Teacher Aptitude Test ~~F~~for College Admission ~~I~~in ~~T~~the University ~~O~~of Eastern Philippines: A Development ~~A~~and Validation Study

ABSTRACT

The study aimed at developing and presenting the validity evidence of a Teacher Aptitude Test (TAT) that could be used as one of the admission requirements in the College of Education of the University of Eastern Philippines Campus. Specifically, it aimed to determine the indices of difficulty and discrimination and the reliability of the constructed test. Descriptive research design was used and involved 224 freshman students. The main instrument used in the study is the developed Teacher Aptitude Test. Data were analyzed through item analysis and the Kuder-Richardson Formula 20. The analysis showed that most of the items in the developed Teacher Aptitude Test were accepted and passed the criteria for both index of difficulty and discrimination. In terms of the reliability of the test, the whole instrument obtained a good internal consistency, an indication that the developed test is highly reliable. Specifically, each component of the test possessed good and acceptable internal consistency. The developed Teacher Aptitude was deemed as valid and reliable test. A total of 100 valid test items constituted the developed TAT after series of validation process were made.

Keywords: Teacher Aptitude Test, college admission test, validation, development

I. INTRODUCTION

Teacher Education Institutions (TEIs) have a significant influence in the quest of producing quality educators who can respond to the never-ending challenges of the profession. Thus, every TEI institutionalized certain admission requirement that would test the mettle of a potential teacher. In spite of the efforts exerted by every TEI to choose the most qualified students for the degree, still a college or a university seemingly encounters dilemmas on students' performance once admitted.

An aptitude test plays an important role to decide on the direction of students' educational objectives [1] ~~(Chatterjee, 2007).~~ Aptitude for teaching means that a person has the capacity or ability to acquire proficiency in the teaching under appropriate conditions. Therefore, knowledge of aptitude helps in predicting the future success of an individual, under suitable training or experience in a particular area of activity.

Kumar and Gupta [2] ~~(2012)~~ considered teaching aptitude as an interest in the teaching work orientation, implementing teaching principles and methods. Kaur [3] ~~(2014)~~ described teaching aptitude as a specific capacity or special ability, distinct from the general intellectual ability of an individual, indicative of his probable success in a particular field after receiving the appropriate opportunity for learning or training. Thus, teaching aptitude is essential in predicting the future success of an individual in the teaching field after providing appropriate opportunities and training.

In the University of Eastern Philippines (UEP), College of Education main campus, a process is observed to screen student-applicants for teacher education degree. Beside the Grade Point Average (GPA) and interview requirements, it is noticed that one major requirement for the applicants to be admitted is to have an average rating or better on the Differentiated Aptitude

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Test (DAT), which served as the university entrance test administered by the University Guidance and Testing Center (UGTC). In addition, student-applicants are required to take the Teacher Aptitude Test (TAT).

In an interview with the head of the UGTC, it was learned that the TAT results showed a consistent low performance of the teacher education applicants since it was administered in the university in the year 2013. The scores of the test takers do not meet the standard score or the passing percentage of the test. Hence, the UGTC modified the test interpretation of TAT results considering the norm of the test takers. The UGTC utilizes the George Washington University Series Teaching Aptitude Test. It can be gleaned that these two standardized aptitude tests administered by the university are not within the context of the test takers since it was only adopted from foreign sources. The test was primarily prepared for Americans and of American norms. Hence, the test might not be valid for Filipino test-takers. The need to contextualize it or use another aptitude test would somehow offer a new vista of doing TEI admission.

It can be noted that the performance of the University of Eastern Philippines graduates in the Licensure Examination for Teachers (LET) showed an average passing percentage of 73.57% for elementary level and 47.48% for secondary level from 2017-2019. There was no remarkable increase in the rating since the TAT was utilized as an additional requirement for the incoming COED freshmen.

The performance in the LET may be predicted by several variables, particularly the entry requirements in college. Hence, there is a need to study the variables which may play a significant role in the performance of the College of Education graduates so as to come up with intervention schemes in improving LET performance. It is being hoped that through developing a locally based TAT to replace the existing one, the University of Eastern Philippines could select, train, and develop the best students with the right aptitude towards the teaching profession.

