



Research Paper

Development of silent reading comprehension test: Analysis of student's skills of one of the State Universities and Colleges offering agriculture program in Caraga Region, Philippines

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The study developed a silent reading comprehension skills test of one of the State University and Colleges (SUC's) in Caraga Region offering agriculture program using Direct Reading Thinking Activity (DRTA) format. Results revealed that agriculture instructors used the 20 popular textbooks, 20 popular general references, and 15 popular serials for instruction. These references were used in developing the test. Series of revisions, rearranging and renumbering in the test questionnaire were done to present the ideas in logical and comprehensive form. Furthermore, improvement of tests were done four times correspond to sessions and obtained very satisfactory/

outstanding reading materials and highly reliable test in agriculture with Pearson r value of 0.99. Usability assessment showed highly usable in ease of administration, scoring, less expense and no interference and moderately usable in less time to those who are involved.

Key words: Direct Reading Thinking Activity, reading selections, silent reading comprehension skills, SUC

INTRODUCTION

No reading takes place without comprehension. The problem of comprehension has been present long before the issue of poor education quality, and ways of improving reading proficiency have become next to obsession among the concerns. Comprehension tests have been used in almost all teaching-learning situations with the objective of assessing the students learning for a particular task. Skilled reading comprehension involves the use of number of cognitive skills among which is the automatic recognition of letters and words and meaning which is the lowermost.

Nowadays, the use and adaptations of multiple-choice and of other standardized tests instruments have proliferated to aid the teachers in gathering information of

their learners' needs and in designing instructional materials suited to the learners' need. Moreover, Instructional testing is not simply done in any classroom instruction to evaluate learners' understanding of the topic. It should be continuous process and an integral component of the curriculum and should be justified on the basis of informative and useful feedback to students and teachers (Bai, 1998).

However, Direct Reading Thinking Activity (DRTA) is a technique that encourages students to make predictions, set purpose of reading and monitor comprehension while they are reading. The DRTA canters on open-minded questions about the reading experiences, students will become aware of their own interpretive actions during

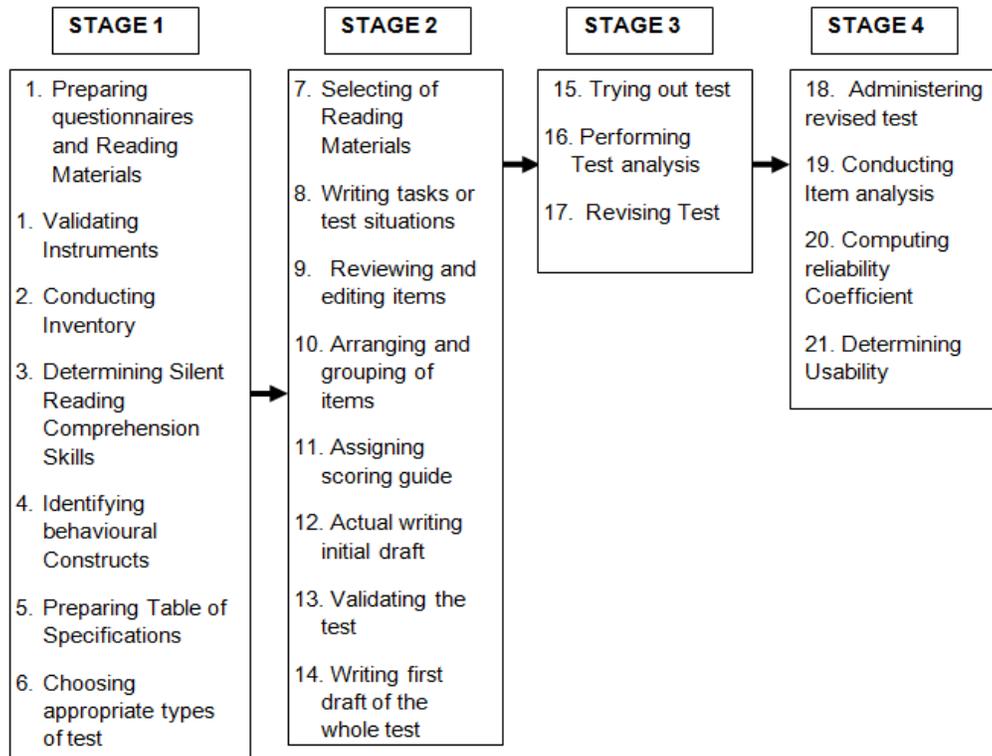


Figure 1. The Schematic Diagram of the Development of Silent Reading Test.

