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Developing Speaking Competence of Professional Undergraduate Students Through Socratic Questing Approach

M Raju[1], Lavanya Sivapurapu[2], Mrunalini Sasanka[3], Thirupathi Thumma[4]
[1&2] K L E F (Koneru Lakshmaiah Education Foundation) ,Deemed to be University, Vaddeswaram,Guntur,AP.
[3&4] B V Raju Institute of Technology, Narsapur, Telangana
[1]madugularaju83@gmail.com
[2]drlavanyasivapurapu@gmail.com
[3]mrunalini.b@bvrit.ac.in,
[4]thirupathireddy.t@bvrit.ac.in

Abstract : This research article primarily focuses on how speaking competence can be enhanced by Socratic Questioning Approach. There are several methods and approaches formulated and applied at different levels to enhance speaking skills, but critical thinking and questioning attitude is still lacking at undergraduate levels. 32 heterogeneous professional undergraduate students (Creswell, 2018, p.157) have participated in a five months twenty-one days intervention study (Yin,2009 & Stake,1995, p.123) to know the desired outcomes. The pre and post-tests results have considerably and possibly been recorded during the study. CEFR (Common European Framework of References) CAN DO descriptors (Council of Europe, 2018 p.171), are adopted to assess the speaking competence. The pre and post-tests have been assessed based on CAN DO Descriptors. After employing Qualitative Research Methodology (Creswell, 2018) to analyze the data obtained through both succeeding and preceding tests, significant results have possibly been founded and observed that professional undergraduate students have considerably enhanced their speaking abilities and competences. CEFR levels of individual performance and variations have scrupulously been observed. This research article ontologically asserts that professional undergraduate engineering students can enhance speaking skills by thinking critically and applying Socratics Questioning Approach (Paul,2006) implicitly and explicitly.

Keywords : CEFR, Critical Thinking, Intervention Programme, Socratic Question Approach, Speaking Skills.

1. Introduction

SOCRATIC Questing Approach (Paul, R., & Elder, L, 2006 & 2019) is not a new framework to the modern and sophisticated world. It was, as a matter fact, born in Greek 2400 years date back, and it was the brainchild idea of the Greek philosopher and teacher named Socrates. Socrates was a great thinker and he used to make his disciples to think and answer for questions, and making them to identify possible ways to solve the given problem (Carey, T.A., 2004). The brainchild of Socrates is "if you deny, I affirm, if you affirm, I deny". This is the core idea of Critical Thinking. Socratic Questing Method (Paul,2006, p. 4). It is very tough to guide or guess being a good critical thinker which keeps things always to question in a penetrate or deeper ways. Questioning (Paul,2006, p.5) is very easy but the question which makes people to think and act very wisely and

Lavanya Sivapurapu
K L E F (Koneru Lakshmaiah Education Foundation),
Deemed to be University, Vaddeswaram,Guntur,AP.
drlavanyasivapurapu@gmail.com

precisely is more important. It is undoubtedly emphasizing that those who are truly interested in critical thinking (Facione., 2011) would also have a sense of deep questioning stance at all levels in the world. Socratic question is the basic cognitive idea of critical thinking. Deep and penetrated SQA will lead to critical thinking. In fact, SQA is the fundamental and basic to form (Paul,2006) the critical thinking abilities in any field or domain.

One has to identify and practice applying the components of one's own art. It is undoubtedly impossible to apply SQA without understanding the elements of it (Paul,2006, p.5). Questioning strategies are very essential while applying SQA to enhance speaking skills before developing thoughts and concepts. SQA speaking strategies are to be underlined and imbibed in critical thinking frame work (Paul,2006).

To apply in a better and possible way, contextualization and contextual thinking is to be adopted and then formulated in the daily life. Through contextualization, SQA and SQT (Socratic Questioning Technique) would be inculcated to get impeccable outcomes. Questioning oneself about the thinking, the thought and concept (Vygotsky, L, S.,2012) in a contextualized way would enhance speaking abilities. While participating in the activities, the basic components, that are to be adopted in SQA, are illustrated here.

1. Critical Thinking

2. Socratic Dialogue

3. Mechanics of Socratic Dialogue

4. Importance of questioning

5. Link between SQA and Critical thinking – Dr Paul and Linda Elder, The Thinking Guide to The Art of Socratic Question Method (Paul, 2006).

