
Title	Test reporting of English language proficiencies of teacher trainees: Towards a profiling assessment system
Author(s)	Chew Lee Chin, Anthony Seow and Luo Guanzhong
Source	<i>ERA-AME-AMIC Joint Conference, Singapore, 4-6 September 2000</i>
Organised by	Educational Research Association of Singapore (ERAS)

This document may be used for private study or research purpose only. This document or any part of it may not be duplicated and/or distributed without permission of the copyright owner.

The Singapore Copyright Act applies to the use of this document.

TEST REPORTING OF ENGLISH LANGUAGE PROFICIENCIES OF TEACHER TRAINEES: TOWARDS A PROFILING ASSESSMENT SYSTEM

Chew Lee Chin, Anthony Seow & Luo Guanzhong
National Institute of Education
Nanyang Technological University
Singapore

Abstract: A single overall grading is the hallmark of test reporting practices in education. This assessment system has provided an efficient and convenient means of reporting test results for a summative purpose such as certifying students on completion of a course of study or selecting students who can benefit from the next level of education. However it is less useful for reporting results for a formative purpose such as monitoring students' learning progress or diagnosing their learning difficulties. The National Institute of Education has developed a computerised assessment tool known as "NIE Computerised English Language Test" (*NIECELT*) for testing the English language proficiencies of prospective students in pre-service teacher training programmes. *NIECELT*, however, can be used for creating appropriate tests meant for any other grade level as well – primary, secondary or college. This paper will describe a profiling assessment system to be incorporated into the test reporting of language proficiencies. *NIECELT*, an interactive mode of computerised testing, presents a number of sub-tests for assessing a student's level of competence in English sentence structure, collocation, text cohesion, text meaning, editing skills as well as semantic awareness. By harnessing the computer's unique capabilities in data management, the student's performance in specific language skill areas can be profiled.

Background

Research in language testing over the last decade has moved in tandem with developments in computer technology. As noted by Alderson & Scott (1991), "the computer has a potentially significant role to play in language testing, especially in presenting a 'user-friendly' testing environment to the test candidate, in providing a variety of options and routes through a test, and in recording information which will not only assess linguistic performance, but will also help in identifying candidate's test-taking strategies" (p.226). It is a truism that in this technology-laden era, computers are fast changing the way we do things.

At the National Institute of Education, a computerised assessment tool known as *NIECELT* has been developed for testing the English language proficiencies of prospective students in pre-service teacher training programmes. *NIECELT*, however, can be used for creating appropriate tests meant for any other grade level as well – primary, secondary or college. *NIECELT*, which has been conceptualised as an automated testing system for English Language, incorporates applications of the computer for performing expeditiously several otherwise tedious and time-consuming tasks in the testing process. These applications include facilities for banking of test-items, for constructing of tests as and when needed, for delivering tests to examinees via the computer any time, for immediate test scoring and on-line reporting of test results, and for statistical analyses of items and tests.

Skills-Based Testing with NIECELT

As a language assessment tool, the NIECELT software presents a number of sub-tests for assessing a student's level of competence in English sentence structure, word collocation, text cohesion, text meaning, editing skills as well as semantic awareness. Specifically, NIECELT comprises the following skills-based sections and sub-sections to measure the intended learning outcomes.

1) Grammar Section:

To assess students' ability to manipulate linguistic units such as words and phrases to produce grammatically correct and meaningful English sentences.

<u>Sub-sections</u>	<u>Target learning outcome(s)</u>
Word	Understanding and use of standard English syntax or word order,
Unscrambling	concept of word collocation
Sentence	Ability to express the meaning of given sentences using some other
Paraphrasing	words in order to make the meaning of the paraphrased sentence clearer, easier to understand or more compact through the transformation or synthesis of the given sentences.
Errors & Corrections I & II	Ability to recognise authentic errors commonly produced by Singapore students at both the word and word-cluster levels.

2) Vocabulary Section:

To assess students' semantic awareness, appropriate choice of words and vocabulary range.

<u>Sub-sections</u>	<u>Target learning outcome(s)</u>
Appropriate Choice of Words	Semantic awareness of specific words
Opposites	Semantic awareness and relations of certain words
Filling the Blanks	Vocabulary in context

3) Reading Comprehension Section:

To assess students' reading sub-skills such as text meaning, inference, gist, critical thinking (e.g. synthesis of ideas) through short passages of different genres.

