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THE ANALYSIS OF CONSTRUCT VALIDITY OF WORK READINESS SCALE USING RASCH MODEL

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Abstract: This article presents research on the analysis of construct validity of work readiness scale using rasch model. The results of the analysis show that the theoretical construct measures one variable of work readiness. Work readiness is important for final year students. A quantitative approach is used as a research method with a survey design. The participants in this study were 245 undergraduate students at the Indonesian Education University batch 2018. The research instrument refers to aspects developed by Robert P. Brady which were analyzed using the Rasch Model. The results showed that the Cronbach Alpha value of 0.71 means that the reliability between the person and item is good, while the item reliability is 0.99 which means the instrument item is very good. This scale meets the criteria because it already has good psychometric properties so that it can be used to determine the level of work readiness.
Keywords: Reliability, Undergraduate Students, Validity, Work Readiness.

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INTRODUCTION

Work readiness is important and fundamental, because: 1) it can change careers; 2) assist individuals in dealing with the world of work so that individuals are more creative, innovative, have competencies, work skills and good personalities, 3) develop vocational identities based on information, interests, values, and determine career choices, 4) help individuals to have good abilities. relevant to their field, and 5) develop knowledge, and have extensive knowledge in order to compete with other prospective workforce (Santrock, 2003; Clark, 2013; Folds, 2013; Agusta, 2014; Baiti et al., 2017).

Work readiness is related to the tendency of individuals to know what skills they have developed and how these skills match the desired work criteria (Harvey, 2001). The results of the study define graduate work readiness as the extent to which graduates are perceived to have the skills and attributes that make them ready to succeed in the world of work (Caballero et al., 2011). The results of work readiness research in Australia show that work readiness training

develops potential cognitive skills and affective skills so that they can improve the employability of graduates who contribute to work readiness (Bandaranaike, 2015).

In the context of the world of work, students who are prepared to face the world of work have the following six aspects; Responsibility, Flexibility, Skills, Communication, Self View and Health & Safety (Brady, 2010). If the six aspects of work readiness are improved by students, they will demonstrate the ability to work well with others, think critically and creatively, communicate effectively, understand one's own strengths and weaknesses, and know how to present oneself, as well as access useful opportunities and plan a career (Molla et al., 2015).

Individuals with work readiness have the skills, knowledge, understanding, and personality that enable them to choose and feel comfortable with their work, so that they have work satisfaction and can ultimately achieve success (Pool et al., 2007). On the other hand, students who do not have work readiness will feel pessimistic, do not believe in their abilities, lack motivation, have low self-efficacy, and have low self-concept (Utami, 2013; Rachmawati et al., 2018; Prisrilia et al., 2021).

Work readiness is correlated with several things such as; career maturity, work motivation, future orientation and fighting power, self-efficacy and soft skills (Agusta, 2014; Yuwanto et al., 2016; Damasanti, 2018; Nurroffifah, 2018; Agustina, 2021). Other studies have shown that job readiness has a correlation with career adaptability and career decision making (Koen etl., 2010; Nachmias et al., 2015; Santisi et al., 2018).

METHOD

Participants

This study was conducted using a descriptive method with a quantitative spproach and a cross-sectional suvey design. The research subjects were students in in West Java, specifically in Bandung, South Garut and Sumedang, who were randomly selected. The majority of the population in West Java is Sundanese. Research participants were selected from Indonesian University of Education class of 2018. The study technique was quantitative, and there are 77 surveys on a five points Likert Scale. Using statistical models, the quantitative method sought to optimize the result (Creswell, 2012).

This Study took place in Indonesian University of Education class of 2018, included 254 students, 88 mens and 166 females. The study technique

was quantitative, and there are 77 surveys on a five points Likert Scale. Using statistical models, the quantitative method sought to optimize the result (Creswell, 2012). The table below is the data of the participants.