Socratic Questioning makes learners to dig deeply to get the accurate, precise and clear answers, never makes the learners rest on them, and conceptionally penetrates to involve and identify to get accuracy, learners can be experienced with a great amount of command and sense of understanding in critical thinking (Paul, 2006 &2019). Proficiency and accuracy (Counsel of Europe, 2018) would naturally drift amongst learners as they apply and practice SQA in daily communicative activities to have the perfect outcomes.

The great advantage with SQA is that it enables learners to think and understand themselves and apply it before speaking. They can speak with deep thinking and share the perfect outcome till they achieve what they want. It ignites learners to think in a broader perspective (Paul,2006, p.10). Question method is embedded in the Blooms Taxonomy levels. The 5th level in Blooms Taxonomy (Bloom, B., 1956) is analyzed, after thinking of it, it would be analyzed very meticulously. Hence the question method is embedded directly in the Blooms Level. Learners' thoughts are very scrupulously observed with Socratic Questioning Approach (Pal,2006 & 2019) and it is associated very closely with basic concepts to develop in any field.

2. Review Of Literature

It significantly provides the theoretical underpinnings to the study and reviews related literature relevant to the study. It discusses different strategies and techniques for teaching speaking skills and highlights the importance of critical thinking and its application in speaking effectiveness of critical thinking and higher-order thinking (HOT) (Forehand, 2005) in teaching English in general, and speaking skills in particular. It also provides review literature on thinking, critical thinking, Paul-Elder Critical Thinking Model, and speaking skills.

Building on the work of Barnett (1997), the suggestion is that critical thinking in higher education has at least six distinct, yet integrated and permeable, dimensions “A Model of critical thinking in Higher Education” These range from: (1). Core skills in critical argumentation (reasoning and inferences-making), (2) critical judgements, (3) critical thinking dispositions and attitudes, (4) critical actions, (5) critical social relations, and (6) what I, and others(notably), Burbules &Berk, 1999), call “critical creativity”, “critical openness”, “critical being”.

There are many well-developed extent models of critical thinking. They might be called “philosophical models” of critical thinking. They range from the tried and tested taxonomy of 'educational objectives', with its contemporary variations (Airasian et al., 2001; Bloom, 1956) to the Collegiate Learning Assessment, APA Delphi and Paul-Elder models (Facione, 1990; Paul & Elder, 2001); Sadler, 2010). Ther are also

models of critical thinking in relation to cognitive decision-making (Ennis, 1991). Pau-Eder Critical Thinking Model (Paul &Elder, 2001) is very suitable for thinking abilities to develop skills as it possibly covers all the dimensions of frameworks to assess skills and abilities.

Socratic Questioning Approach is the heart of the Critical Thinking (Paul,2006). It is also very essential to know about critical thinking. Different philosophers, educationalists, psychologists, education-psychologists tried to define what critical thinking is. All tried to define it based on their view points and perceptions that they perceived. The first thing to do is to gain an understanding of critical thinking as it applies in higher education. The other perspective view to take the strategy of removing negative and victim speak patterns i.e., to utter what critical thinking is NOT. This assists to delimit the parameters of the brainchild concept. Critical Thinking is NOT:

1. Purposeless thinking: Day-dreaming, music and idle thinking is not critical thinking, they don't qualify for the attributive "critical" (McPeck, 1981, p.3). It is agreed, instead, that critical thinking must be goal-directed, aimed towards an end, and purposeful.

2. Random thinking: Careless, misdirected and sloppy thinking is not critical thinking either. Using questionable evidence, failure to assess sources, and relying on dubious authority is contrary to critical thinking (Bailin, Case, Coombs, & Daniels, 1999). Critical thinking relies on meeting adequate standards.

3. Accidental and incidental thinking: Arriving inadequately or unintentionally at the correct critical assessment of position or the accomplishments of goal is insufficient for critical thinking. Critical thinking must be done in full knowledge and awareness of the standards of thinking expected. (Bailin et al., 1999, p.287). To place it in other terms, critical thinking is necessarily an 'intellectually disciplined process' (Scriven & Paul, 1987). Mindless application of a set of logical principles "as an exercise" will not suffice. There must be some kind of metacognitive awareness as well (Mulnix, 2012, p. 465).

