

Single Subject Experimental Research: Measuring Speaking Proficiency in Teaching English as a Second Language

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This piece of Applied Linguistics research utilizes a variant of the “A-B” Single Subject Experimental Research design which is termed as a simple variant of the baseline and intervention model. It seeks to measure and analyse the speaking proficiency of two purposive samples, each comprising four adult Spanish-speaking learners in teaching English as a Second Language within the Anglophone Caribbean country of Barbados. With the intervention of strategies related to the Communicative Approach, each learner’s speaking proficiency is perceived as a complex process related to the development of the interrelated skills of communicative competence and is assessed through a prescribed set of performance-based criteria. In this environment, the research design facilitates the methodical application of the relevant research instruments as well as the systematic and rigorous collection and analysis of quantitative data. Thus, the results showed that the “A-B-B” variant of “A-B” Single Subject Experimental Research enabled the efficient measurement of each learner’s speaking proficiency based on the utilisation of communicative instructional strategies. Furthermore, the findings validated the worth and usefulness of procedures within this type of research design to provide comprehensive and conclusive data of the effectiveness of the intervention.

Keywords: *Single Subject Experimental Research; intervention; speaking proficiency; Teaching English as a Second Language; performance-based criteria; communicative instructional strategies*

Introduction

Background to the Problem

Applied linguists and theorists have established several methods and approaches for application in second language teaching. In this regard, Alice Omaggio-Hadley (2001) suggests with the development of several creative and new approaches, materials, teaching ideas and technological innovations there has been much scholarly debate about how best to use them. With the array of choices that exist in the language teaching domain, the ultimate goal of any instructor is to make the selection that best facilitates the type of instruction which would enable learners to attain the highest level of proficiency in the various skilled areas. By extension, the instructor’s aim is also to provide learners with the means to acquire the ability to use the target language for effective communication.

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Yet, even within this modern era, some instructors conclude that meaningful learning in a second language is achieved through engaging learners in intense reading and writing exercises based on the grammar of the target language. Accordingly, such instructors determine that the learners' level of proficiency increases as they acquire the knowledge and ability to use the structure of the language. For this reason, it is important to establish the fact that proficiency in a foreign or second language is no longer perceived narrowly as the acquisition of linguistic skills relating to grammar, vocabulary and pronunciation. This is mainly because research based on the work of several acclaimed linguists has proved emphatically that proficiency in a target language is a complex process that relates to the development of skills in communicative competence.

Such theorising is further substantiated by those linguists who specifically focus on research associated with the Teaching of English as a Second Language (TESOL). They indicate that the materials which are used in language development need to be comprehensible to learners so that they can meet their developmental, cognitive, social and cultural needs (Language and Literacy, 2006). Therefore, in contrast to those who persist in adhering to traditional pedagogy, some instructors subscribe to the conceptualisations of the aforementioned TESOL researchers. Moreover, the literature advocates that the process of learning a language entails far more than merely focus on linguistic competence and proficiency in the specific skills that comprise this component. A central feature is the suggestion that attention must be given to the acquisition of knowledge through experience as well to the areas included in communicative competence. In fact, Penny Ur (2002) states that instead of the idea associated with the audio-lingual principles which stipulates that learners should use language in controlled exercises until they have mastered the structures to a high degree, it is now accepted that some sort of meaningful oral practice should be included in language instruction from the beginning.

Likewise, in his contribution to the corpus of work on modern approaches to language teaching, Taylor (1987) focuses on the point that current literature stresses that learners need to acquire the target language by using it rather than to learn it by studying and they should be provided with more opportunities to interact directly with the target language. He further claims that the observation that many learners fail to acquire communicative competence in the target language even after years of instruction has prompted instructors to question the effectiveness of some approaches. Taylor's (1987) views draw attention to the fact that traditional grammar-based instruction has been widely criticised as being ineffective.

Undeniably, it is recognised that foreign and second language speakers are confronted with a particularly challenging task of aiming to develop proficiency within a language which is not their first language. As a consequence, the selected methods or approaches for instruction should assist in making this process as successful as possible for the learner. Accordingly, after careful analysis of the comments of Omaggio-Hadley (2001), Ur (2002) and Taylor (1987), as well as other noted linguists, the conclusion was made that there was a need for some instructors to revisit the use of the habitual and conventional strategies used in language teaching. It was also deduced that the existing research findings on the modern approach to language teaching, had implications for the form of instruction used within the six-week summer English programme at UWI.

Although no formal research was done to provide empirical evidence of the success or failure of the methods used in the university's programme, informal observation of the classroom environment and the form of instruction, as well as evaluation of the results of learners' discrete-point of reference tests during the years 2002 to 2004, revealed some significant information. As a result, one of the areas of focus was the instructors' predominant use of activities and tasks

related to traditional language methods such as the Audiolingual Method and the Grammar Translation Method. The related activities appeared to be monotonous and rigid and the classroom atmosphere seemed to lack excitement and enjoyment for the learners. This meant that several of them exhibited a diminished level of interest and enthusiasm during the sessions. In addition, a major development was that many of the percentages attained by learners in the speaking final achievement tests indicated clearly only marginal progress in proficiency. Therefore, as there was evidence of a measure of retardation in the progress of some learners in attaining the maximum levels of proficiency in the oral language skill, a primary concern was that they also appeared to lack the ability to function as efficient communicators in the target language.