Table 1
Participants

No	Faculty	Department	Gender		Total
			L	P	
1	Faculty of Education	Guidance and Counseling	7	37	44
		Psychology	5	14	19
2	Faculty of Social Education	Tourism Marketing Management	8	9	17
		History Education	14	12	26
3	Faculty of Language and Literature Education	English Language and Literature	1	11	12
		English Laguage Education	1	7	8
4	Faculty of Mathematics and Natural Science Education	Mathematics Education	5	9	14
		Mathematics	1	6	7
5	Faculty of Vocational Education	Architectural Engineering Education	0	2	2
		Architectural	3	2	5
6	Faculty of Short and Health Education	Physical Education, Health and Recreation	15	6	21
		Sport Science	17	9	26
7	Business Economics Education Faculty	Accounting Education	0	15	15
		Accounting	5	18	23
8	Faculty of Art and Design Education	Dance Education	1	6	7
		Visual Communication Design	5	3	8
		Total	88	166	254

Data were taken in 2022 by passing out questionnaires to respondents. The students are having good work readiness to enter the employability.

Work Readiness Scale

The instrument that will be used in this research is the work readiness instrument made by Robert P. Brady (2010). This instrument consists of six dimensions, namely; responsibility, flexibility, skills, communication, self-view, and health and safety. These aspects become indicators for compiling statement items in revealing student work readiness (Brady, 2010). This questionnaire uses Likert-Type Scale Response Anchors (Vagias, 2006) alternative answer choices refer to the Level of Agreement which consists of five alternative answer choices, which is Strongly Disagree, Disagree, Neither Agree or disagree, Agree, and Strongly Agree. Statement items are presented in the form of positive statements and negative statements.

Data Analysis Procedure

The Winstep program will be used to perform statistical processes to assess psychometric qualities using the common factor analysis approach and the Rasch modeling tool. The results of the student work readiness instrument through the Rasch model are analyzed based on the aspects of unidimensionality, rating scale, and content validity tests which are described in detail as follows. The Winstep application is used to carry out statistical processes to determine psychometric quality using the general factor analysis approach and Rasch modeling. The basic idea of item response theory (IRT) is latency properties, and has features of latency properties. Empirical indications that can be measured or observed will result from their manifestations, properties, and interactions with the environment (Nurhudaya et al., 2019).

FINDINGS AND DISCUSSIONS

Unidimensionality

Unidimensionality analysis identifies several attributes or dimensions that are measured by the instrument. This analysis uses Output Table 23 by taking into account the value of Raw variance explained by measures and Unexplained variance in 1st to 5st contrast. Unidimensionality of measurements can be proven if the Raw variance is explained by measures 20% with a note that the general criteria for interpretation are sufficient if 20-40%, good if 40-60%, and very good if above 60%) and if Unexplained variance in 1st to 5st contrast of residuals < 15% each.

The results of data analysis showed that the Raw variance explained by measures of 53.9% was included in the good category. While the Unexplained variance in 1st to 5st contrast of residuals is 8.8%, 4.1%, 3.3%, 2.2%, and 1.7%, respectively. It can be seen from the results of the Unexplained variance in 1st to 5th that the contrast of residuals is less than 15%. Thus, the instrument construct used actually measures one variable, namely the undergraduate student's work readiness as a whole.

Item Level Difficulty

To find out the difficulty level of the item items can be seen in Table 2. Item Difficulty Level. From the table, it is known that the SD value is 0.84. This SD value when combined with the logit average value, the difficulty level of the items can be grouped into the very difficult category (greater +1 SD), the difficult category (0.0 logit + 1 SD), the easy category (0.0 logit - 1 SD), and very easy category (less than -1 SD). Thus, the score limit for the very difficult

category is more than 0.84, the difficult category is 0.00 to 0.84, the easy category is -0.84 to less than 0.00, and the very easy category is less than -0. ,84. In detail can be seen in the following table.

