Toward an integrated Framework for Language Testing and Intervention

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Abstract

An integrated framework for language testing and intervention with a paradigm $T_1 \rightarrow LI \rightarrow T_2$ was proposed and illustrated. The proposed framework combines approaches from Error Analysis, Need Analysis and Systems Instruction. The operation of the framework was illustrated based on the data derived from a corpus consisting of the transcripts of hundred (100) students from a college in Yola metropolis. The transcripts were analyzed using the COMPFORM-MARKCHART method of error correction. The test served as a pre-intervention language test and the first component of the framework (T_1). The result of the analysis was then used to design the ERROR PROFILE of the students. Based on this profile, a Language Intervention technique (LI) comprising of two sub-components was designed; that is Language Teaching for Common and Specific Errors [LTCSE] and Language Task for Specific Students [LTSS]. The last component of the framework is a post language intervention test [T_2] which was designed to test the efficacy of the language method/approach adopted. The paper concludes with a discussion on the prospects of the framework within the context of Teaching English as a Second Language (TESL).

Keywords: Pretest, language Intervention, Post-test, EDP, LTCSE, LTSS.

1. Introduction

In the past four decades, language teaching and learning has witnessed a number of paradigm shifts in the areas of teaching methodology and pedagogic aims. Some language teaching methods/approaches resulting from the paradigm shift include the Direct method, Grammar Translation Method, Audio-Lingual Method, Functional Notional Method, The Natural Approach, The Communicative Approach, Delayed Oral Physical Response, the Silent Way, Computer assisted Language Learning, Suggestopedia, etc. (Lopez 1989). In respect to teaching aims, one of the shifts was from a pedagogy that aims at preventing errors to learning from errors. The first perspective, which has gained paradigm status in ESL research until now, is premised on the belief that the occurrence of errors in students' written compositions is as a result of inadequate teaching and the use of unsuitable teaching materials. Empirical findings in psycholinguistics have however fostered a change in attitude among language teachers on their students' errors. This trend has been documented in the works of a number of scholars (Lakoff 1987; Harris 1990; Halliday 1994; Beaugrande 1996). They argue that the formation of (correct) sentences is not determined exclusively by linguistic rules, but also by the cognitive and social constraints of contexts. While Michaelides (1990) asserts that teachers do not need a contrastive analysis between mother tongue and the target language to draw attention to areas their students

are likely to make errors but rather teachers should classify and arrange students' errors according to their seriousness and degree of occurrence, and on the basis of this, design a remedial syllabus. In view of these intellectual currents, language teaching changed from teaching learners the structure of the language [only] to teaching them the use of the language (Malgwi 2000). This trend forms a major theme in many ESL/EFL journals advocating that, language teachers should realign their pedagogic procedures in line with newer insights on how language is learned. In ESL research the emphasis has shifted from Contrastive Analysis to Error Analysis. Regrettably, language testing and evaluation in Nigeria is still under the influence of the classical approaches. Significant progress therefore awaits studies that develop frameworks for language testing and evaluation within the context of error analysis. In the next section of the paper, the discussion will be on the prospect of an integrative framework for language testing and intervention. This procedure will be followed by an illustration of the components of the framework. In conclusion, the implications of the framework will be discussed within the context of second language teaching and testing.

2. Methodology

The methodology underpinning the study combines approaches from error analysis, need analysis and system approach to instruction. Data for the study was derived from a corpus consisting of language tasks given to hundred students (100) over a period of six months at Concordia College in Yola, Nigeria. The pretest (T_1) identifies the learning problems of the students and serves as a basis for designing language intervention technique(s). The "COMPFORMMARKCHART" Method as developed by Josephson (1989) was modified and used as the instrument for the pretest (T_1). The chart consists of the three components: one is a composition form with spaced, consecutively numbered word length lines for students to write on so that each word is designated by the number underneath. The second component is a marking chart consisting of organized list of errors and blank boxes. The mark chart also contains provisions for indicating total number of errors, total number of words, and percentage of errors and level of grade. Using this component can serve as a framework for monitoring students' learning progress (i.e., Error diagnosis). The post-test (T_2), which follows the same process with the pretest(T_1) but with slight variations, comes after the language intervention(LI).The post-test(T_2) comes with progress indexes that denote students' overall performance at eliminating errors.