In this regard, from the “rich” literature that emerged based on the body of work of several linguists, there was information about a more modern approach to language teaching known as the Communicative Approach. The fundamental principles of this approach presented it as a feasible alternative to the usual form of instruction which was used within the summer English programme. Moreover, the writings indicate that the Communicative Approach possesses some similarity to the whole language approach to language teaching in which language learning is conceptualised as an interactive process. For that reason, learners are allowed to manipulate the language and interact with it in meaningful and interesting ways with activities that are authentic and contextually rich. When this communicative interaction materialises, the language function is viewed as purposeful and real to learners. Researchers have also discovered that with instruction based on the Communicative Approach learners are facilitated with the necessary knowledge and ability to improve their proficiency level and sustain a satisfactory performance in their language output. Needless to say, all of those aforementioned foci seemed to be precisely what were necessary for the learners in the UWI summer English programme to attain the optimum success.

In spite of the fact that the aforementioned views were not based on experimental data, consideration must be given to the comments of researchers of TESOL who affirm that a preponderance of isolated language skills as an intense language programme which is not grounded in meaningful instruction does not foster the overall proficiency skills. They also claim that there is a need for a balanced programme that would teach language skills within the context of meaningful interaction with the material (Language and Literacy, 2006). To buttress the foregoing ideas, most researchers are of the view that learners who are acquiring a foreign or second language need a strong supportive context for learning in which they can experience the language without fear of failure and in which the acquisition of proficiency in the second language is regarded as an exciting and meaningful activity.

The linguists’ comments reinforce the fact that the information gathered from the informal observation of the teaching-learning environment within the six-week summer programme could not be ignored. Consequently, it was hypothesised that foreign language teaching based on a method which focused more on meaning and the appropriate use of oral language would provide learners with the knowledge and ability to achieve the maximum potential in their language output. Furthermore, for each year of the six-week summer English programme at the UWI, learners frequently expressed a special need and preference to increase their knowledge and proficiency in speaking skills. So, as alluded to earlier, it was deduced that the language teaching and learning environment which was necessary to facilitate their needs required much more than a traditional approach; learners needed to be exposed to instruction which enabled them to engage in real and meaningful situations in which they could interact

among themselves as well as with speakers of the target language. Thus, it was deemed necessary for any model of language teaching which aimed to develop proficiency in speaking skills in English among adult Spanish-speakers to entail a component in which learners were exposed to a language-rich environment that appropriately utilises meaningful content based on the use of authentic materials.

A productive language programme should focus on using the most effective approach which would equip learners with the necessary skills to use the target language efficiently for the principal function of language, which is communication. Indeed, each learner's proficiency in oral communication relies substantially on the ability to listen and comprehend. Even with that acknowledgement, over the years, the teaching of the oral skills and the interrelated listening skills, "have not figured so centrally in second and foreign language pedagogy" (Larzaraton, 2001, p. 103). Such linguists consider this situation to be an oversight and one that retards the progress of language learners. In fact, like listening skills, speaking skills are considered to be the foundation of language learning and learners' proficiency in this area is paramount to facilitate acquisition of the target language. Hence, it was deemed worthwhile to examine and measure the oral language behaviour of each of the eight participants that comprised the two subgroups of four participants within the two study samples in relation to the application of the treatment and the conditions under which it was administered. Accordingly, the "A-B-B" variant of the "A-B" Single Subject Experimental Research design was deemed most adequate to facilitate the efficient measurement of the each participant's speaking proficiency, based on the utilization of communicative instructional strategies.

A brief history reveals that the inaugural summer exchange language programme between the Colombian institutes and the Mona Campus of Jamaica commenced in 2000 after the signing of a collaborative academic agreement in Kingston Jamaica on 16th February that same year between The University of the West Indies (UWI) and The Colombian Institute for the Development of Higher Education (ICFES). Then in 2001, the programme expanded to include the Cave Hill Campus in Barbados and the St. Augustine Campus in Trinidad. As a result, each summer, students from the Spanish courses at the three campuses in the West Indies travelled to Colombia to participate in the summer Spanish programme and university lecturers from the various campuses in the cities of Bogota, Medellin and Manizales of the 'Universidad Nacional' (National University) in Colombia, journeyed to Jamaica, Trinidad and Barbados as students in the summer English programme.

Research Problem

The purpose of this research is to analyse the efficacy of the "A-B-B" variant of the "A-B" Single Subject Experimental Research in measuring the speaking proficiency of each adult Spanish-speaker learning English as second language, based on the application of instructional strategies associated with the Communicative Approach to language teaching within the six-week English summer course, in the Anglophone setting at The University of the West Indies, Cave Hill Campus.

Research Questions

Data from the oral language behaviour of each of the eight participants that comprised the two subgroups of four participants within the two study samples were measured and analysed to determine the following:

- 1 Does the “A-B-B” variant of the “A-B” Single Subject Experimental Research enable the effective measurement of the speaking proficiency of each adult Spanish-speaking learner within a six-week English programme?
- 2 Is the “A-B-B” variant of the “A-B” Single Subject Experimental Research efficient to analyse the effectiveness of instructional strategies associated with the Communicative Approach on the speaking proficiency of each adult Spanish-speaking learner within a six-week English programme?