To ensure quality assessment, a test is expected to be valid and reliable. Achieving test validity is essential in test development, especially when a test is used for high-stake purposes. Driven to impact reform in ensuring qualified, competent, and potential students to be admitted in the college, the researcher subjected the constructed Teacher Aptitude Test to various validation process to establish reliability and validity of the test.

The main objective of the study was to develop and validate a Teacher Aptitude Test that could be used as one of the admission requirements in the College of Education of the University of Eastern Philippines Campus. The study determined the indices of difficulty and discrimination of the items to find out which items are accepted for the test. It also investigated which items have acceptable difficulty and discrimination indices. It determined the reliability of the constructed test.

2~~I~~. METHODOLOGY

The main objective of the study was to develop and validate a Teacher Aptitude Test that could be used as one of the admission requirements in the College of Education of the University of Eastern Philippines Campus. Specifically, it tried to (1) determine the indices of difficulty and discrimination of the items, (2) look into which items have acceptable difficulty and discrimination indices, and (3) determine the reliability of the constructed test.

In framing the items for the test, the researcher greatly benefited from readings on different aptitude tests, professional education books, LET reviewers, and from the developed teacher aptitude test of Ballado et al. [4]. ~~(2014).~~ Aside from using previous tools and studies related

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to aptitude test and teaching profession, the researcher obtained assistance from experts about the items that could measure the desired dimensions of a teacher aptitude test.

The researcher adapted the multiple-choice item format, which consisted of a problem and a list of four (4) possible answers. There was a total of 200 items in the initial pool of test items. As for the percentage of the distribution of the items, it was patterned from the 40% General Education and 60% Professional Education distribution of test items in the Licensure Examination for Teachers. The developed Teacher Aptitude Test included two components: The General Ability Test and the Pedagogical Knowledge. The General Ability test comprised the 40% or 80 test items distributed in three (3) components namely: Abstract Reasoning, Numerical Ability, and Verbal Ability in both English and Filipino consisting of items on word analogy, spelling, and word meaning. The Pedagogical Knowledge covered 60% or 120 test items which could help measure the ability of a person to know and understand certain common facts and principles concerning the teaching profession.

The respondents of this study were taken from the sample of freshman students currently enrolled in the second semester of the College of Education, University of Eastern Philippines main campus, school year 2019-2020. The respondents were selected through proportional random sampling, of the 224 freshman students was done covering students from four-degree programs: BEED (73); BSED (80); BTLED (43); and BPED (28). Prior to the conduct of the study, the researcher sought the approval to conduct the study from the university president. A permission letter was sent through the college dean to administer the test. A consent form was given to the respondents before the test administration. The respondents were given opportunity to ask questions and clarify all doubts regarding the conduct of the test.

The two major classical test theory properties were used in item analysis i.e., difficulty index and discrimination index. To establish reliability of the instrument Cronbach alpha was computed.

3~~II~~. RESULTS AND DISCUSSION

Table 1 shows that the value of difficulty index for all items ranges from 0.03 to 0.99. Item 58 has the largest difficulty index while item 642 has the smallest difficulty index. The value of the discrimination index for all items ranges from -0.21 to 0.65 with item 79 having the highest discrimination power while item 175 having the smallest discrimination power.

Looking into the mean scores of each component, for the index of difficulty, only verbal ability – spelling is interpreted as Easy, while the other areas in general ability test are Average. With regard to the discrimination index, all components of general ability test are interpreted as Poor, while numerical ability is interpreted as Marginal. On the other hand, for the pedagogical knowledge, the items have average difficulty but poor discrimination index.

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Table 1. Comparative item difficulty and discrimination indices and decision

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Item No.	Difficulty Index	Interpretation	Discrimination Index	Interpretation	ACTION
GENERAL ABILITY					
Abstract Reasoning					
1	0.67	E	0.33	RG	Accept
2	0.59	A	0.26	M	Accept
3	0.33	D	0.36	RG	Accept