Table 1. Table of specification (TOS)

Topics	Directed Reading Thinking Activity (Stauffer, 1969 as cited by Canda,2001)			Number of Items	Percentage (%)
	Predicting Outcomes	Verifying Predictions	Making Generalization		
Crop Science	7	10	8	25	25%
Animal Science	7	9	9	25	25%
Plant Physiology	10	9	6	25	25%
Fishery	9	7	9	25	25%
Total Item	34	34	32	100	
Percentage	34%	34%	32%		100%

reading and will therefore recognize prediction, judgment, and evidence verification (Bermiso, 2003; Canda and Juliet, 2001).

The use of DRTA to test the comprehension skills of one of the State Universities and Colleges offering agriculture program in Caraga Region may prove very

effective, for students are engaged in a step-by-step process that guides them through informational test. The use of DRTA in Caraga region specifically SUCs' offering agriculture is not observed. Thus this study was conducted to develop a silent reading comprehension skills test for SUCs' in Caraga region using DRTA; to

Table 2. Item Analyses of the 25 items in Session 1 to 4 Subtests of the final Draft

Final Draft Item No.	SESSION 1			SESSION 2			SESSION 3			SESSION 4		
	Old Item No.	Difficulty Index	Discrimination Index	Old Item No.	Difficulty Index	Discrimination Index	Old Item No.	Difficulty Index	Discrimination Index	Old Item No.	Difficulty Index	Discrimination Index
1	3	0.50	0.33	5	0.73	0.36	1	0.76	0.56	8	0.66	0.64
2	5	0.37	0.33	7	0.73	0.64	7	0.77	0.59	9	0.74	0.67
3	6	0.60	0.33	10	0.70	0.77	9	0.71	0.72	11	0.68	0.49
4	8	0.60	0.38	15	0.61	0.59	10	0.33	0.31	12	0.67	0.67
5	9	0.74	0.51	16	0.52	0.62	13	0.76	0.67	27	0.63	0.59
6	14	0.47	0.56	17	0.54	0.69	14	0.72	0.56	28	0.74	0.67
7	19	0.48	0.51	19	0.76	0.59	28	0.69	0.51	30	0.68	0.56
8	22	0.77	0.64	21	0.65	0.38	29	0.51	0.38	31	0.74	0.72
9	24	0.45	0.51	25	0.72	0.72	30	0.59	0.49	32	0.56	0.85
10	29	0.61	0.41	27	0.75	0.69	31	0.33	0.49	33	0.72	0.56
11	32	0.60	0.31	28	0.73	0.62	35	0.68	0.72	35	0.60	0.49
12	33	0.61	0.44	33	0.74	0.59	36	0.66	0.56	36	0.53	0.62
13	37	0.42	0.38	34	0.71	0.74	37	0.59	0.64	39	0.79	0.59
14	39	0.67	0.62	35	0.63	0.85	38	0.65	0.64	41	0.72	0.59
15	41	0.24	0.31	37	0.48	0.51	39	0.74	0.74	50	0.76	0.64
16	42	0.59	0.49	38	0.79	0.59	44	0.55	0.62	52	0.39	0.36
17	43	0.33	0.62	39	0.49	0.87	45	0.48	0.74	55	0.30	0.31
18	49	0.65	0.59	44	0.57	0.56	53	0.63	0.79	57	0.69	0.72
19	51	0.54	0.72	46	0.87	0.62	54	0.63	0.89	58	0.46	0.46
20	57	0.63	0.62	47	0.74	0.64	55	0.66	0.97	62	0.52	0.67
21	59	0.68	0.46	50	0.76	0.62	56	0.54	0.72	65	0.55	0.56
22	60	0.21	0.36	52	0.72	0.69	70	0.57	0.54	66	0.37	0.31
23	63	0.53	0.33	54	0.63	0.56	71	0.55	0.38	67	0.57	0.74
24	66	0.53	0.33	55	0.51	0.74	72	0.66	0.59	68	0.76	0.54
25	67	0.53	0.46	56	0.72	0.74	73	0.69	0.54	69	0.52	0.67
N = 145												

Table 3. Usability of the test

CRITERIA	QUESTION NO.	INSTRUCTOR			QUESTION MEAN	CRITERION MEAN (Interpretation)
Ease of Administration	1	1	2	3	2.7	2.9 (Highly Usable)
	2	3	3	2	3.0	
	3	3	3	3	3.0	
Ease of Scoring	4	3	3	3	3.0	3.0 (Highly Usable)
	5	3	3	3	3.0	
Less Expense	6	3	3	2	2.7	2.5 (Highly Usable)
	7	3	3	1	2.3	
Less Time Involved	8	3	2	2	2.0	2.0 (Moderately Usable)
	9	3	2	2	2.0	
Does not interfere with the well being of those involved	10	3	3	3	2.7	2.9 (Highly Usable)
	11	3	3	3	3.0	
	12	3	3	3	3.0	
Mean						2.66 (Highly Usable)

identify the different reading materials as sources for comprehension skills tests item construction; to test item that would measure silent reading comprehension; and to try-out the test to determine the indices of difficulty, indices of discrimination, and plausibility of the distracters of the test.