Table 2
Item Level Difficulty

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	ITEM
11	371	254	1.97	.09	1.14	1.1	1.10	.9	.21	.16	57.9	57.6	i11
68	382	254	1.89	.09	1.11	1.0	1.10	.9	.16	.17	50.0	52.4	i68
71	408	254	1.71	.08	2.20	8.5	2.18	8.2	.23	.18	30.3	39.3	i71
12	417	254	1.65	.08	1.16	1.5	1.16	1.4	.20	.19	33.9	35.2	i12
72	427	254	1.60	.08	1.04	.5	1.00	.1	.30	.19	31.1	34.0	i72
15	511	254	1.19	.06	1.04	.6	1.04	.6	.15	.22	33.1	32.4	i15
60	590	254	.89	.06	1.06	.9	1.06	.8	.10	.23	35.8	31.8	i60
19	599	254	.86	.06	.73	-4.1	.72	-4.1	.38	.23	38.6	31.6	i19
76	606	254	.84	.06	.75	-3.7	.75	-3.7	.42	.23	44.5	31.6	i76
4	614	254	.81	.06	.94	-.8	.94	-.9	.11	.24	35.4	31.4	i4
31	628	254	.76	.06	.67	-5.2	.67	-5.3	.44	.24	47.2	31.3	i31
32	634	254	.74	.06	.96	-.5	.96	-.5	.24	.24	34.3	31.2	i32
16	635	254	.74	.06	.97	-.5	.95	-.6	.35	.24	34.3	31.2	i16
59	637	254	.73	.06	1.27	3.6	1.27	3.5	.13	.24	33.1	31.2	i59
56	638	254	.73	.06	.89	-1.6	.90	-1.5	.22	.24	34.6	31.2	i56
67	647	254	.70	.06	1.67	7.9	1.68	8.0	.07	.24	18.5	31.1	i67
74	652	254	.68	.06	1.06	.8	1.05	.7	.33	.24	34.3	31.1	i74
47	663	254	.64	.06	.98	-.3	.97	-.4	.24	.24	32.3	31.0	i47
63	663	254	.64	.06	1.28	3.7	1.28	3.7	.09	.24	26.8	31.0	i63
64	680	254	.59	.06	1.25	3.4	1.25	3.4	.27	.24	26.0	31.1	i64
7	693	254	.55	.06	1.01	.2	1.02	.3	.00	.24	32.3	31.1	i7
40	715	254	.48	.06	1.99	9.9	1.99	9.9	-.02	.24	12.2	31.4	i40
35	723	254	.45	.06	.85	-2.3	.85	-2.3	.31	.24	36.2	31.5	i35
52	731	254	.42	.06	.91	-1.3	.91	-1.2	.06	.24	38.2	31.5	i52
44	735	254	.41	.06	.94	-.9	.94	-.8	.14	.24	39.4	31.6	i44
1	751	254	.36	.06	.93	-1.0	.93	-1.0	.30	.24	34.6	31.9	i1
34	752	254	.36	.06	.99	-.1	1.00	.0	.22	.24	30.7	31.9	i34
43	760	254	.33	.06	1.29	3.7	1.29	3.8	.05	.24	27.2	32.1	i43
73	797	254	.21	.06	1.05	.7	1.06	.8	.20	.23	33.5	32.5	i73
41	802	254	.19	.06	1.02	.3	1.01	.2	.30	.23	34.6	32.5	i41
39	804	254	.18	.06	1.33	4.1	1.34	4.1	.27	.23	30.3	32.5	i39
48	805	254	.18	.06	1.16	2.1	1.17	2.2	.06	.23	24.8	32.5	i48
36	808	254	.17	.06	.98	-.2	.99	-.1	.17	.23	32.3	32.5	i36
27	813	254	.15	.06	1.17	2.2	1.17	2.2	.28	.23	27.6	32.7	i27
55	816	254	.14	.06	1.23	2.9	1.23	2.9	.11	.23	33.9	32.7	i55
25	824	254	.12	.06	.99	-.2	.99	.0	.31	.23	32.7	32.8	i25
75	850	254	.03	.06	.98	-.2	.99	-.1	.30	.22	39.0	33.3	i75
3	851	254	.02	.06	.89	-1.4	.90	-1.4	.27	.22	37.8	33.5	i3
17	861	254	-.01	.06	.67	-4.8	.67	-4.7	.35	.22	46.9	33.7	i17
61	865	254	-.03	.06	.99	-.1	.99	-.1	.16	.22	30.7	33.8	i61
24	867	254	-.03	.06	1.00	.1	1.00	.1	.22	.22	31.9	33.9	i24
46	868	254	-.04	.06	.91	-1.1	.92	-1.0	.28	.22	39.4	33.9	i46
51	873	254	-.05	.06	.91	-1.1	.92	-.9	.08	.22	39.8	34.0	i51
8	878	254	-.07	.06	.99	-.1	.98	-.2	.33	.22	26.8	34.3	i8
77	878	254	-.07	.06	.98	-.3	.98	-.2	.21	.22	37.4	34.3	i77
6	881	254	-.08	.06	.89	-1.4	.90	-1.2	.19	.22	35.4	34.3	i6
22	886	254	-.10	.06	.69	-4.3	.70	-4.2	.30	.22	43.3	34.8	i22
66	893	254	-.13	.06	1.26	3.0	1.28	3.2	.32	.22	31.5	35.4	i66
28	913	254	-.20	.06	.96	-.4	.96	-.4	.11	.21	32.3	36.6	i28
33	914	254	-.21	.06	.86	-1.7	.86	-1.7	.17	.21	37.8	36.8	i33
50	943	254	-.32	.06	.83	-2.0	.83	-2.1	.35	.21	44.9	39.0	i50
42	971	254	-.44	.07	.77	-2.8	.77	-2.7	.29	.20	44.9	40.6	i42
2	980	254	-.48	.07	.84	-1.9	.83	-2.0	.25	.20	44.9	41.0	i2
53	984	254	-.50	.07	.80	-2.4	.81	-2.2	.20	.20	44.9	41.1	i53
57	985	254	-.50	.07	.71	-3.5	.73	-3.3	.30	.20	47.6	41.1	i57
23	996	254	-.55	.07	.99	-.1	.99	-.1	.31	.19	37.4	41.4	i23
45	998	254	-.56	.07	.62	-4.7	.65	-4.4	.21	.19	54.3	41.4	i45
49	999	254	-.56	.07	.83	-2.0	.83	-2.0	.17	.19	51.6	41.4	i49