4	0.51	A	0.06	P	Reject
5	0.44	A	0.22	M	Accept
6	0.71	E	0.14	P	Revise
7	0.44	A	-0.07	P	Reject
8	0.32	D	0.14	P	Revise
9	0.26	D	0.04	P	Reject
10	0.50	A	0.25	M	Accept
11	0.64	E	0.22	M	Accept
12	0.52	A	0.32	RG	Accept
13	0.38	D	0.21	M	Accept
14	0.74	E	0.28	M	Accept
15	0.34	D	-0.01	P	Reject
16	0.21	D	0.08	P	Reject
17	0.44	A	0.11	P	Revise
Mean	***0.47***	***A***	***0.17***	***P***	
Numerical Ability					
18	0.54	A	0.36	RG	Accept
19	0.82	VE	0.11	P	Reject
20	0.62	E	0.21	M	Accept
21	0.87	VE	0.15	P	Reject
22	0.63	E	0.22	M	Accept
23	0.83	VE	0.18	P	Reject
24	0.26	D	0.21	M	Accept
25	0.14	VD	0.11	P	Reject
26	0.63	E	0.26	M	Accept
27	0.62	E	0.21	M	Accept
28	0.42	A	0.35	RG	Accept
29	0.34	D	0.21	M	Accept
30	0.36	D	0.22	M	Accept
31	0.60	A	0.22	M	Accept
32	0.44	A	0.32	RG	Accept
33	0.26	D	0.01	P	Reject
34	0.26	D	0.08	P	Reject
35	0.83	VE	0.13	P	Reject
36	0.69	E	0.29	M	Accept
37	0.71	E	0.22	M	Accept
38	0.88	VE	0.19	P	Revise
Mean	***0.56***	***A***	***0.22***	***M***	
Verbal Ability – Word Analogy					
39	0.10	VD	-0.08	P	Reject
40	0.25	D	0.28	M	Accept
41	0.61	E	0.36	RG	Accept
42	0.03	VD	0.00	P	Reject
43	0.58	A	0.26	M	Accept
44	0.14	VD	0.06	P	Reject

45	0.10	VD	0.01	P	Reject
46	0.44	A	-0.07	P	Revise
47	0.73	E	0.21	M	Accept
48	0.80	E	0.10	P	Reject
49	0.85	VE	0.22	M	Accept
50	0.95	VE	0.01	P	Reject
51	0.60	A	0.38	RG	Accept
52	0.82	VE	0.11	P	Reject
Mean	***0.50***	***A***	***0.13***	***P***	
Verbal Ability - Spelling					
53	0.67	E	0.31	RG	Accept
54	0.80	E	0.21	M	Accept
55	0.88	VE	0.04	P	Reject
56	0.51	A	0.29	M	Accept
57	0.91	VE	0.04	P	Reject
58	0.99	VE	0.03	P	Reject
59	0.92	VE	-0.01	P	Reject
60	0.69	E	0.14	P	Reject
61	0.27	D	0.21	M	Accept
62	0.52	A	0.21	M	Accept
63	0.18	VD	0.03	P	Reject
64	0.97	VE	0.00	P	Reject
65	0.44	A	0.31	RG	Accept
66	0.88	VE	0.07	P	Reject
Mean	***0.69***	***E***	***0.13***	***P***	
Verbal Ability – Word Meaning					
67	0.30	D	0.21	M	Accept
68	0.60	A	0.33	RG	Accept
69	0.71	E	0.39	RG	Accept
70	0.24	D	0.01	P	Reject
71	0.26	D	-0.08	P	Reject
72	0.49	A	0.17	P	Revise
73	0.87	VE	0.24	M	Accept
74	0.51	A	0.18	P	Revise
75	0.51	A	0.06	P	Revise
76	0.95	VE	0.04	P	Reject
77	0.72	E	0.25	M	Accept
78	0.32	D	0.00	P	Reject
79	0.65	E	0.65	VG	Accept
80	0.73	E	0.21	M	Accept
Mean	***0.56***	***A***	***0.19***	***P***	
PEDAGOGICAL KNOWLEDGE					
81	0.77	E	0.07	P	Reject
82	0.78	E	0.26	M	Accept
83	0.59	A	0.13	P	Revise