4) Cloze Section:

To assess students' understanding of contextual use of words, word collocation, text cohesion, grammatical and lexical functions of certain words.

Issues in Test Reporting

The hallmark of test reporting practices in education is a single overall score. This assessment system has provided an efficient and convenient means of reporting test results for a summative purpose such as certifying students on completion of a course of study or selecting students who can benefit from the next level of education. But educators are well aware of its inadequacy for other educational testing needs such as the formative purpose of testing where students' learning progress is monitored or learning difficulties diagnosed. The ubiquitous single test score is, obviously, too narrow a measurement since more detailed information about an individual

student's strengths and weaknesses in a learning domain is not reflected. The following scenario is a case in point:

Mary brings home a test report which shows that she has scored a total of 60% in her English Language test.

As educators or parents, we may have the following questions. What does this single overall score tell us about Mary's achievement in English language? What do we know about Mary's learning ability and difficulties in this subject where she was assessed for a number of language skills such as semantic awareness, word collation, text cohesion and grammatical and lexical functions of words. A single score tells us nothing about Mary's level of competence in each of the language components assessed, except that she had cleared the whole test if the pass mark was the conventional 50%.

Towards a Test Profiling System

One inherent feature of the computer is its fast and efficient management of data. This unique capability is fully capitalised in NIECELT. For a test developer, he can systematically bank in test-items and at the point of test construction he can instruct the computer to select test-items according to certain specifications and compile the test. For a test candidate, he can register for a required test, and log on to take it via the computer. With the automation of test scoring, there can be detailed on-line reporting of test results made available to him; that is, he is given immediate feedback on his test performance on the computer screen at the end of the test.

Pilot Study

Ninety-seven teacher trainees participated voluntarily in a pilot study on NIECELT which was conducted on 3 August 2000. They took a 100-item English Language test via the computer. Table 1 shows the sectional distribution of the items in the test.

Table 1.
English Language Test by Sections/Sub-Sections and the Number of Items

Section/Sub-sections	No. of Items
Grammar	
Word Unscrambling	10
Paraphrase	10
Errors and Corrections I	8
Errors and Corrections II	7
Sub-total	35
Vocabulary	
Appropriate Choice of Words	8
Opposites	5
Filling in the Blanks with Words in Given List	15
Sub-total	28
Reading Comprehension	12
Cloze	25
Total	100

Immediate test scoring and test reporting were in place. This means that upon completion of the test by an examinee, the computer scored the examinee's responses and produced an on-screen report of his/her test performance. The examinee had the option of printing out a hard copy of the test report. Test reporting in NIECELT included a profiling of the examinee's test performance on the basis of the specific language skills tested. Appendix 1 shows a sample test report.

Test Performance of Examinees

The test performances of three examinees (here referred to as Student A, B and C) will be discussed in this paper. On the 100-item English Language test, Student A obtained 78% of the items correct, Student B 55% and Student C 35%. More than just a unitary score to summarise an examinee's test performance, the examinee was given his/her component scores on the various language skills tested as well. Table 2 shows the test profiles of the three examinees.

Table 2.
Test Profiles of Students A, B and C

Section/Sub-sections	#Items	Student A #I (%)	Student B #I (%)	Student C #I (%)
Grammar				
• Word Unscrambling	10	7 (70)	6 (60)	3 (30)
• Paraphrase	10	8 (80)	4 (40)	2 (20)
• Errors and Corrections I	8	6 (75)	7 (87)	4 (50)
• Errors and Corrections II	7	1 (14)	0 (0)	0 (0)
Sub-total	35	22 (62)	17 (48)	9 (25)
Vocabulary				
• Appropriate Choice of Words	8	7 (87)	7 (87)	4 (50)
• Opposites	5	3 (60)	1 (20)	1 (20)
• Filling in the Blanks with Words in Given List	15	15 (100)	11 (73)	8 (53)
Sub-total	28	25 (89)	19 (67)	13 (46)
Reading Comprehension	12	11 (91)	6 (50)	4 (33)
Cloze	25	20 (80)	13 (52)	9 (36)
Total	100	78 (78)	55 (55)	35 (35)

Interesting information was revealed in the profile of each examinee's performance on the test. The following were the analyses.