9	1007	254	-.60	.07	1.01	.2	1.02	.2	.19	.19	43.7	41.5	i9
20	1008	254	-.61	.07	.91	-1.0	.90	-1.1	.32	.19	46.9	41.5	i20
62	1009	254	-.61	.07	.75	-2.9	.77	-2.7	.26	.19	52.0	41.5	i62
5	1010	254	-.62	.07	.60	-5.0	.61	-4.9	.24	.19	59.1	41.5	i5
21	1014	254	-.64	.07	.75	-2.9	.77	-2.6	.26	.19	47.6	41.5	i21
58	1027	254	-.70	.07	.76	-2.7	.76	-2.7	.36	.18	45.7	41.5	i58
14	1032	254	-.73	.07	1.18	1.9	1.21	2.0	.09	.18	36.6	41.4	i14
26	1037	254	-.75	.07	.87	-1.4	.89	-1.1	.23	.18	48.0	41.5	i26
18	1069	254	-.93	.08	.62	-4.3	.61	-4.5	.31	.17	58.3	40.8	i18
29	1070	254	-.94	.08	.83	-1.8	.86	-1.4	.14	.17	46.5	40.8	i29
38	1083	254	-1.02	.08	.77	-2.4	.80	-2.0	.19	.16	50.8	41.2	i38
54	1105	254	-1.17	.08	.79	-2.1	.78	-2.2	.29	.16	50.8	41.4	i54
30	1118	254	-1.26	.09	.92	-.7	.88	-1.1	.19	.15	47.2	42.1	i30
13	1127	254	-1.34	.09	1.01	.2	1.07	.6	.05	.15	46.1	44.2	i13
70	1129	254	-1.35	.09	.91	-.8	.89	-1.0	.17	.14	47.2	44.9	i70
65	1136	254	-1.41	.09	.80	-1.9	.80	-1.9	.30	.14	57.1	46.6	i65
69	1138	254	-1.43	.09	2.72	9.9	2.85	9.9	.00	.14	38.6	47.1	i69
10	1173	254	-1.77	.11	.99	-.1	1.04	.3	.05	.12	64.2	65.9	i10
37	1210	254	-2.30	.13	1.24	1.6	1.25	1.7	.10	.10	80.3	78.5	i37
MEAN	835.9	254.0	.00	.07	1.01	-.2	1.02	-.1			39.7	37.4	
S.D.	201.3	.0	.84	.01	.33	3.0	.33	3.0			10.6	8.0	