Research Methodology and Approach

Research Design/Framework

The research employed the A-B design of Single Subject Experimental Research (S.S.E.R.) which is also termed a baseline and intervention model. The research focused on the treatment was the systematic application of instructional strategies linked to the Communicative Approach, the independent variable, on the speaking proficiency of adult Spanish-speaking learners of a second language, the dependent variable. Hence, it was determined that the implementation of S.S.E.R. facilitated the systematic collection and analysis of quantitative data to determine the existence of a causal or functional relationship between the independent variable and the dependent variable.

As there are challenges in establishing a functional link between the application of the independent variable and any changes that may occur with the dependent variable when using the A-B, S.S.E.R. design, there was utilisation of a baseline phase with six data collection points and a ‘formative intervention phase’ and ‘summative intervention phase’ each administered within eight day durations. Consequently, these procedures facilitated the analysis of the results at each stage to determine if any effect which occurred at the first treatment phase was continued or maintained within the second treatment phase. Furthermore, it was judged that the use of data from the two treatment phases served to strengthen and validate any conclusions about the level of effectiveness of the independent variable on the dependent variable.

By the same token, because replication is considered a vital part of S.S.E.R. research (Gay & Airasian, 2003), it was resolved that the simultaneous replication of the application of the intervention on two different study samples, made up of four participants, provided eight separate collections of data for analysis so that the total collection could be perceived as eight individual studies. Furthermore, the procedure was carried out under similar conditions at the same location, in two different time periods and applied within the same six-week duration each year with the use of teaching methods and strategies based on the Communicative Approach. These conditions established replication of the research and served to remove any existing threat to external validity. Commensurately, the combined measures guaranteed the level of verification necessary to authenticate the predictions made within the baseline phase. In addition, they intensified experimental control and validated any conclusions of a functional relationship between the independent variable and the dependent variable.

Based on the implementation of a baseline phase and two intervention phases, each year the design conformed to the variant ‘A-B-B Single Subject Experimental Research’. The procedure is symbolised in Figure 1.

Figure 1: Data points for baseline phase A and intervention phase B-B.



The Study Sample

A probability sampling procedure was used to randomly select two groups of eight learners classified as stratified samples with varying levels of proficiency in English ranging from *novice* through to *competent* from among the cohort of eleven during 2005 and 2006. Accordingly, Gall and Borg (1989) point out that stratified sampling includes several cases at defined points in variation with respect to the phenomena being studied which allows insight into each type as well as into the variations that exist. Then, at the baseline phase, data were analysed to evaluate the learners' proficiency levels and each year four learners who demonstrated a stable trend in their speaking pre-intervention behaviour were selected.

At that stage, although each sample included all the participants available, it was restrictive to a very specific population which comprised small numbers. As a result, it was categorised as a purposive sample in which the participants' selection was based on some existing differences related to maximum variation. In this regard, Patton (1990) states that maximum variation sampling is the type of purposeful sampling that describes central themes and focuses on a great deal of participant variation. When this procedure is applied with single subject research, after the baseline data are analysed, the researcher can purposively select the participants who are best representative of how the variation has influenced the behaviour. Therefore, purposive maximum variation sampling was carried out for this research and the participants were assessed to be "information-rich" cases with variations in age, sex and proficiency in speaking. Those conditions were favourable to provide detailed analyses of the effectiveness of the Communicative Approach on each participant's speaking proficiency. This meant that the selection of the participants in sample one and two was based on the following criteria:

- a baseline data which represented a stable pre-intervention pattern of proficiency in speaking.
- b language behaviour which demonstrated a need for instruction to improve proficiency in speaking.

Instrumentation

The Diagnostic Test

For two days prior to the commencement of the language programme, a set of diagnostic speaking tests in the form of an Oral Proficiency Interview was the first research instrument used to gather pre-intervention data about each learner. It was a fifteen minute face-to-face interaction between each participant and the two interviewers which was administered to identify each participant's language problem and its intensity. Hall (2001) suggests that this standardised measuring tool, known as the Oral Proficiency Interview (OPI), was designed to evaluate oral abilities in the foreign language. She states that the OPI was formulated as a result of concern for an instrument which focused on measuring performance, based on communicative skills. Accordingly, as the principles associated with the Communicative Approach are directly related to the concept of communicative competence, it was concluded that the purpose of the research

was better served with the use of Hall's performance-based guidelines related to Situated and Transformed Practice Activities. The guidelines for the categories within this instrument are based on Hymes' (1986) linguistic concept of communicative competence.

Communicative principles are related directly to the more recent model of performance-criteria with a focus on communicative competence so that there is a shift in emphasis from specific grammatical skills to a more modern style of mark category which covers all aspects of a speaker's performance and requires consideration of the speaker and the context, as well as the appropriateness of what is said (Hall, 2001). Based on this conceptualisation, the criteria in Hall's performance-based instrument which relate specifically to oral proficiency were adjusted and placed within an instrument termed an 'Oral Assessment Sheet' which was used to record each participant's quantitative data acquired from the results of the OPI.

Table 1 is an amended version of Hall's rubric of a performance-based measurement for Situated and Transformed Practice Activities modified into an Oral Assessment Sheet using a rating scale. The Table also sets out the proficiency levels, the categories that comprise communicative competence and the criteria in which the learners are measured.

