of making songs can make students develop a happy soul, enjoy the beauty, and develop feelings through singing with phrases and notes that are strung together to form a song, as well as rhythms that beautify the learning atmosphere (Miranti et al, 2015).

Visual communication is a person's ability to communicate messages or information with readers with various visual strengths, such as typography, illustrations, colors, lines, and so on with the help of technology (Supriyono, 2010). One of the activities that can be carried out to measure visual communication skills is through infographic media which is a digital-based learning media containing material information that is designed to be as attractive as possible with attractive visual images and colors (Rizawati, 2022). Infographics combine text and images into a certain format to convey information that is more easily and quickly understood by infographic users (Anggraeni & Arfa, 2017).

We can see each individual with multiple intelligences to see the extent of their understanding of concepts based on how they communicate their understanding. Tests are certainly needed to diagnose the weaknesses of prospective physics teachers, distinguish between superior and less superior groups, and help improve understanding (Arifin, 2009). To measure the conceptual understanding of each prospective physics teacher who is unique because he has a variety of multiple intelligences through communication skills which are complex, of course, a type of instrument is needed that is capable of measuring in detail. To answer this need, performance assessment can be one solution, because it can be used to measure students' real or actual performance which is inadequate if measured only using objective tests, besides that, it can be used by teachers or instructors to assess the multiple intelligences possessed by participants. education (Pribadi & Lestari, 2011). The tests that can be given are prepared in the form of Tasks and rubrics, however, in preparing the instruments to be used, in-depth analysis is required to determine the quality of the instruments. With this instrument that has a rubric, it is hoped that it can differentiate between individuals who have adequate skills and those who still have difficulty conveying the material they understand.

▪ METHOD

Research Design and Procedures

The research method used in this research is the Mixed Method method or research with qualitative and quantitative data collection (Creswell, 2014). By using the Exploratory sequential design: Instrument development model, this research intends to develop an instrument with qualitative research followed by quantitative research. The Instrument Development Model is a systematic process used to develop valid and reliable measurement instruments (Hinkin, 1998).

This design was chosen because it can achieve the research objective of developing a performance assessment of the differentiation of solar matter as stars. In qualitative

research, the data obtained is data that will support quantitative research. Qualitative data contains information on the multiple intelligence profiles of prospective physics teacher students, validation results in the form of improvement notes from experts, and ordinal data from validation results. Meanwhile, quantitative data is in the form of test result data from performance assessments given to prospective physics teacher students.

Qualitative research consists of collecting qualitative data by conducting literature studies on multiple intelligences, and communication skills, analyzing qualitative data descriptively, and interpreting the results of qualitative analysis. Furthermore, these results were used to design the PABMMSB instrument that was developed. After the instrument is designed, validation is carried out which produces improvement notes for the instrument and ordinal data from the validation results. Improvement notes were analyzed descriptively to obtain a better instrument. Next, quantitative research was carried out by testing instruments, analyzing quantitative data empirically, and interpreting the results of quantitative data analysis. From this research, an instrument was produced that has good characteristics.

Participants

In this research, testing of the differentiated performance assessment instrument on the material of the sun as a star was carried out with the help of four Material Experts who acted as experts who would validate (test the suitability) of the material (content) on the instrument to be used. In this research, the selected material or topic is then developed into tasks & rubrics. It is hoped that material experts can provide criticism and suggestions on the material descriptions in the teaching materials. The research sample consisted of 39 students who were prospective physics teachers at one of the universities in Bandung City who were selected using a purposive sampling technique, where the criteria determined were that the respondent had studied the sun as a star and had taken a multiple intelligence test. Student teacher candidates act as subjects who will be involved in quantitative studies by carrying out trials of performance assessment instruments. Apart from that, there are seven assessors or raters who will evaluate and check the results of the PABMMSB instrument trial.

Instruments

In this research, several instruments were used, including the Multiple Intelligence Test to determine the profile of the most dominant type of multiple intelligence possessed by respondents through the help of the Akupintar platform. The Validation Sheet was given to experts to be used in the Expert Judgment, and the PABMMSB instrument along with its rubric was tested on 39 respondents and then assessed by seven raters using the rubric that had been developed. The PABMMSB instrument consists of seven types of tests, namely a) presentation; b) podcast; c) term paper; d) reflective journal; e) songs; f) infographics; and g) observation reports to facilitate eight types of multiple intelligences. Meanwhile, the rubric developed for each type of test consists of four indicators with each criterion designed to determine the communication skills of the respondents.