Item Conformity Level

Items that behave consistently with what is expected by the model mean that the items are fit. If the questions do not fit, it is an indication that students have misconceptions about the items. The level of suitability of the items with the model (item fit) can be analyzed based on the data in Table 10: Item Fit Order, namely the Person Infit ZSTD column, Person Outfit ZSTD, Person Infit MNSQ, Person Outfit MNSQ, Item Infit ZSTD, Item Infit ZSTD, Item Outfit ZSTD, MNSQ Infit Items, and MNSQ Outfit Items.

MNSQ is used to see the suitability of the data with the model. MNSQ is always positive and moves from zero (0) to infinity (∞). The expected mean square value is 1. The criteria used in checking the fit items are as follows: (1) the acceptable Z-Standard outfit value (ZSTD) is -2.0 < ZSTD < +2.0; (2) the value of the outfit mean square (MNSQ) received is 0.5 < MNSQ < 1.5. If the items analyzed are not good and need to be replaced, it means that the items do not meet the two criteria (Untary et al., 2020). For more details, can be seen in Table 3.

Table 3
Item statistics: Misfit order

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	ITEM
69	1138	254	-1.43	.09	2.72	9.9	2.85	9.9	A .00	.14	38.6	47.1	i69
71	408	254	1.71	.08	2.20	8.5	2.18	8.2	B .23	.18	30.3	39.3	i71
40	715	254	.48	.06	1.99	9.9	1.99	9.9	C-.02	.24	12.2	31.4	i40
67	647	254	.70	.06	1.67	7.9	1.68	8.0	D .07	.24	18.5	31.1	i67
39	804	254	.18	.06	1.33	4.1	1.34	4.1	E .27	.23	30.3	32.5	i39
43	760	254	.33	.06	1.29	3.7	1.29	3.8	F .05	.24	27.2	32.1	i43
63	663	254	.64	.06	1.28	3.7	1.28	3.7	G .09	.24	26.8	31.0	i63
66	893	254	-.13	.06	1.26	3.0	1.28	3.2	H .32	.22	31.5	35.4	i66
59	637	254	.73	.06	1.27	3.6	1.27	3.5	I .13	.24	33.1	31.2	i59
64	680	254	.59	.06	1.25	3.4	1.25	3.4	J .27	.24	26.0	31.1	i64