Table 1

Participant's Oral Assessment Sheet Based on Hall's Rubric for Evaluating Performance in Situated and Transformed Practice Activities

MARK RANGE & PROFI- CIENCY LEVEL	AREAS OF COMPETENCE				
	DISCOURSE COMPETENCE	LINGUISTIC COMPETENCE	ACTIONAL COMPETENCE	SOCIO- CULTURAL COMPETENCE	STRATEGIC COMPETENCE
1-4 Novice	Limited ability to interact. Only a few utterances are coherent	Limited ability of basic vocabulary and grammar.	Very basic understanding of communicative activity.	Very basic understanding of social norms	Experiences difficulty in understanding
5-8 Intermediate	Some ability to understand, select and arrange utterances	Some ability to use the conventional grammar and vocabulary.	Some understanding of the typical speech acts.	Some understanding of the norms and expected behaviour.	Some ability to understand but often asks for clarification.
9-12 Competent	Able to sustain interaction through the appropriate interpretation,	Ability to use the conventional vocabulary and grammatical structures	Has a good understanding of the typical speech acts	Understands norms and expected behaviours.	Some understanding of the ability to use strategies such as circumlocution, and approximation
13-16 Distinguished	Clear understanding of interaction, able to initiate and sustain the interaction	Able to use and elaborate on conventional vocabulary and grammatical structures.	Very good understanding of the typical speech acts associated with the interaction	Good ability to use norms, and extralinguistic factors to contribute in the interaction in expected ways	Appropriate and effective use of strategies for resolving communication difficulties
17-20 Expert	Can create and sustain a cohesive interaction	Precise use and understanding of the grammar, vocabulary	Can interpret, respond to and create a variety of speech acts	Ability to use the norms and extralinguistic factors to contribute to the interaction in expected and unexpected ways	Appropriate and effective use for resolving communicative difficulties. Can anticipate possible misunderstandings and resolve them

Source: Joan Kelly Hall. *Methods for Teaching Foreign Language: Creating a Community of Learners in the Classroom* (New Jersey: Prentice, 2001)

Along with the categories relating to communicative competence, the Oral Assessment Sheet presented the hierarchic order of proficiency ranging from the lowest level, Novice, through to Intermediate, Competent and Distinguished, with the highest level, Expert. A rating scale was formulated to provide a series of brief descriptions of different levels of language ability and capabilities of the typical learner so that the assessor can decide what level or score to give each learner (Underhill, 1989). So, the OPI was used to measure each participant's ability to effectively use all the components of communicative competence within the interactions based on the completion of three oral tasks and a numerical score was awarded for the performance which was assessed according to the criteria in the rating scale. The first task functioned as a

“warm-up” activity, the second focused on competency to perform a communicative task successfully while the concluding task aimed at relaxing the participants.

To counteract the problem of lack of reliability associated with evaluating the OPI, two interviewers assessed each participant. Their scores were combined and divided by two and the final raw score for each participant was converted to an average score which was further converted to a percentage. In the lower range, a score of zero (0) was given to participants who demonstrated no functional proficiency in any of the areas. A raw score of twenty was allocated as the highest mark that the participant could receive in any of the categories. As there were five categories, the final score of 100 marks was reduced to a score out of 20 marks. The results were placed on the Oral Assessment Sheet and were analysed to provide quantitative data for each participant.

Table 2 highlights the scores and proficiency levels of Participants C and B in sample one and participants E and G in sample two.

Table 2

Participants’ Percentages and Averages and Oral Proficiency Levels

PARTICIPANT	PERCENTAGE	AVERAGE	PROFICIENCY LEVEL
2005			
B	25	5/20	Intermediate
C	45	9/20	Competent
PARTICIPANT			
2006			
E	18	3.6/20	Novice
G	31	6.2/20	Intermediate

Based on the results of the 2005 Diagnostic OPI, **Participant B** who received an average score of 5/20, which was converted to 25%, was deemed to have an Intermediate Level proficiency. **Participant C** with an average score of 9/20 and a percentage of 45 was considered to be at a competent level of proficiency.

In 2006, **Participant E** got an average score of 3.6/20 which was 18% and he was assessed to be at the Novice proficiency level while **Participant G** had an average score of 6.2/20 and 31 % so that he was evaluated to have Intermediate level competence.

Data Collection Procedure

Collection of the data utilised the quantitative mode primarily and qualitative data were used to present details of the general trends indicated by the quantitative data as well as an overall description of each participant’s learning environment prior to and during the intervention. Table 3 shows the quantitative data collection phases as well as the instruments and the quantity of each data collection instrument for the two years of the research.

Table 3

Phases of Quantitative Data collection: Measurement Instrument and Quantity

Baseline Phase	Formative Intervention Phase	Summative Intervention Phase
Diagnostic Speaking Test(1)	Formative Speaking Tests (3)	Summative Speaking Tests (3)
Needs Analysis Questionnaire (1)	Modified COLT Observation	Modified COLT Observation
Proficiency Speaking Pre-tests (3)	Schedule.	Schedule

Within the intervention phase, various aspects of oral interaction in relation to the appropriate use of the target language, participation in the activities and utilisation of materials were assessed and the general trends indicated from the Diagnostic Tests and Pre-tests were also sources of data. In addition, the data from the Observation Schedule were used to supplement and enhance the results from the total measurement points.