3. Components of Integrated Language Testing and Intervention Framework

Literatures on language testing contain several techniques and suggestions for correcting students' written compositions but few studies suggest techniques for language testing and evaluation. A consequence of this bias is that some language teachers find it difficult to design language intervention techniques to cater for the language learning challenges of their students. The first component of the framework is a pretest (T_1).This test involves the use of the COMPFORMMARKCHART method of error analysis proposed by Josephson (1989).Here language teachers can use the COMPFORMMARKCHAT to identify their students' language learning problems(i.e., Error diagnosis) and thereafter design intervention technique(s) (i.e., Error prognosis) based on the error profile of each student. Other components of the framework include two variables namely; (a) Language Intervention or LI [which consist of Language Task for Specific Students (LTSS) and Language Teaching for Common and Specific Errors (LTCSE)] and (b) post-test or T_2. When these variables are subjected to computation, we will have a pretest design with a linear paradigm [O→X→O]. Going by the paradigm, our framework for language testing and evaluation then is represented by the algorithm [T_1→LI → T_2], where T_1= Pre-intervention Language Testing, LI =Language Intervention and T_2= Post-intervention Language Testing. This is interpreted to mean that in language teaching, an initial language testing [T_1] should precede language intervention in order to identify the language problems of learners and that a summative language testing is necessary in order to verify the efficacy of the language intervention technique adopted. In what follows, we shall illustrate the application of this paradigm using the results from a language intervention program involving 100 students of Concordia College, Yola, Adamawa State, Nigeria.

3.1 Language Testing (Pretest or T_1)

Language Testing involves error analysis. By error analysis we mean a type of linguistic analysis concerned with the identification, description and explanation of errors either in spoken or in written form (Teh 1990). The systematic analysis of errors involves the following steps; first, the

identification of errors by the use of symbols, abbreviations and marginal comments; second, the description of the errors identified based on a grammatical model; third, the classification of the errors into categories and sub-categories; fourth, the explanation of why the errors have been made; and last, the evaluation of the errors to determine how much they deviate from the target language or to what extent they affect communication. In language testing, as mentioned earlier, the use of the COMPFORMMARKCHART" method is a systematic and thorough method of marking composition that combines two procedures of error analysis (error identification and error classification). The method was developed based on insights from the communicative approach to language pedagogy. Josephson (1989) opines that this method has a number of advantages for language teaching. This is because it accomplishes the tasks of error identification and classification simultaneously. The method also facilitates an error count and percentile calculation which helps teachers to grade objectively. Other strengths underpinning the methods are that it shows the students: (a) which of their words are wrong; (b) what these errors are called; (c) why such constructions are wrong; (d) what their problems are; (e) how many errors they make; (f) what percentage of their words are errors; (g) how to revise; and (h) whether they are making progress or not. This method serves as a framework for designing students' error profile.

3.2 Error Profile Design

Systems Approach to instruction emphasizes the uniqueness of individuals in the learning process. The development of an error profile is predicated on this view. We find in this component a basis for teachers to reorganize their language learning materials to address learners' language problems based on the needs of the learners. Table 1 presents a sample of an error profile of a Concordia student after a pretest (T_1) in a language task.

ERROR TYPE	FREQUENCY	WORD RANGE	PERCENTAGE (%)
1. Capitalization	7		12.3
2. Spelling	7		12.3
3. Wrong word	1		1.8
4. Verb tense agreement	2		3.5
5. Auxiliaries	1		1.8
6. Word repetition	2		3.5
7. Abbreviation	8		14.0
8. Omissions	2		3.5
9.Articles (definite & indefinite)	2		3.5
10. Hyphenation	15		26.3
11. Wrong preposition	4		7.0
12. Wrong tenses	6		10.5
13. Sentence fragment	0		0
Total	57	400	100%

Table 1: Error Profile Design

3.3 Language Intervention

By Language Intervention we mean the use of a language teaching method/approach to solve a language learning problem (Kamai 2011). Some common language teaching methods and approaches include; The Direct method, Grammar Translation Method, Audio-Lingual Method, Functional Notional Method, The Natural Method, The Communicative Approach, Delayed Oral Physical Response, the Silent Way and Computer Assisted Language Learning, Suggestopedia, Cooperative Language Learning Strategy etc. This component of the framework is concerned

with the development of a pedagogy tailored to address specific language challenges. It consists of two subcomponents: Language Teaching for Common and Specific Errors and Language Task for Specific Student(s) [LTCSE and LTSS respectively] (i.e., Error prognosis).

3.4. Language Teaching for Common and Specific Errors

This process involves English language assessment (a pretest or T_1) of many students in a class or school using a broader base of categorization. After the pretest (T_1), deficiencies of each student are identified and classified. Based on this task an error profile is designed for each student (see Table 1).This profile is given to English language teachers handling the different levels of students. Significantly, this method of error analysis operates alongside normal teaching. In other words, individual student error profiles are used by teachers to form a remedial scheme for language intervention (LI). Deficiencies common among students are handled in the normal English language class where Language Teaching for Common and Specific Errors (LTCSE) is applied; this method forms the first component. While individual deficiencies are handled in the remedial class where Language Task for Specific Students (LTSS) is used; which forms the second component. A sample of Language Task for Specific Student (LTSS) is presented in Table 2.