37	1210	254	-2.30	.13	1.24	1.6	1.25	1.7	K	.10	.10	80.3	78.5	i37
55	816	254	.14	.06	1.23	2.9	1.23	2.9	L	.11	.23	33.9	32.7	i55
14	1032	254	-.73	.07	1.18	1.9	1.21	2.0	M	.09	.18	36.6	41.4	i14
27	813	254	.15	.06	1.17	2.2	1.17	2.2	N	.28	.23	27.6	32.7	i27
48	805	254	.18	.06	1.16	2.1	1.17	2.2	O	.06	.23	24.8	32.5	i48
12	417	254	1.65	.08	1.16	1.5	1.16	1.4	P	.20	.19	33.9	35.2	i12
11	371	254	1.97	.09	1.14	1.1	1.10	.9	Q	.21	.16	57.9	57.6	i11
68	382	254	1.89	.09	1.11	1.0	1.10	.9	R	.16	.17	50.0	52.4	i68
13	1127	254	-1.34	.09	1.01	.2	1.07	.6	S	.05	.15	46.1	44.2	i13
60	590	254	.89	.06	1.06	.9	1.06	.8	T	.10	.23	35.8	31.8	i60
73	797	254	.21	.06	1.05	.7	1.06	.8	U	.20	.23	33.5	32.5	i73
74	652	254	.68	.06	1.06	.8	1.05	.7	V	.33	.24	34.3	31.1	i74
15	511	254	1.19	.06	1.04	.6	1.04	.6	W	.15	.22	33.1	32.4	i15
72	427	254	1.60	.08	1.04	.5	1.00	.1	X	.30	.19	31.1	34.0	i72
10	1173	254	-1.77	.11	.99	-.1	1.04	.3	Y	.05	.12	64.2	65.9	i10
41	802	254	.19	.06	1.02	.3	1.01	.2	Z	.30	.23	34.6	32.5	i41
BETTER FITTING OMITTED														
56	638	254	.73	.06	.89	-1.6	.90	-1.5	z	.22	.24	34.6	31.2	i56
3	851	254	.02	.06	.89	-1.4	.90	-1.4	y	.27	.22	37.8	33.5	i3
26	1037	254	-.75	.07	.87	-1.4	.89	-1.1	x	.23	.18	48.0	41.5	i26
33	914	254	-.21	.06	.86	-1.7	.86	-1.7	w	.17	.21	37.8	36.8	i33
29	1070	254	-.94	.08	.83	-1.8	.86	-1.4	v	.14	.17	46.5	40.8	i29
35	723	254	.45	.06	.85	-2.3	.85	-2.3	u	.31	.24	36.2	31.5	i35
2	980	254	-.48	.07	.84	-1.9	.83	-2.0	t	.25	.20	44.9	41.0	i2
50	943	254	-.32	.06	.83	-2.0	.83	-2.1	s	.35	.21	44.9	39.0	i50
49	999	254	-.56	.07	.83	-2.0	.83	-2.0	r	.17	.19	51.6	41.4	i49
53	984	254	-.50	.07	.80	-2.4	.81	-2.2	q	.20	.20	44.9	41.1	i53
65	1136	254	-1.41	.09	.80	-1.9	.80	-1.9	p	.30	.14	57.1	46.6	i65
38	1083	254	-1.02	.08	.77	-2.4	.80	-2.0	o	.19	.16	50.8	41.2	i38
54	1105	254	-1.17	.08	.79	-2.1	.78	-2.2	n	.29	.16	50.8	41.4	i54
21	1014	254	-.64	.07	.75	-2.9	.77	-2.6	m	.26	.19	47.6	41.5	i21
42	971	254	-.44	.07	.77	-2.8	.77	-2.7	l	.29	.20	44.9	40.6	i42
62	1009	254	-.61	.07	.75	-2.9	.77	-2.7	k	.26	.19	52.0	41.5	i62
58	1027	254	-.70	.07	.76	-2.7	.76	-2.7	j	.36	.18	45.7	41.5	i58
76	606	254	.84	.06	.75	-3.7	.75	-3.7	i	.42	.23	44.5	31.6	i76
19	599	254	.86	.06	.73	-4.1	.72	-4.1	h	.38	.23	38.6	31.6	i19
57	985	254	-.50	.07	.71	-3.5	.73	-3.3	g	.30	.20	47.6	41.1	i57
22	886	254	-.10	.06	.69	-4.3	.70	-4.2	f	.30	.22	43.3	34.8	i22
17	861	254	-.01	.06	.67	-4.8	.67	-4.7	e	.35	.22	46.9	33.7	i17
31	628	254	.76	.06	.67	-5.2	.67	-5.3	d	.44	.24	47.2	31.3	i31
45	998	254	-.56	.07	.62	-4.7	.65	-4.4	c	.21	.19	54.3	41.4	i45
18	1069	254	-.93	.08	.62	-4.3	.61	-4.5	b	.31	.17	58.3	40.8	i18
5	1010	254	-.62	.07	.60	-5.0	.61	-4.9	a	.24	.19	59.1	41.5	i5
MEAN	835.9	254.0	.00	.07	1.01	-.2	1.02	-.1				39.7	37.4	
S.D.	201.3	.0	.84	.01	.33	3.0	.33	3.0				10.6	8.0	

Rating Scale Diagnostic

Rating Scale Diagnostic or scale accuracy test is calculated using the Rasch Model with the help of Winstep software. This analysis uses the Output Table 3.2 Rating (partial credit) scale which is presented in Table 4.