Table 4 highlights the schedule for activities, instruction and data collection during the pre-intervention and treatment phases of the study. The Table also shows the type of instruction and the duration for each session.

Table 4

Activity/Instruction Type and Approximate Time Periods within the Three Research Phases

Year	Phase	Activity/Instruction Type	Time Period - hr/min
2005 and 2006	Diagnostic Phase	Diagnostic measurement	6hr 40 min
2005 and 2006	Pre-instruction	Three Speaking Proficiency Tests	3hr
	Baseline Phase	Needs Analysis Questionnaire	1hr 20 min
2005 and 2006	Baseline	Baseline measurement	11 hr 20 min
2005 and 2006	Formative instruction	Formative speaking activities	13 hr 30 min
2005 and 2006	Summative instruction	Summative speaking activities	13 hr 30 min
2005 and 2006	Intervention instruction	Speaking activities	27hr
			Total 54hr

Table 4 shows the modules of diagnostic testing and pre-testing took 6 hours and 40 minutes, and 11 hours and 20 minutes respectively each year. There were 27 hours allocated to instruction in the dependent variable in each year for a total of 54 hours. Every participant within the two study samples was exposed to daily sessions of instruction of approximately ninety minutes with the systematic application of the independent variable on the dependent variable.

Formal instruction comprised sessions of conversation, discussions and oral presentations as well as the field trips. As the structure of the course did not facilitate separate teaching of the participants they were merged with the other language learners in the cohort. However, that condition was not deemed to influence the validity of the research negatively as both the participants and non-participants were exposed to the same course content, activities and materials. Furthermore, every aspect of instruction was administered using procedures related to the Communicative Approach and each participant's language behaviour was systematically measured, recorded and analysed according to the stipulations of the "A-B-B" Single Subject Experimental Research.

Table 5 presents the instruction schedule with the dependent variable and highlights the schedule for the application of the intervention.

Table 5

Speaking Schedule and Intervention Schedule for 2005 and 2006

Time Per Session	Monday	Tuesday	Wednesday	Thursday	Friday
2005 1hr 30min	Conversation	Conversation		Conversation Field Trip	Conversation Discussions Presentations
2006 1hr 30min	Conversation	Conversation	Conversation	Conversation Field Trips	Conversation Discussions Presentations

The Baseline Phase

As a result of the constraint of the limited duration of six weeks for instruction each year it was determined that one session of baseline measurement within eight days of repeated applications of the measurement using three data collection points was adequate for the learners to demonstrate a consistent and definite pattern in speaking. That procedural framework was used with three Pre-tests in speaking administered to each study sample in the first stage of the “A-B-B” variant of the S.S.E.R. before the participants were exposed to any form of treatment. As data of the participants’ behaviour in the dependent variable were collected the results were graphed immediately on a line graph to provide a visual description and the information was consistently examined to focus on the visual trend as well as the level and variability.

In this regard, as the visual representation of each participant’s performance revealed scores which fell within a narrow range, this demonstrated observable stability in the oral communication. The stable baseline data predict future behaviour and are “the foundation on which single subject evaluation is grounded” (McCormick, 1995, p. 27). This baseline period was distinguished as “A” and the data were analysed to make predictions about each participant’s behaviour to determine the trend or direction of the participant’s speaking proficiency before the treatment was applied, assess the baseline proficiency in speaking and inform decisions about the procedures for the next phase.

Table 6 presents details of the scores obtained by Participants B, C, from sample one and **Participants E and G** from sample two in each of the five categories during the three Oral Proficiency Pre-tests.

Table 6

Participants Scores for Each Category in Oral Proficiency Pre-Tests for 2005 and 2006

Participant 2005 Pre-tests	Discourse Competence			Linguistic Competence			Actional Competence			Sociocultural Competence			Strategic Competence		
	1 st	2 nd	3 rd	1 st	2 nd	3 rd	1 st	2 nd	3 rd	1 st	2 nd	3 rd	1 st	2 nd	3 rd
B	5	6	6	5	5	6	5	6	6	5	5	4	5	5	5
C	8	9	10	8	9	9	8	8	8	8	8	8	8	9	9
Participant 2006 Pre-tests															
E	3	4	3	3	4	3	3	3	3	2	3	3	3	3	3
G	5	7	7	6	6	7	5	6	6	5	5	5	6	6	5

According to the data, in 2005, Participant C had a range of scores of 8/20 to 10/20. There was also some similarity in the scores of **Participant B**, in 2005, and **Participant G**, in 2006 whose range was 4/20 to 7/20. In the first year **Participants E**'s scores ranged from 2/20 to 4/20.

Table 7 shows the assessment of the participants' proficiency levels based on the percentages from the Oral Proficiency Pre-tests attained during the three data collection points in the baseline.

Table 7

Participants' Percentages for Oral Proficiency Pre-Tests and the Proficiency Levels at the Baseline Phase

Year	Participants	Oral Pre-test 1 Percentage	Oral Pre-test 2 Percentage	Oral Pre-test 3 Percentage	Proficiency Level
2005	C	40	43	44	Competent
2005	B	25	27	27	Intermediate
2006	G	27	30	30	Intermediate
2006	E	14	17	15	Novice

After the analysis of baseline data from measurement of the dependent variable, each participant maintained a steady pattern with scores in Pre-tests in the oral language. These criteria determined their selection as the two purposive samples. In addition, when a comparison was made between the results of the Diagnostic Tests and the Proficiency Pre-tests, there were no significant changes in oral proficiency levels of the four selected participants. This meant that the results of the proficiency levels of the participants based on the pre-tests mirrored generally those from the diagnostic data and the judgement was made that the selected participants exhibited consistent patterns in their performance in the dependent variable during the pre-intervention period.