METHODOLOGY

The developmental type of study was utilized in developing a silent reading comprehension skills test for one of the SUCs' offering agriculture program in Caraga region (Calderon and Gonzales, 1993). It is composed of

four stages namely: planning, test construction, try-out and analysis and evaluation stage stage (Figure 1).

The descriptive-survey method was used in the first stage (Kirlinger, 1973), content-analysis of the reading materials was employed in the second stage, and content-validation of the initial draft of the test was done in third stage while test-retest method was executed to establish test reliability in the fourth stage. The evaluation stage was conducted in the three campuses Surigao del Sur State University (SDSSU) former Surigao del Sur Polytechnic State College (SSPSC) namely : Tagbina, Lianga and San Miguel.

The universal sampling was employed in getting the number of instructor for the reading materials inventory of

300 items questionnaire. This sampling method is to ensure the broad list of reading materials as references for test construction. Moreover, multistage sampling (High, average and low achievers) comprises of 67 agriculture students from the three campuses and ten percent of these were subgroup according to class standing using fishbowl method for the try-out and analysis. This stage was done in four session's equivalent to numbers of revision.

The accounted reading materials of the agriculture instructors were summarized using frequencies and ranks to determine the relative popularity of the references. The characteristics of 300 items questionnaire were categorized, tabulated and interpreted using the parameters; item index of difficulty, whole test index of difficulty, item index of discrimination, whole test index of discrimination and plausibility of the distracter. Pearson product-moment coefficient of correlation was used to determine the reliability of the whole test (Bermiso, 2003; Oriondo et al., 1984).

RESULTS AND DISCUSSION

There were 78 textbooks titles were listed and the top 20 most popular textbooks were; Feeds and feeding, Soil and Water Conservation Management, Aquaculture: The Farming and Husbandry of Freshwater, Practical Horticulture, The Science and Practice of Crop Production, Organic Farming, Rice Production Manual in the Philippines, Soil Management, Home Technology and Livelihood Education Book II, Principles of Animal Science, Cro Production: Principles and Practices, Agricultural Mechanics, Manual for General Entomology, Plant Pest Identification Manual, Introduction to Tropical Horticulture, Statistical Procedure for Agricultural Research, The Science and Practice of Crop Production, Weed Control Handbook, Introduction to Livestock Production Including Poultry and Fundamental of Horticulture.

As to general reference materials, the top 20 most popular were; Practical guide to Goat Raising, Root Crop Production (A Manual), Rice Production Technoguide, Tips on Swine Raising, Philippine Recommends for Vegetable Crops, Mungbean Varieties, Peanut Varieties, Plant Breeding, Genetics, and Biochemistry Division, Practical Guide to Swine Raising, Philippine Recommends for Pili, Philippine Recommends for Cassava, Philippine Recommends for Dairy Cattle Production, Philippine Recommends for Cacao, Philippine Recommends for Goat Farming, Banana Diseases in Asia and the Pacific, PCARRD Annual Report 2004, Plant Breeding, Genetics, and Biochemistry Division, Practical Tips to Organic Gardening/Farming, PCARRD Annual Report and Rice R&D Highlights 1996. For journals and magazines, the 15 most popularly read serials were; Agriculture Magazine, Feed Mix, Farm News

News, Rice Literature Update, The SSPSC Buzz, Meat International, Animal Husbandry, The Philippine Journal of Education, Sipag Pinoy, FeedTech, World Poultry, Pig Progress, Monitor, Cogio Bulletin and Aquaculture.

Table of Specification was constructed to help decide which items to discard and retain and the researcher verified if the DRTA skills are represented by an adequate number of items in the final draft of the test (Tables 1- 3).

To establish reliability of the test, a retest was conducted to the same group of 145 students 10 days after the first administration. The Pearson Product-Moment Correlation coefficient of reliability of the test was 0.99 or very high correlation between the test and retest scores. This implies that the test gives a consistent rating and is therefore highly reliable as a test instrument.

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