84	0.09	VD	0.01	P	Reject
85	0.88	VE	0.22	M	Accept
86	0.74	E	0.08	P	Reject
87	0.81	VE	0.17	P	Revise
88	0.10	VD	0.00	P	Reject
89	0.16	VD	-0.10	P	Reject
90	0.75	E	0.14	P	Reject
91	0.80	E	0.24	M	Accept
92	0.22	D	0.21	P	Accept
93	0.29	D	-0.06	P	Reject
94	0.31	D	0.03	P	Reject
95	0.15	VD	-0.15	P	Reject
96	0.96	VE	0.06	P	Reject
97	0.62	E	0.21	M	Accept
98	0.51	A	0.14	P	Revise
99	0.69	E	0.11	P	Reject
100	0.91	VE	0.01	P	Reject
101	0.73	E	0.13	P	Reject
102	0.67	E	-0.13	P	Reject
103	0.93	VE	0.14	P	Reject
104	0.47	A	0.15	P	Revise
105	0.80	E	0.15	P	Reject
106	0.79	E	0.08	P	Reject
107	0.70	E	0.32	RG	Accept
108	0.70	E	-0.07	P	Reject
109	0.53	A	0.00	P	Revise
110	0.90	VE	0.11	P	Reject
111	0.90	VE	0.11	P	Reject
112	0.92	VE	0.11	P	Reject
113	0.88	VE	0.13	P	Reject
114	0.63	E	0.28	M	Accept
115	0.81	VE	0.17	P	Revise
116	0.49	A	-0.04	P	Reject
117	0.48	A	0.21	M	Accept
118	0.60	A	0.28	M	Accept
119	0.78	E	0.18	P	Revise
120	0.17	D	0.00	P	Reject
121	0.80	E	0.10	P	Reject
122	0.66	E	0.13	P	Reject
123	0.55	A	0.21	M	Accept
124	0.13	VD	0.01	P	Reject
125	0.74	E	0.36	RG	Accept
126	0.91	VE	0.18	P	Revise
127	0.61	E	0.08	P	Reject
128	0.41	A	0.24	M	Accept

129	0.76	E	0.13	P	Reject
130	0.76	E	0.24	M	Accept
131	0.55	A	0.15	P	Revise
132	0.44	A	0.01	P	Reject
133	0.51	A	0.06	P	Reject
134	0.28	D	-0.04	P	Reject
135	0.44	A	0.18	P	Revise
136	0.44	A	0.25	M	Accept
137	0.33	D	-0.08	P	Reject
138	0.83	VE	0.22	M	Accept
139	0.70	E	0.40	VG	Accept
140	0.52	A	0.46	VG	Accept
141	0.26	D	0.25	M	Accept
142	0.47	A	0.15	P	Revise
143	0.72	E	0.07	P	Reject
144	0.72	E	0.29	M	Accept
145	0.85	VE	0.15	P	Reject
146	0.63	E	0.21	M	Accept
147	0.52	A	0.43	VG	Accept
148	0.28	D	0.11	P	Reject
149	0.35	D	-0.01	P	Reject
150	0.53	A	0.47	VG	Accept
151	0.40	D	0.32	RG	Accept
152	0.23	D	0.35	RG	Accept
153	0.19	VD	0.04	P	Reject
154	0.56	A	0.14	P	Revise
155	0.42	A	-0.03	P	Reject
156	0.49	A	0.25	M	Accept
157	0.72	E	0.46	VG	Accept
158	0.59	A	0.15	P	Accept
159	0.51	A	0.25	M	Accept
160	0.48	A	0.10	P	Revise
161	0.58	A	0.33	RG	Accept
162	0.26	D	0.17	P	Revise
163	0.60	A	0.06	P	Reject
164	0.26	D	0.24	M	Accept
165	0.77	E	0.07	P	Reject
166	0.40	D	0.17	P	Revise
167	0.49	A	0.11	P	Revise
168	0.06	VD	-0.07	P	Reject
169	0.63	E	0.29	M	Accept
170	0.51	A	0.21	M	Accept
171	0.38	D	0.26	M	Accept
172	0.66	E	0.18	P	Revise
173	0.26	D	0.11	P	Reject