At the last data collection point none of the participants' performance indicated an increasing trend in the language behaviour. Therefore, the results suggested that the stability in their patterns was favourable for the application of the independent variable. The condition was also conducive to make the prediction that application of the independent variable could result in an increase in the proficiency level in the dependent variable. Accordingly, the participants were

selected as the two Stratified Purposeful and their Pre-test results in the dependent variable was the baseline data as designated within the “A-B-B” Single Subject Experimental Research.

The Intervention

Within this treatment phase identified as “B-B”, numerical and graphical data were used to measure and evaluate each participant’s language behaviour in the dependent variable. Accordingly, in a foreign language teaching-learning environment that focuses on the Communicative Approach the extensive and intensive use of language for communication is of major importance and priority is given to the use of language for meaning and appropriateness. For these reasons, during the research, major focus was placed on the sociocultural context in which the language was used and communication was paramount so that the communicative tasks were categorised as focused on “form in communicative contexts” (FCC), “meaning in interaction” (MI) or “meaning in transaction” (MT).

FCC activities were formulated to make practice in the structure of the target language real and meaningful. According to Flyman-Mattsson (2007), such activities are dominated by interaction which is directed towards practice of some specific grammatical area. She emphasizes that with this type of task learners are often unaware that as they learn the skill of speaking the target language they are being taught grammar as well. Moreover, Lightbown and Spada (1993) express the view that ... in more communicative settings, meaning is emphasized over form, a larger variety of discourse types are used and language input is simplified through contextual cues (as cited in Flyman-Mattsson 47: 39, 2007). Consequently, activities formulated and categorised as MI and MT were geared towards enhancing the communicative and interactive features of each participant’s language.

Therefore, while participants engaged in the MI activities the importance of using the correct form of the target language was not negated or trivialised and major focus was on their ability to explore the language and use it appropriately within various social contexts. Furthermore, MT activities afforded participants the opportunity to use the language for interaction that facilitated their skills for completing some form of transaction. The variation in the purpose of the interactive activities revealed their proficiency in all five components of communicative competence. In addition, authentic materials were used for these activities and participants were placed within the most effective group pattern to facilitate the “richest” interactions in the interactional and transactional modes. The activities allowed them to use language in response to utterances which occur within daily routines and to practice various aspects of communicative competence meaningfully and realistically as stipulated by the principles of the Communicative Approach.

At this stage, the Oral Assessment Sheet’ was used again to record each participant’s quantitative data acquired from the results of the OPI. This meant that each participant’s results from the two intervention phases were represented visually on line graphs and the analysis was based on a comparison of these representations at the baseline phase and the treatment phase. The data from both phases were also statistically analysed and compared through the simple time series analysis procedure which focuses on whether there is a visible or marked trend in the sequential measurement.

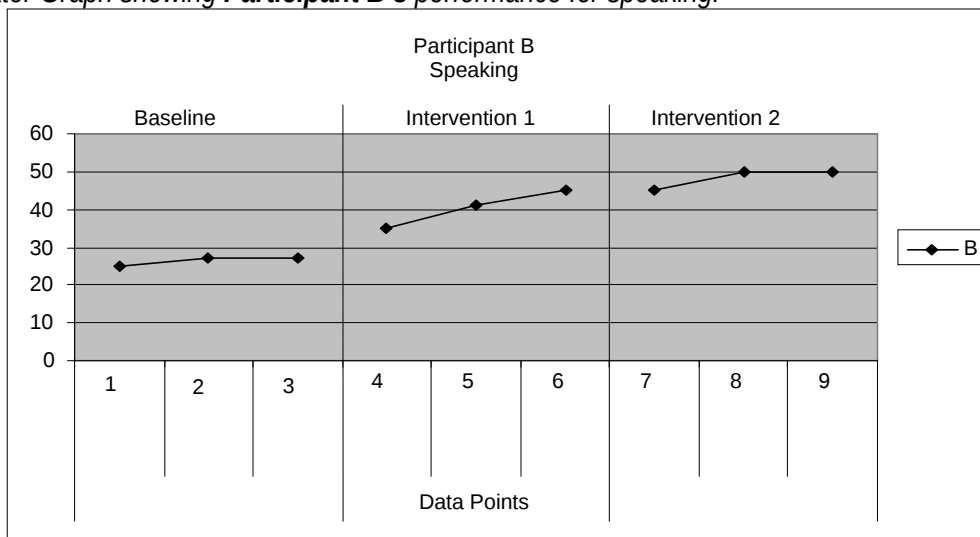
Data Analysis

The numerical and visual data of the baseline phase and the intervention allowed for a comprehensive comparison of the each participant's performance to evaluate the effectiveness of the intervention. According to Gay and Airasian (2003), "data analysis in single subject research is typically based on visual inspection and the analysis of graphic presentation of results".

Presented below are the data for two participants during both years of the research.