The data collected through the research instrument was then analyzed to determine the characteristics of the PABMMSB instrument using a multi-facet rater so that characteristics were obtained in the form of content and construct validity, reliability, and capability. Instrument validity is how far the measurement by the instrument can measure the attributes that should be measured (Sumintono and Widhiarso, 2015). Data from

testing the validity of tasks & rubrics are used to seek expert agreement to determine the level of validity of the instruments used.

Data Analysis

The data obtained can then be analyzed using Rasch modeling to determine the ability of prospective teacher students and the ability of the test items. Analysis of the level of difficulty of questions is an analysis that aims to determine the cognitive level that students who are prospective physics teachers answer successfully and find difficult to answer. In this study, the data was analyzed for level of difficulty using the Rasch model. The level of difficulty of questions analyzed using the Rasch model is known as the one-parameter logistic (1PL) model. This Rasch model predicts the probability of success for each person in answering an item correctly (Hambleton & Swaminathan, 1985). This Rasch model is described as a 1-PL model because it contains one item parameter, namely the level of difficulty of the questions (Hambleton & Swaminathan, 1985). A person's ability and the estimated difficulty of the items on the computer will be displayed along a logit scale. Items and students are located on the same map. The logit scale is an interval scale in which all logit units are the same size. The highest value is located at the top of the map, and the lowest value is located at the bottom. Each item and student falls along the logit scale according to its predicted value. Students who are in a positive (high) logit are students with high ability and the question items are difficult questions, while students who are in a low logit are students with low ability and the question items are questions with a low level of difficulty (Bond & Fox, 2015). Item and student fit is between -2 to 2 with a sample size of 30 to 300 (Bond & Fox, 2015).

▪ RESULT AND DISSCUSSION

After carrying out the expert judgment process from experts consisting of 4 physics education lecturers in assessing assignments and also rubrics from the PABMMSB instrument, the data was analyzed using the Facet software and the results obtained can be seen in Table 1.

Table 1. WrightMap judgment expert

Table 6.0 All Facet Vertical "Rulers".

Vertical = (2A,3A,1A,S) Yardstick (columns lines low high extreme)= 160,4,-4,2,End

Measr	+Jenis Instrumen	-Kriteria	-Pakar
2			
		IKK01	
1	Siniar		Validator 3
	Jurnal reflektif		
0	Infografik Lagu Laporan pengamatan Makalah		
		IKK02 IKK03 IKK04	Validator 4
-1			
	Presentasi		
-2			
-3			Validator 2
-4		Task	Validator 1
Measr	+Jenis Instrumen	-Kriteria	-Pakar

In Table 1, the results of expert judgment are presented which consist of 4 columns, namely columns one to four. The 1st column is the measurement column (logit transformation) which states the measurement results in the range +2 (top) to -4 (bottom), this number is called the logit value. Column 2 (analysis of instrument types by experts), explains the distribution of instrument types which are in the range of logit values from the smallest around -1 logit (presentation) to the largest value approaching +1 logit (showcase). In this table, the type of podcast task is at the top which means that this type of task is at a higher level of ability than other types of tasks. A logit value of 0 is the minimum criterion for the quality of a type of instrument considered to be of good quality by experts so if the value is positive (greater than zero logits) it indicates the instrument is considered good by the expert panel, whereas if the logit value is negative (less than 0) it indicates the questions are not good according to experts (Darmana et al, 2020). Furthermore, in the expert section, which are experts who are validators or raters, we can see that of the four experts, validator 3 is at the top, which means validator 3 gives a score that is more difficult or less than other experts, while validator 1 is at the bottom, which means providing value more easily or more and can be said to be cheap in providing value. In the results of this expert judgment, validator 3 also provided more comments and input to improve the instrument to make it better, such as improvements in terms of writing and content in several types of assignments, in the rubric section validator 3 also provided input in detailing the categories of each indicator to measure skills. communication to better differentiate the skills of respondents who will be tested using this instrument.