174	0.56	A	0.08	P	Reject
175	0.19	VD	-0.21	P	Reject
176	0.56	A	0.31	RG	Accept
177	0.41	A	-0.13	P	Reject
178	0.54	A	0.25	M	Accept
179	0.72	E	0.36	RG	Accept
180	0.40	D	0.26	M	Accept
181	0.55	A	0.40	VG	Accept
182	0.23	D	-0.04	P	Reject
183	0.69	E	0.28	M	Accept
184	0.64	E	0.28	M	Accept
185	0.44	A	0.07	P	Reject
186	0.44	A	0.28	M	Accept
187	0.73	E	0.32	RG	Accept
188	0.67	E	0.25	M	Accept
189	0.26	D	-0.06	P	Reject
190	0.61	E	0.56	VG	Accept
191	0.40	D	0.10	P	Reject
192	0.50	A	0.44	VG	Accept
193	0.56	A	0.33	RG	Accept
194	0.80	E	0.32	RG	Accept
195	0.61	E	0.25	M	Accept
196	0.28	D	-0.07	P	Reject
197	0.50	A	-0.08	P	Reject
198	0.44	A	0.32	RG	Accept
199	0.63	E	0.03	P	Reject
200	0.81	VE	0.22	M	Accept
Mean	***0.55***	***A***	***0.16***	***P***	

Note: VE – Very Easy, E – Easy, MD – Moderate Difficulty, D – Difficult, VD – Very Difficult, P – Poor, M – Marginal, RG – Reasonably good, VG – Very good

The index of discrimination, index of difficulty and distracter analysis were used to analyze the result of the initial 200-item test administered to the respondents. Each question carried one (1) point for right answer and zero (0) point for wrong answer. The response sheets received from the respondents were arranged from maximum on the basis of the overall score. It was followed by identifying two groups: the Upper Group (UG) and the Lower Group (LG). Twenty-seven percent (27%) of the total respondents were considered for both upper group and lower group.

The obtained data were used to assess the difficulty level and discriminating power of the items. Item difficulty and item discrimination are often used as statistical criteria for the selection and refinement of test items. All items with difficulty index within the range of 0.20 and 0.80 and at least 0.20 discrimination index were accepted. Items with difficulty index interpreted as "easy" and with discrimination power interpreted as "poor item" were considered for revision, while those items that did not meet both criteria were rejected. According to Sharma ~~Shrama (2000)~~ [5] the quality of a test depends upon the construction of

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each test item. Thus, the developed Aptitude Test was examined through item analysis. The analysis of the items used in this study was in agreement with the process employed by Hashimi et al. [6] (2012), Osadebe and Nwazebe [7] (2018), and Opara and Magnus-Arewa [8] (2017) in their developed tests in which item analysis was believed to be a significant tool to confirm test effectiveness and fairness.

3.1 Difficulty Index

Item analysis shows that 60 or 30 percent of the prepared items had an average difficulty; 58 or 29 percent were found to be easy; 38 or 19 percent were difficult; 30 or 15 percent were found to be very easy while only 14 or 7 percent of the items were very difficult. This means that the developed test approximates average item difficulty as shown in the Table 2. This finding agrees with the result of the study of Ballado et al. [4] (2014) where majority of the items in their developed teacher aptitude test had an average difficulty while only few items were found to be easy or difficult. Similarly, the developed test of Opara and Magnus-Arewa [8] (2017) was found to be of appropriate difficulty index and distracted positively. Generally, items of moderate difficulty are to be preferred to those which are much easier or much harder [9].(Boopathiraj & Chellamani, 2013).

Table 2. Index of Difficulty of the Items

Difficulty Level	f	%	Item Placement
Very Easy	30	15.00	19,21,23,35,38,49,50,52,55,57,58,59,64,66,73,76,85,87,96,100, 103,110,111,112,113,115,126,138,145,200
Easy	58	29.00	1,6,11,14,20,22,26,27,36,37,41,47,48,53,54,60,69,77,79,80,81, 82,86,90,91, 97,99,101,102,105,106,107,108,114,119,121,122,125,127,129,130,139,143, 144,146,157,165,169,172,179,183,184,187,188,190,194,195,199
Average	60	30.00	2,4,5,7,10,12,17,18,28,31,32,43,46,51,56,62,65,68,72,74,75,83, 98,104,109, 116,117,118,123,128,131,132,133,135,136,140,142,147,150,154,155,156, 158,159,160,161,163,167,170,174,176,177,178,181,185,186,192,193,197, 198
Difficult	38	19.00	3,8,9,13,15,16,24,29,30,33,34,40,61,67,70,71,78,92,93,94,120,134,137,141, 148,149,151,152,162,164,166,171,173,180,182,189,191,196
Very Difficult	14	7.00	25,39,42,44,45,63,84,88,89,95,124,153,168,175
Total	**200**	**100.00**	