Figure 2

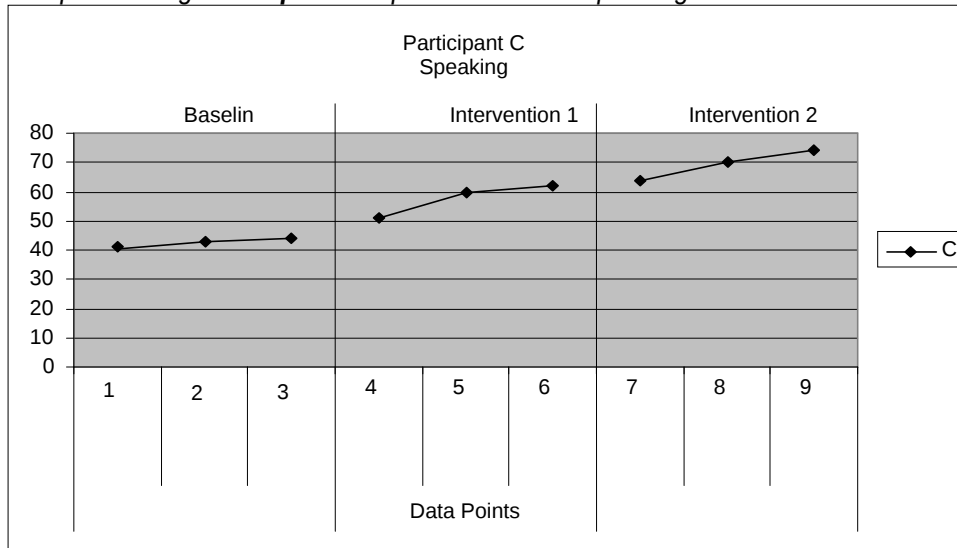
A Scatter Graph showing **Participant B's** performance for speaking.



An analysis of **Participant B's** performance for the variable indicated a slight movement upwards from data point 1 to data point 2. Her performance remained static at data point 3 at the baseline phase which suggested a stable pattern. There was an increasing trend in **Participant B's** performance in the intervention phase from data point 4 through to data point 8. There was no variation in her performance at data points 8 and 9, indicating that her level of improvement remained fixed for these last two data points. As there was no downward or decreasing trend in her performance there was lack of evidence to indicate that some deterioration in her oral language behaviour was occurring. Conversely, the results suggest that she maintained the level of improved performance. Overall, the data revealed a marked improvement in **Participant B's** proficiency at the intervention phase; this improved to Competent proficiency (45%) when compared to her performance at the baseline phase- intermediate proficiency (26 %).

Figure 3

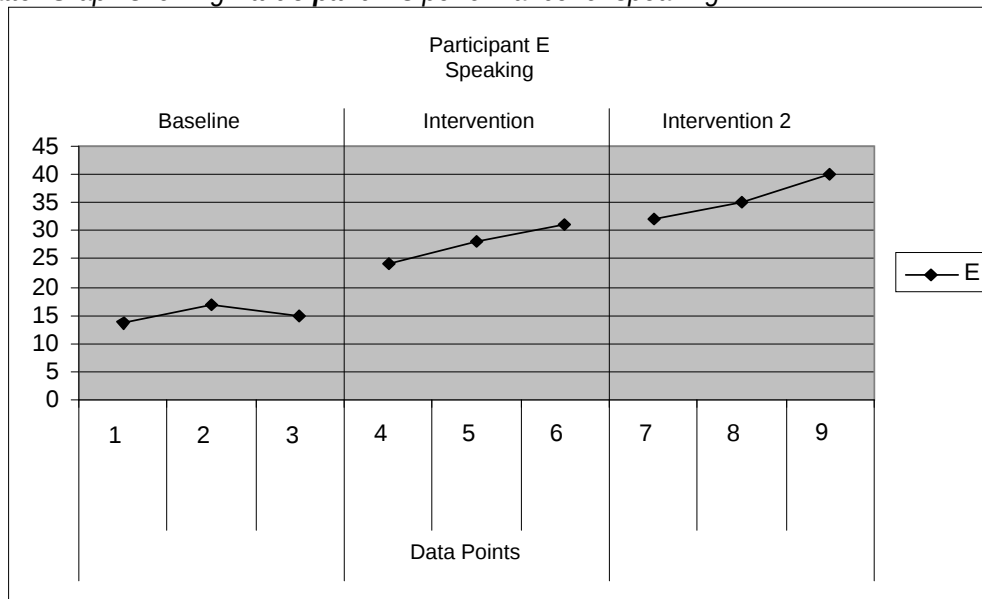
A Scatter Graph showing **Participant C's** performance for speaking.



Participant C had a slight upward movement in his performance at the baseline phase in the variable at data points 1 and 2. Although his performance showed a marginal increase of one percentage point from 43% at data point 2 to 44% at data point 3, a thorough analysis of the scores suggests that such a small increase could not be termed a trend. Therefore, **Participant C's** performance at the baseline phase was predicted to produce percentages within the narrow range of 40 to 44%. This was determined to be his stable pattern. In the intervention phase, his improved performance resulted in an upward trend, based on an increase in percentages from data point 4 through to data point 9. Although **Participant C** showed a trend in his performance of a marginal increase of two percentage points from data point 5 with 60%, to data point 6 with 62%, and data point 7 with 64%, his progress was continuous. His level of improvement increased at data points 8 and 9. When his performances at the baseline and intervention phases are compared the results indicate a definite enhanced proficiency level in speaking. Hence, this satisfies the prediction at the baseline that **Participant C's** performance was consistent, and suitable for intervention. His proficiency improved from 42.5% Competent at the baseline to 74% Distinguished at the intervention.