Student A:

Overall, this student had a good command of the English Language. For the grammar section, she had performed well on three out of four subsections, namely, *word unscrambling*, *paraphrase*, *errors & corrections I*. But she had scored poorly in the *errors & corrections II* subsection. For the vocabulary section, she had performed very well especially in the *vocabulary in context* subsection (100% correct) but performed moderately well in the *opposites* subsection (60% correct). She had performed well in both the reading comprehension and cloze sections.

Student B:

This student demonstrated average proficiency. For the grammar section, she had performed exceptionally well in the *errors & corrections I* subsection, managing a score of 87% for that, but less well in the other three subsections. She had probably not attempted any questions in the *errors & corrections II* subsection. For the vocabulary section, she had performed well in two out of the three subsections, namely *appropriate choice of words* and *vocabulary in context*, but poorly in the *opposites* subsection with only 20% of the items scored correctly.

Student C:

On the whole, the student had low language proficiency. Her percentage scores for the four sections ranged from 25 to 46. These results projected her low levels of competence in the language skills tested in NIECELT. Further analyses of the grammar and vocabulary scores showed her general weakness in these two subsections. Like the other two students, Student C had the worst score in the *errors and corrections II* subsection, which suggests that it must be a difficult section to contend with.

Discussion

By harnessing the computer's unique capabilities in data management and in immediate test scoring, the NIECELT system can produce test profiles for students in the specific language skills tested. A test profiling approach to assessment is deemed to be useful for a comprehensive interpretation of students' learning abilities. Depending on the purpose of testing, test reporting can take either a norm-referenced interpretation or a criterion-referenced interpretation. NIECELT can deliver tests for the purpose of either a summative or a formative evaluation of students' language abilities.

For a summative NIECELT test, a norm-referenced interpretation of student performance is required. In such a case, the identification of a normed group is critical, but scores obtained for each language skill tested would need to be standardised. An aggregate score, computed from the standardised scores of the various components of the test, could then be used for reporting a student's overall proficiency.

NIECELT could also be used formatively for monitoring students' progress in language learning. Here, a criterion-referenced interpretation of student performance is in order. This means that there is a need for clarity and relevance of the domain specification. Normally, a mastery level of between 75 and 85 percent correct score is set for each learning outcome.

Given the aggregate score as well as the component scores realisable in NIECELT, invaluable information derived from such test profiles of individual students can help teachers to better understand and identify the specific learning needs of students and to plan language programmes that address those needs.

References

- Alderson, J. Charles (1988). *Innovations in Language Teaching: Can the Micro-computer Help?* Lancaster: University of Lancaster, U.K.
- Alderson, J. Charles & Brian Scott (eds.) (1991). *Language Testing in the 1990s: The Communicative Legacy*. London: Modern English Publications.

- McNamara, Tim (1996). *Measuring Second Language Performance*. New York: Addison Wesley Longman.
- Nitko, Anthony J. (2000). *Educational Assessment of Students*. 3rd Edition. Englewood Xcliffs, New Jersey: Prentice Hall.
- Oosterhof, Albert (1994). *Classroom Applications of Educational Measurement*. 2nd Edition. Toronto: Maxwell Macmillan.

Appendix 1. Sample Test Report of NIECELT



NANYANG TECHNOLOGICAL UNIVERSITY
NATIONAL INSTITUTE OF EDUCATION



N I E C E L T

(NIE Computerised English Language Test)

Name : SEOW WAN LOONG
NRIC/Passport : S7676334F
Date : 22 MAY 2000

Test Report

<u>Sections</u>	<u>Score/Total</u>	<u>(%)</u>
1) Grammar - Word Unscrambling	7/8	87%
2) Grammar - Paraphrase	6/10	60%
3) Grammar - Errors and Corrections - I	6/10	60%
4) Grammar - Errors and Corrections - II	4/6	66%
Total Score for Grammar :	23/34	67%
5) Vocabulary - Choice of Appropriate Words	6/10	60%
6) Vocabulary - Opposites	7/10	70%
7) Vocabulary - Filling Blanks with Words in Given List	8/10	80%
Total Score for Vocabulary :	21/30	70%
8) Reading Comprehension	8/12	66%
9) Cloze Test	40/47	85%
Overall Score :	92/123	74%