3.2 Discrimination Index

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Result of the item analysis revealed that 110 or 55 percent of the items had poor discrimination level while 58 or 29 percent were found to have marginal index. Twenty-three or 11.50 percent of the items were found to be reasonably good and only 9 or 4.50 percent were considered "very good" in discriminating the high performing respondents from low performing learners. Based on the result, most of the items in the test were considered to be poor in discriminating the two groups of the respondents. This means that there was a need for minor and major revisions of the test items or should be eliminated from the pool of test items. The result of this study differs from the result of the discrimination analysis of Ballado, et.al [4]. ~~(2014).~~ They found out that the average discrimination index of the whole teacher aptitude instrument was found to be capable in discriminating high performing students from low performers.

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Table 3. Index of Discrimination of the Items

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Discrimination Level	f	%	Item Placement
Poor	110	55.00	4,6,7,8,9,15,16,17,19,21,23,25,33,34,35,38,39,42,44,45,46,48,50,52,55, 57,58,59,60,63,64,66,70,71,72,74,75,76,78,81,83,84,86,87,88,89,90,93, 94,95,96,98,99,100,101,102,103,104,105,106,108,109,110,111,112,113, 115,116,119,120,121,122,124,126,127,129,131,132,133,134, 135,137,142,143,145,148,149,153,154,155,158,160,162,163, 165,166,167,168,172,173,174,175,177,182,185,189,191,196, 197,199
Marginal	58	29.00	2,5,10,11,13,14,20,22,24,26,27,29,30,31,36,37,40,43,47,49,54,56,61,62, 67,73,77,80,82,85,91,92,97,114,117,118,123,128,130,136,138,141,144, 146,156,159,164,169,170,171,178,180,183,184,186,188,195, 200
Reasonably Good	23	11.50	1,3,12,18,28,32,41,51,53,65,68,69,107,125,151,152,161,176, 179,187,193, 194,198
Very Good	9	4.50	79,139,140,147,150,157,181, 190,192
Total	**200**	**100.00**	

3.3 Accepted Items

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The items were accepted based on the result of the computation of the difficulty and discrimination indices of each item. Items with difficulty index within the range of 0.20 and 0.80 and at least 0.20 discrimination index were accepted. Items which passed only one of these criteria and those items with difficulty index interpreted as "easy" or "difficult" and with discrimination power interpreted as "poor item" were considered for revision, while those items that did not meet both criteria were eliminated. As shown in Table 4, 91 or 45.50 percent of the items were accepted as items of the admission test. Only 25 or 12.50 percent are to be revised while 84 or 42 percent of the 200-item tests are to be rejected. The result shows that almost half of the test items should be deleted to make the developed Teacher

Aptitude Test more reliable. Further, the items which needed to be revised were still considered as part of the test by doing some revisions considering the result of the distracter analysis.

The researcher meticulously reviewed the items and options of these items. The analysis of the workability of the distractors was considered for the items under revision. For each item to be revised, any option failing to receive three percent (3%) choice was revised. After the necessary revisions had been made, the second draft of the test was prepared.

The final format of the developed Teacher Aptitude Test consisted of 100 items. These were all taken from the accepted and revised items based on the item analysis. Each component of the General Ability has equal number of items (10 items) comprising 40% of the test. While 60% of the test was allotted for Pedagogical Knowledge. The 100-item test was then administered to the respondents of the study. The data collected in the second administration were used for further analysis of the test reliability and validity of the developed test.

Table 4. Acceptability of Items

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Decision	f	%	Item placement
Accept	91	45.50	1,2,3,5,10,11,12,13,14,18,20,22,24,26,27,28,29,30,31, 32,36,37,40, 41,43,47,49,51,53,54,56,61,62,65,67,68,69,73,77,79,80,82,85,91,92, 92,97,107,114,117,118,123,125,128,130,136,138,139,140,141,144, 146,147,150,151,152,156,157,158,159,161,164,169,170,171,176, 178,179,180,181,183,184,186,187,188,190,192,193,194,195,198,200
Revise	25	12.50	6,8,17,38,46,72,74,75,83,87,98,104,109,115,119,126,131,135,142, 154,160,162,166,167,172
Reject	84	42.00	4,7,9,15,16,19,21,23,25,33,34,35,39,42,44,45,48,50,52,55,57,58,59, 60,63,64,66,70,71,76,78,81,84,86,88,89,90,93,94,95,96,99,100,101, 102,103,105,106,108,110,111,112,113,116,120,121,122,124,127, 129,132,133,134,137,143,145,148,149,153,155,163,165,168,173, 174,175,177,182,185,189,191,196,197,199
Total	**200**	**100.00**	