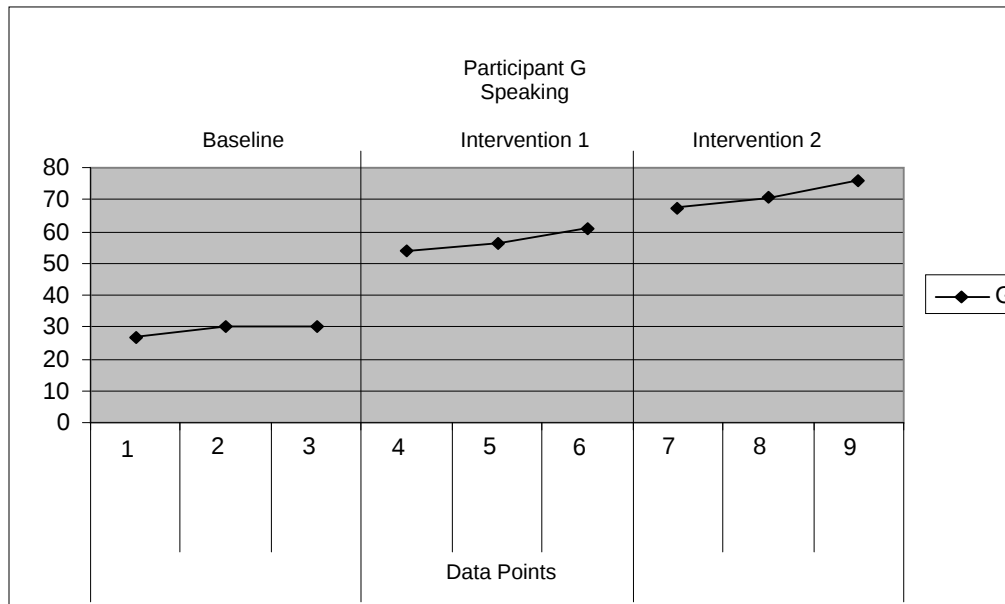
Figure 4

A Scatter Graph showing **Participant E's** performance for speaking



In the second study sample, **Participant E** had a minimal increase in scores from data points 1 to 2 for the dependent variable, resulting in a slight upward movement. He then attained a smaller percentage at data point 3 which caused a slight downward movement and indicated a marginal decline in his performance. Therefore, the range of 14 to 18 percent was determined to be his consistent baseline pattern. **Participant E's** percentages at all the data points in the intervention phase showed a steady upward trend from the first data point to the last data point. At data point 6, **Participant E** attained 31% and at data point 7 he received 32%. This slight increase of one percent indicated marginal improvement in his performance. Significantly, a comparison of the data from the baseline phase with the intervention phase show that application of the treatment resulted in an improved performance and a higher level of proficiency in oral communication. At the baseline 15.5% placed him at Novice proficiency while after the Intervention with 32% he improved to Intermediate.

Figure 5
A Scatter Graph showing **Participant G's** performance for speaking.



At the baseline phase **Participant G** had a slight upward movement in his performance at data points 1 and 2 and this remained static at data point 3. As a result, it was concluded that his performance ranged between 25 and 30 percent, and this was his stable pattern. The data indicate that during the period of the application of the independent variable, there was a constant upward trend, validating judgement of an improvement in his performance from the first data point to the last data point. A comparison of the baseline and intervention data also revealed significant improvement in **Participant G's** proficiency in oral communication from 29% at the baseline which indicated intermediate proficiency level to 64% after the intervention and advancing to distinguished.

Conclusions

An analysis of the graphic data in **Figures 2, 3, 4 and 5** for sample one and two respectively, suggest that with the application of the treatment on the dependent variable, there was an immediate and rapid change in the participants' oral language proficiency. At the first data point at the intervention phase, each participant showed an increase in the percentage attained from the last data point at the baseline phase. The results also indicate that the participants increased their percentages from the Formative Intervention Phase to the Summative Intervention Phase and generally from data point to data point. This suggested that the application of the intervention on the dependent variable was taking effect and influencing the increasing trend of improvement in their speaking proficiency. Thus, the "A-B-B" variant of the "A-B" Single Subject Experimental Research was effective in measuring the speaking proficiency of each adult Spanish-speaking learner in the UWI's six-week English programme.

Researchers such as Wasson (2000) are of the view that use of S.S.E.R. design is the most scientifically valid method of making the appropriate decision for our learners. Likewise, McCormick (1995) asserts that with implementation of the necessary control procedures, the internal validity of single-subject experiments is often very strong and the experimental logic entails the three elements of prediction, verification and replication (McCormick, 1995). It is

significant that all three of these constituents were accounted for in the “A-B-B” variant of SSER applied in this research, so that validity and reliability were assured. Hence, the evidence confirms the worth and success of the application of the “A-B-B” variant of the “A-B” Single Subject Experimental Research in analysis of the effectiveness of communicative instructional strategies in language teaching strategies, methods and approaches in Applied Linguistics.

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