Table 2 Language Task for Specific Student(s) Sheet

LANGUAGE COMPONENT	TASK DESCRIPTION
Mechanics	Review Punctuation Marks.
Grammar	Read up Brighter Grammar Book 1 on countable and uncountable nouns and Book 2 on regular and irregular verbs.
Vocabulary Building	Learn one word every day.
Lexis/structure	Identify ten simple sentences from a novel or newspaper.
Handwriting	Practice with handwriting copy book.
Continuous Writing	Write the introduction of a paragraph on the most pleasant day in your life.
ALE	Read a novel every week for a month

ALE = [Alternative Linguistic Environment]

Table 2 presents a sample of Language Task for a student whose profile indicates that the student has difficulties in the use of tenses and insufficient vocabulary to develop a statement. The rationale for this template is to guide the teacher in designing a remedial syllabus to cater for the language needs of a student.

3.5 Language Testing (Post-test or T_2)

After the language intervention, a post-test (T_2) is carried out to test the effectiveness of the intervention. This test follows the same process with the pretest (T_1).The overall results of

students performance at eliminating observable errors can be analyzed and evaluated for future language intervention. The process is ad infinitum.

4. Application of the Framework in Nigeria

Table 3 is an excerpt from the results of 100 students at the end of the post-test. It serves as a sample of an integrated language intervention chart showing: (a) the framework of the model $[T_1 \to LI \to T_2]$ and the progress index of three (3) out of the hundred(100) students tested at Concordia College,Yola, Adamawa State. Pretest (T_1) stands for problem areas identified, Language Intervention (LI) represents areas taught, Post-test (T_2) represents eliminated errors and pending errors. Progress Index (PI) stands for level of achievement in error reduction.

Table 3. An Integrated Language Intervention Chart

S/N	PRETEST(T_1)	LANGUAGE INTERVENTION(LI)	POST-TEST(T_2)		PROGRESS INDEX(PI)
001	Vowel & consonant sounds, synonyms, Summary, comprehension	Vowel & consonant sounds, synonyms, Summary, comprehension	ELIMINATED ERRORS	PENDING ERRORS	Rapid Gradual Slow No progress
			consonant sounds, synonyms, comprehension	Vowel sounds Summary,	
002	Idioms, registers, word stress, summary, synonyms, narrative essay	Idioms, registers, word stress, summary, synonyms, narrative essay	registers, word stress, synonyms, narrative essay	Idioms, summary,	Rapid Gradual Slow No progress
003	Vowel sounds, synonyms, clauses, phrases, summary, Letter writing	Vowel sounds, synonyms, clauses, phrases, summary, Letter writing	Vowel sounds, synonyms,	Clauses, phrases, summary, Letter writing	Rapid Gradual Slow No progress

As Table 3 indicates; student 001 had five (5) language problems, while student 002 had six (6) and also student 003 had six (6) language problems after the Pretest (T_1). The next step was the Language Intervention (LI) where language problems identified in the Pretest (T_1) were addressed. In order to test the efficacy of the Language Intervention (LI) after six (6) months, a post-test (T_2) was conducted. The post-test (T_2) showed that student 001 had remedied three (3) out of the five problems identified in the pretest (T_1). Likewise, student 002 who had six (6) identified language problems had remedied four (4) with two (2) pending problems. While student 003 had six (6) identified problems but was able to remedy only two (2) problems with four (4) pending. In calculating the progress index of the students the procedure followed was: Pretest (T_1) →Language Intervention (LI) →Post-Test (T_2) = $[T_1 \to LI \to T_2]$. The progress indexes were marked as follows; rapid, gradual, slow and no progress. The indexes counts provided data that were subjected to statistical analysis using the formulae: PI/TNI x 100/1. Based on the above computation; where PI represents Progress Index(R-rapid, G-gradual, S-slow, and NP-no progress) and TNI indicates Total Number of Indexes, the results show that the student 001 had a rapid progress index; student 002 also had a rapid progress index, while student 003 had a slow progress.

5. Conclusion

An Integrated Framework for Language Testing and Intervention proposes and illustrates how students' language errors can be used as a tool to foster language testing and intervention. The paradigm $[[T_1 \to LI \to T_2]]$ is a chain-reaction-process involving three uninterrupted procedures of testing, intervention and testing. The first procedure is the Pretest (T_1) which involves the use of

the COMFORMMARKCHART to develop an Error Profile Design (EPD). Language Intervention (LI) forms the second procedure; two components, the Language Teaching for Common and Specific Errors (LTCSE) and Language Task for Specific Students (LTSS) are employed in teaching. The third and last part of the procedure is the Post-Test (T_2) in which similar methods like the pretest are used with the addition of a Progress Index that serves as a tool of evaluation. Based on the specificity of the data and the result derived from a secondary school in Nigeria where the framework was experimented, the integrated framework proves an efficacious alternative to language testing and intervention.

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