3.4 Reliability

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The reliability analysis of the newly developed Teacher Aptitude Test was done using the Kuder-Richardson, which is a special case of Cronbach's alpha. This test was done using internal consistency measures to ascertain whether the items that made up the subtests were internally consistent. The procedure for reliability analysis generated a reliability coefficient alpha. Values of the reliability coefficient range from 0 to 1, with values closer to 1 indicating high reliability. Acceptable values for reliability range between 0.70 and above. Respondents' responses to the different subtests were subjected to reliability analysis via internal consistency measure and the result yielded good reliability coefficients for all the subtests as shown in Table 5.

From Table 5, there was a high degree of internal consistency of the whole test with a Cronbach's alpha value of 0.85. This value indicates a good reliability for the teaching aptitude test. Reliability coefficients for each component range from α=0.77 to α=0.84. Finally, Kuder-Richardson, KR-20 was also used to determine internal consistency with a value of 0.85. All components of the newly developed TAT met the acceptable standards for reliability coefficient values. This figure suggests that the test possesses high reliability in measuring the teaching aptitude of the students. These findings on the high reliability of the teacher aptitude instrument is similar to that of the developed test of Osadebe and Nwabeze [7](2018), Rosaroso- [10](2015), Rahman (2014) [11], and Hashmi et al. [12] (2012) in which the constructed aptitude tests were found to be reliable and valid. The finding of this study supports the concept of Huck [13] (2007) and Robinson [14](2009) that a scale or test is said to have high internal consistency reliability if the items of a scale "hang together" and measure the same construct.

On the contrary, the result of the study of Aliyu and Akinoso [15] (2016) showed a poor reliability coefficient of the developed aptitude test. According to Ary et al. [16], Jacobs and Razavieh (2002), one factor that affects the value of reliability coefficient is the length of the test; that is, the longer the test, the greater the reliability.

Table 5. Cronbach's Alphas of the TAT Components

Variable	α	KR-20	Interpretation
Abstract Reasoning	0.81		Good
Numerical Ability	0.79		Acceptable
Verbal Ability Word Analogy	0.84		Good
Verbal Ability- Spelling	0.84		Good
Verbal Ability- Word Meaning	0.78		Acceptable
Overall Verbal Ability	0.77		Acceptable
Pedagogical Knowledge	0.80		Acceptable
Overall Reliability of TAT	**0.85**	**0.85**	**Good**

4IV. CONCLUSIONS

The newly developed Teacher Aptitude Test is generally acceptable. All items comprising the test were subjected for item analysis and passed both the criteria for index of difficulty and index of discrimination. This implies that the items developed are suitable for a Teacher Aptitude Test. The developed test is reliable with a good reliability coefficient. This implies that there is a high internal consistency of the items.

5V. RECOMMENDATIONS

1. Considering that this study is an initial attempt towards the development of a Teacher Aptitude Test for the College of Education, UEP Main, the researcher is cognizant of the need for further improvement on the test. There is a need for the University Testing Center to have a continuous review, evaluation, and revision of the items for improvement of the test. This will also lead to further development of its statistical indices.
2. Conduct a test-retest reliability study with a longer time interval to further measure its stability not only its internal consistency. In view of this, it is recommended that this

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test be tried out using larger samples to arrive at a stable norm. This can be done by gathering the results of its administration for two consecutive semesters.

3. Continuous validation of the Teacher Aptitude Test should be conducted to determine some forms of validation evidence that can add to the validity of the instrument.
4. In view of the need for a more comprehensive and objective admission criteria for the College of Education of the University of Eastern Philippines, the newly developed and validated Teacher Aptitude Test is recommended to supplement the existing criteria for selection of students who want to enroll in the college. The instrument may likewise be used by the two external campuses of the university.
5. Further studies and researches should be undertaken in line with test development and validation that would encourage test developers in producing valid and reliable test instruments.

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