Table 2. Analysis results from judgment experts using facets

Table 7.2.2 Jenis Instrumen Measurement Report (arranged by FN).

Total Score	Total Count	Obsvd Average	Fair(M) Average	+ Measure	Model S.E.	Infit MnSq	Infit ZStd	Outfit MnSq	Outfit ZStd	Estim. Discrm	Correlation PtMea	Correlation PtExp	N Jenis Instrumen
55	20	2.75	2.66	-.08	.73	.76	-.7	.53	-.3	1.47	.70	.65	3 Makalah
55	20	2.75	2.66	-.08	.73	.76	-.7	.53	-.3	1.47	.70	.65	5 Infografik
55	20	2.75	2.66	-.08	.73	.76	-.7	.53	-.3	1.47	.70	.65	6 Lagu
55	20	2.75	2.66	-.08	.73	.76	-.7	.53	-.3	1.47	.70	.65	7 Laporan pengamatan
56	20	2.80	2.77	.46	.74	.86	-.3	.61	.0	1.29	.62	.60	4 Jurnal reflektif
57	20	2.85	2.86	1.04	.79	1.64	1.5	1.23	.6	.18	.40	.53	2 Siniar
53	20	2.65	2.39	-1.17	.77	1.73	1.5	1.80	1.1	.13	.62	.74	1 Presentasi
55.1	20.0	2.76	2.67	.00	.75	1.04	.0	.83	.0		.63		Mean (Count: 7)
1.1	.0	.06	.13	.62	.02	.41	1.0	.46	.6		.10		S.D. (Population)
1.2	.0	.06	.14	.67	.02	.44	1.1	.50	.6		.11		S.D. (Sample)

In Table 2 we can see that of the seven types of assignments given to experts for expert judgment and analyzed using the Facet multi-rater, satisfactory scores were obtained because almost all types of assignments met the three existing criteria, but in the presentation assignment type was one The criteria that are not met are MnSq with a value of 1.80 which is greater than the maximum value for MnSq, namely 1.5, however, because the other two criteria are met, this type of task is still considered feasible and declared valid. After being analyzed based on existing criteria and interpreted, all types of assignments and their rubrics are declared valid. This means that these types of assignments and rubrics can be considered as measuring tools that measure what should

be measured and can be relied on to provide accurate or relevant information about measuring skills. communication that facilitates multiple intelligences in solar matter as a star.

Next, testing was carried out on 39 respondents who chose the type of assignment based on their wishes. There were five types of assignments chosen including presentations, infographics, reflective journals, papers, and songs. The results of the tasks carried out by the respondents were then assessed by seven raters and then analyzed using multi-facet raters and the following data were obtained.

		Count	Mean	S.D.
Responses non-extreme estimable	=	1092	3,42	1,09
Count of measurable responses	=	1092		
Raw-score variance of observations	=	1,185	100.00%	
Variance explained by Rasch measures	=	0,472	39,79%	
Variance of residuals	=	0,714	60,21%	

Figure 1. Variance explained by *ras*ch measures

What needs to be paid attention to in Figure 1 is the variance explained by the Rasch measures column where the score is 39.79%, this shows that the data obtained meets the minimum criteria or is suitable for using the Rasch measurement model analysis with the score criteria > 20% being said to be met, > 40% good and > 60% for special criteria (Sumintono & Widhiarso, 2015).

Table 3. WrightMap trial result data

Measr	+Mahasiswa	-Indikator	-Rater	Scale
2				(5)
	R1 R2 R3			4
1	R37			
	R29			---
	R15 R18		E	
	R13 R31 R32	IKK02 IKK04	A	3
0	R16 R22 R23 R24 R25 R26 R28 R33 R9	IKK03		
	R10 R11 R12 R14 R20 R21 R35 R36 R38 R6	IKK01		
	R19 R27 R34 R39 R4 R5 R8			---
	R17 R30 R7		C	
-1			D	
			B F G	2
-2				(1)
Measr	+Mahasiswa	-Indikator	-Rater	Scale

In Table 3, we get data on the distribution of student abilities in the range -2 to +2, in column 2 you can see the distribution of student abilities in the range of logit values from the smallest, close to -1 logit (R17, R30, and R7) to the largest value close to +2. logit (R1, R2, R3) In this table, the group of students at the top, which means they have

higher communication skills than other students, means that this group of students has a higher ability to express ideas and help in the process of forming thoughts to solve problems. problem (Medrianti, 2020). Apart from that, in Table 3 it can be seen that indicators two and four are indicators that are more difficult for students to fulfill and the possibility of fulfilling them is smaller, while indicator one is an indicator that tends to be easier for students to fulfill.