Table 4.
Rating Scale Diagnostic

Category Label	Observed		Observed Sample		INFIT	OUTFIT	Andrich Threshold	Category Measure
	Count	%	Average	Expect	MNSQ	MNSQ		
1	2325	12	-0.73	-0.72	1.02	1.08	NONE	(-2.26)
2	3110	16	-0.30	-0.28	0.91	0.92	-0.79	-0.93
3	4553	23	0.12	0.12	0.90	0.87	-0.46	-0.07
4	5687	29	0.58	0.54	0.93	0.96	0.10	0.88
5	3883	20	0.97	1.02	1.14	1.13	1.15	(2.47)

Based on the results of the rating scale test, Table 4 shows the suitability and equally increased at the alternative levels 1, 2, 3, 4, and 5. The values

observed average and andrich threshold have increased. The results of the analysis show an increase which means that respondents understand the difference between each alternative answer.

Instrument Analysis

Table 5.
Summary Statistics

	Mean Measure	*Separation*	*Reliability*	*Alpha Cronbach*
Person	0,25	1,62	0,72	0,71
Item	0,00	12,20	0,99	

According to Table 5, the average score of all participants working on the instrument questions for work readiness questionnaire is 0.25 logit. The average person value is larger than the average Item value (where the average Item is 0.00 logit), indicating that the participants' abilities are typically greater than the instrument items' difficulty.

Table 6
Summary of Person Statistics

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	253.4	77.0	.25	.12	1.01	-.4	1.02	-.3
S.D.	16.1	.0	.22	.00	.49	3.1	.49	2.9
MAX.	301.0	77.0	.96	.13	3.14	9.5	3.68	9.9
MIN.	214.0	77.0	-.27	.11	.23	-7.9	.26	-6.9

REAL RMSE	.13	TRUE SD	.18	SEPARATION 1.42	PERSON RELIABILITY .67
MODEL RMSE	.12	TRUE SD	.19	SEPARATION 1.62	PERSON RELIABILITY .72

S.E. OF PERSON MEAN = .01
MEDIAN = .23

Table 7
Summary of Item Statistics

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	835.9	254.0	.00	.07	1.01	-.2	1.02	-.1
S.D.	201.3	.0	.84	.01	.33	3.0	.33	3.0
MAX.	1210.0	254.0	1.97	.13	2.72	9.9	2.85	9.9
MIN.	371.0	254.0	-2.30	.06	.60	-5.2	.61	-5.3

REAL RMSE	.07	TRUE SD	.83	SEPARATION 11.49	ITEM RELIABILITY .99
MODEL RMSE	.07	TRUE SD	.83	SEPARATION 12.20	ITEM RELIABILITY .99

S.E. OF ITEM MEAN = .10
MEDIAN = -.01

Tables 6 and 7 show that persons' separation is 1,42 and for items is 11.49. The higher the value of separation, the higher the quality of the individual and the instrument as a whole.

The results of data analysis showed that the Raw variance explained by measures of 53.9% was included in the good category. While the Unexplained variance in 1st to 5st contrast of residuals is 8.8%, 4.1%, 3.3%, 2.2%, and 1.7%, respectively. It can be seen from the results of the Unexplained variance in 1st to 5th that the contrast of residuals is less than 15%. Thus, the instrument construct used actually measures one variable, namely the undergraduate student's work readiness as a whole. If analyzed, the six aspects of work readiness on this scale illustrate that students who are ready to enter the world of work are students who are responsible, flexible, have skills, can communicate well, have a positive self-view and pay attention to health and safety at work.

