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Instructor's Evaluation on Importance of Item on a Diagnostic Inventory for Teaching Competency

Sook Hee Park[1]

[1]72, Choerubaek-Ro, Bongdam-Eup,
Hwaseong-Si, Gyeonggi-Do, Republic of Korea
spark@uhs.ac.kr

Abstract. This study aimed at analyzing opinions of professionals on the scale for self-diagnosis and reflection on the teaching competency, one of key capabilities for instructors. So, a diagnostic instrument of Yang's(2010) scale was used for the teaching competency of a professor. As for 30 items for diagnosing the teaching competency, 54 professors who are lecturing at a college located at Gyeonggi-Do were asked to answer the question about how much each item is important for effective teaching. As the result of analyzing their responses, 2 items had a lower correlation coefficient with the total score, and reliability increased a little in case related items were deleted. This study has significance in that it analyzed opinions of instructors on items of the self-report typed Diagnostic Inventory for Teaching Competency to be used for identifying an effect of the teaching competency reinforcement program.

Keywords: instructor, **t**eaching competency, item analysis

1 Introduction

Recently, terms of the competency, teaching competency and students' core competency are often used in the educational field. Competency refers to personal inner characteristics causing effective and superior performance according to a criterion in certain situation or job [1]. A psychologist at Harvard, McClelland (1973) asserted firstly a concept of competency. The early concept of competency was defined as a wide range of psychological and behavioral characteristics related to performance in a very broad sense. However, as a conceptual evolution was done, it came to develop more specifically into the knowledge, skill, ability and others to distinguish superior from average performers [2].

Yang (2010) divided the teaching competency into the teaching and basic competencies, and conducted a study to develop a diagnostic instrument. Through such an instrument, teaching competency areas were composed of 8 capabilities including the solid educational philosophy, professional subject knowledge, teaching development, teaching operation, facilitation, communication, achievement assessment and feedback, self-diagnosis & reflection on efficiency of teaching. Also, basic competency areas were composed of 7 capabilities including pride in school, vocational ethics and moral values, enthusiastic attitude, affection and interest in

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students, respect of diversity, self-development and a global mind [3]. This instrument is composed of self-report items, and result of self-report typed competency diagnosis instrument is based on recognition of instructors themselves, so enabling an objective and active change of competency in the process to diagnose and reflect on their teaching competency [4]. However, in order to increase generalizability of such an instrument, validity verification seems to be required for diagnosis items by instructors at other colleges. Accordingly, this study intends to analyze how professors evaluate about importance of every 30 item diagnosing teaching competency for effective teaching among Yang's (2010) scale developed for diagnosing teaching competency, one of key capabilities of an instructor.

2 Method

2.1 Subjects

In order to conduct this study, questionnaire was given to 54 instructors who are teaching at the college located at Gyeonggi-Do. As for gender composition of participants, the number of female professors participated was fewer as 19% than that of male as 81%. However, it corresponded to the gender ratio of the entire faculty composing a population.

Table 1. Subjects

	Group	n	Percentile(%)
gender	Male	44	81
	Female	10	19
	Total	54	100

2.2 Instrument

Instrument used for this study is a Diagnostic Inventory for Teaching Competency developed by Yang (2010). It is composed of 2 areas of the teaching competency and the basic competency, and this study used 30 items for measuring 8 kinds of competencies in the teaching competency area. The reason why items of the basic competency area were excluded is that they contain indexes for measuring the basic competency that faculty of certain religious school should have.

2.3 Data Analysis

Excepting respondents lacking in sincerity, statistical processing was done for data collected by the questionnaire using SPSS of the statistical package, also Pearson's correlation coefficient and Cronbach's α coefficient were calculated.

3 Results

With a view to analyzing evaluation on importance of the diagnostic instrument items for teaching competency by instructors, correlation coefficient between the total score and each item was calculated along with the reliability coefficient. As the result, as shown from Table 2, it showed that most items have a significant correlation with the total score but items No 1, 3 on the solid educational philosophy have no correlation with the total score. No. 1 item is 'As a professor, I can explain an obvious reason of teaching', and No. 3 item is 'I share my educational philosophy with students'. Accordingly, after eliminating both items without correlation with the total score, the total score was computed again and correlation coefficient between the total score and each item was calculated. As the result, correlation coefficients of both items, which were deleted when calculating the total score secondly, rather decreased. Also, Cronbach's α coefficient in case of eliminating 2 items increased a little than before item exclusion.

Table2. Correlation Coefficient between the Item-Total Score and Reliability of Teacing Competency Scale (N=54)

Item Number	M(SD)	Before item exclusion r (Item to Total)	After Item exclusion r (Item to Total)	Cronbach's α (if item exclusion)
1	4.64(.51)	.27	.23	.9519
2	4.53(.50)	.57***	.57***	.9497
3	4.12(.80)	.23	.17	.9539
4	4.66(.47)	.42**	.42**	.9508
5	4.50(.63)	.63***	.63***	.9492
6	4.66(.47)	.50***	.51***	.9502
7	4.44(.66)	.68***	.69***	.9488
8	4.37(.65)	.59***	.59***	.9496
9	4.38(.59)	.77***	.77***	.9480
10	4.31(.72)	.76***	.76***	.9479
11	4.48(.69)	.76***	.76***	.9479
12	4.40(.71)	.77***	.79***	.9478
13	4.48(.63)	.71***	.71***	.9485
14	4.29(.71)	.68***	.70***	.9487
15	4.27(.73)	.78***	.78***	.9477
16	4.27(.81)	.77***	.79***	.9477
17	4.37(.75)	.76***	.77***	.9479

18	4.38(.56)	.66***	.66***	.9490
19	4.27(.59)	.55***	.57***	.9499
20	4.16(.77)	.52***	.52***	.9505
21	4.24(.75)	.68***	.68***	.9488
22	4.29(.69)	.71***	.72***	.9484
23	4.61(.52)	.76***	.77***	.9483
24	4.57(.56)	.69***	.69***	.9487
25	4.62(.62)	.72***	.73***	.9484
26	4.33(.91)	.63***	.64***	.9498
27	4.31(.77)	.79***	.79***	.9476
28	4.42(.60)	.63***	.65***	.9492
29	4.12(.75)	.51***	.51***	.9506
30	4.50(.60)	.76***	.76***	.9480

*<.05, **<.01, ***<.001

4 Conclusion

Correlation coefficients between the total score and each item score were calculated by totaling up instructors' responses to importance of each 30 item on the diagnostic instrument for teaching competency for effective teaching. As the result, 2 items having no significant correlation with the total score were deleted according to the criterion by Song & Han [5]. In other words, instructors replied that 2 items are indexes of little importance for their effective teaching.

In conclusion, findings of this research reveal that deletion of 2 items may increase reliability of the scale. This study has significance in that it analyzed opinions of instructors on the diagnostic inventory for teaching competency used at the teaching & learning field.

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