Table 4. Test results data on respondents

Total Score	Total Count	Obsvd Average	Fair(M) Average	Measure	Model S.E.	Infit MnSq	Infit ZStd	Outfit MnSq	Outfit ZStd	Estim. Discrm	Correlation PtMea	Correlation PtExp	N Indikator
985	273	3.61	3.65	-.26	.07	.79	-2.8	.82	-2.2	1.18	.59	.61	1 IKK01
889	273	3.26	3.25	.23	.07	1.08	1.0	1.07	.8	.90	.59	.62	2 IKK02
959	273	3.51	3.54	-.12	.07	.91	-1.1	.89	-1.3	1.13	.69	.61	3 IKK03
903	273	3.31	3.31	.16	.07	1.15	1.8	1.13	1.6	.82	.59	.62	4 IKK04
934.0	273.0	3.42	3.44	.00	.07	.98	-.3	.98	-.3		.61		Mean (Count: 4)
39.4	.0	.14	.16	.20	.00	.14	1.8	.13	1.6		.05		S.D. (Population)
45.5	.0	.17	.19	.23	.00	.16	2.1	.15	1.8		.05		S.D. (Sample)

Model, Populn: RMSE .07 Adj (True) S.D. .19 Separation 2.61 Strata 3.81 Reliability .87
Model, Sample: RMSE .07 Adj (True) S.D. .22 Separation 3.06 Strata 4.42 Reliability .90
Model, Fixed (all same) chi-squared: 31.1 d.f.: 3 significance (probability): .00
Model, Random (normal) chi-squared: 2.7 d.f.: 2 significance (probability): .25

From this data, we will focus on the MnSQ, ZStd, and PtMea outfit values to determine the content validity of the PABMMSB instrument using misfit order analysis. Based on this data, IKK01 does not meet the criteria for a ZStd value ranging from -2 to +2 because it has a value of -2.2. However, because the MnSq (0.82) and PtMea (0.59) values already meet the criteria, the ZStd values can be ignored and IKK01 is still declared valid. This is based on the opinion of Boone et. al (2014) who stated that if the MNSQ outfit value meets the model suitability criteria, then the ZSTD outfit value can be ignored. For IKK02, IKK03, and IKK04, all of them have met the three criteria and are declared valid. Apart from that, from the data in Table 4, a reliability value of 0.87 is also obtained and is included in the Very Good criteria (Sumintono & Widhiarso, 2015).

▪ CONCLUSION

The PABMMSB instrument has been prepared based on the need for an instrument capable of facilitating the differentiation of multiple intelligences to measure communication skills. This type of performance assessment instrument consists of seven types of tasks, namely presentations, podcasts, reflective journals, papers, infographics, songs, and observation reports accompanied by each -Each assessment rubric consists of four indicators to measure communication skills. Based on the results of the expert judgment carried out by four experts and analyzed using a multi-facet rater, it was found that almost all types of tasks met the three existing criteria, but in the presentation task type, there was one criterion that was not met, namely MnSq with a value of 1.80 which was greater. of the maximum value for MnSq, namely 1.5, but because the other two criteria are met, this type of task is still considered feasible and declared valid. After a trial was carried out on 39 prospective physics teacher students, data was obtained from 5 types of assignments that were selected, then assessed by seven raters, then analyzed using the Rasch model and the result was that IKK01 did not meet the ZStd score criteria with a range of -2 to +2 because it had a value of -2.2. However, because the MnSq (0.82)

and PtMea (0.59) values have met the criteria, the ZStd value can be ignored and IKK01 is still declared valid, and for IKK02, IKK03, and IKK04 all have met the three criteria and all the indicators tested have all met the criteria and declared valid for measuring communication skills. Apart from that, from the data in Table 4, a reliability value of 0.87 is also obtained and is included in the Very Good criteria.

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