Unidimensionality has the impact of forming a complete work readiness construct that can realize psychological dynamics. The raw variance explained by measured value of 53.9% has an instrument construct that measures each aspect of work readiness which includes responsibility, flexibility, skills, communication, self-view and health and safety. The responsibility aspect measures the student's ability to be on time at work, the student's ability to focus on work, the student's ability to maintain work equipment, the student's ability to maintain organizational confidentiality, and the student's ability to meet work quality standards. The flexibility aspect measures the ability of students to be active in work, the ability of students to accept changes in work situations, the ability of students to comply with regulations at work, the ability of students to be able to do different tasks. The skills aspect measures students' ability to master hard skills and students' abilities to master soft skills. Aspect of communication measures the ability of students to communicate interpersonally, the ability of students to be able to work together with colleagues, the ability of students to have a supportive attitude. The self-view aspect measures the ability of students to understand themselves and the ability of students to develop themselves. The health and safety aspect measures the ability of students to maintain cleanliness and take care of themselves as well as the ability of students to follow the rules that apply in the workplace. The development of work readiness instruments can produce a profile of the embodiment of the form of work readiness.

By looking at the logit value of each item in table 2, the level of suitability of the items, sequentially based on the level of difficulty (from the most difficult items to the easiest items) it is known that there are 8 items that are included in the very difficult category, namely items number 11, 12, 68 , 71, 71, 60, 15 and 19. And the very easy category has 11 items, namely numbers

18, 29, 38, 54, 30, 13, 70, 65, 69, 10, 37. The results of the item validity test show that in the first criterion, it is known that there are four items that are misfit, namely numbers 69, 71, 40, and 67, each of which has an MNSQ Outfit value of 2.85, 2.18, 1.99 and 1.68. According to the second criterion, there are 28 misfit items, namely numbers 69, 71, 40, 67, 39, 63, 66, 59, 64, 37, 55, 27, 48, 54, 21, 42, 62, 58, 76, 19. 57, 22, 17, 31, 45, 18 and 5. Based on the third criterion, it is known that 50 items have a Pt Measure Corr value of more than 4.0 and less than 0.85. Referring to the view (Boone et al., 2014) 50 items of student work readiness are declared fit, which means the items function normally and can be understood correctly by students and can measure what must be measured in this case, namely work readiness.

Based on the results of the rating scale test, Table 4 shows the suitability and equally increased at the alternative levels 1, 2, 3, 4, and 5. The values observed average and andrich threshold have increased. The results of the analysis show an increase which means that respondents understand the difference between each alternative answer. The increased Andrich threshold value represents the way of thinking and acting on alternative choices of instrument answers that meet various conditions, level of work readiness and accuracy of aspects of responsibility, flexibility, skills, communication, self-view and health and safety.

The person measure shows the average score of all participants in working on the items of the instrument revealing student work readiness. The average person value that is greater than 0.0 logit indicates that the participants' abilities are generally greater than the difficulty of the instrument items. The Cronbach Alpha value is 0.71, representing how the person interacts with the items as a whole. Additionally, the Person Reliability value is 0.72, suggesting that respondents' responses, specifically those from the very excellent category, generally consistent. Item Reliability achieved a score of 0.99, positioning it in the excellent category. The separation value is calculated more accurately through the formula: H={(4 x separation) + 1}/3 (Boone et al., 2014; Sumintono & Widhiarso, 2015). Thus the separation value for persons is 2.22 rounded to 2, while the separation for items is 15.65 rounded up to 16. It indicates that participants in the study have a range of talents that may be divided into three categories.

CONCLUSION AND RECOMMENDATION

This article presents research on the development and validation of work readiness instruments. The results of the analysis show that the theoretical construct measures one variable of job readiness. The six aspects of job readiness proposed by Robert P. Brady serve as the basis for the preparation of indicator instruments. The six aspects include responsibility, flexibility, skills, communication, self-view and health and safety. Respondents consisted of 254 Indonesian Education University students batch 2018. The results of the analysis showed that Cronbach's Alpha value of 0.71 means that the reliability between people and items is good, while the reliability of items is 0.99 which means the instrument item is very good.

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