4. Good thinking: Critical thinking can be exemplified in "good" thinking, but the relationship is asymmetrical. The concepts are not equivalent.

5. Independent thinking: This can be seen in the same way as "good thinking"

6. Rational thinking: There are closely connected but not identical, and critical thinking is a facet of what it meant to be "rational" (McPeck, 1981, p.12)

7. Creative thinking: A number of things can be the product of creative thinking: dances, dramatic work, poetry, scientific innovations, and so on. Creativity 'masters a process of making or producing; criticality, is a process of assessing or judging' (Paul &Elder, 2008, P.4). However, creative and critical thinking are inseparable, interchangeable, and go hand in hand.

The next part of the critical thinking, most difficult, is to take to define critical thinking. This is not so easy like eating a cake. Dates back, a scholar remarked that after reading the various definitions of critical thinking, it becomes clear that agreement upon a single concise definition of this concept is difficult, if not impossible (Skinner, 1976, p.293.). This made one theorist to claim that critical thinking was both" over-worked" and "under-analyzed" (McPeck, 1981, p.2), and another to call situation like being mired in a 'conceptual swamp' (Cuban, 1984, p.686). However, the task of defining critical thinking is attempted and more well -known definitions of critical thinking that are proposed over decades back: These are listed in a chronological order

· …the ability to think critically: (1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experience, (2) knowledge of the methods of logical inquiry and reasoning, and (3) some skills in applying those methods' (Edward Glaser, 1941)

- … correct assessing of statements' (Ennis, 1962, p.8)

- … the propensity and skills to engage in an activity to reflective skepticism' (McPeck, 1981, p.8) …' he intelligent use of all available evidence for the solution of some problem' (McPeck, p. 12)

- … reflective and reasonable thinking that is focused on deciding what to believe or do' (Ennis, 1985b, p.45)

- … the ability to analyses the facts, generate and organize ideas, defend opinions, make comparisons, draw inferences, evaluate agreements and solve problems (Chance, 1986, p.6)

- … is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Scriven & Paul, 1987)

- … to detect and avoid fallacious reasoning and to analyses deductive and inductive arguments (Kurfiss, 1988, p.3)

- … a process of fading and appropriation/ transformation, which is associated with scaffolding' (Lipman, M. (1988, p.39)

- … we understand the critical thinking to be purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation and inferences as well as explanation of the evidential conceptual, methodological, criteriological, or contextual considerations upon which the judgement was based. Critical Thinking is essential tool of enquiry. Critical thinking is pervasive and self-rectifying, human phenomenon (Facione, 1990)

- … active, systematic process of understanding and evaluating arguments (Mayer & Goodchild, 1990, p.4)

- … careful and deliberate determination of whether to accept, reject, or suspend judgement (Moore & Parker, 1991, p.4)

- … thinking about your thinking while you are thinking to make your thinking better (Paul. 1993, p.4)

- … skilled, active interpretation and evaluation of observations, communications, information and argumentation' (Fisher & Scriven, 1997, p.20) · thinking itself meets standards of adequacy and accuracy (Bailin et al., 1999, p.287), or fulfilling standards of critical assessment in carrying out thinking tasks' (p.291)

Table 2: 32 Students' Cefr Levels in Pre And Post Tests

S. No	No. of samples	CEFR levels Pre-test	Post-test
1.	21	A1	A2
2.	6	A1	B1
3.	5	A1	A1
Total	32		

- .. is effortful, careful, consciously controlled processing that maximizes the use of all available evidence and cognitive strategies, and purposefully strives to overcome individual biases' (Riggio & Halpern, 2006).

3. Research Methodology

The present study is an attempt to develop speaking competence in English language through Socratic Questing among the first-year undergraduate learners with regional medium backgrounds. This section meticulously discusses the research methodology employed to conduct the study. It explains the design of the research instruments, and how the data was gathered through personal interviews, and tests (pre and post). It presents the different stages of the intervention program which is conducted to carry out the study. This section also presents the objectives of the study, research questions, design of the study, the setting of the study, description of the sample, description of the tools used for the study.

Qualitative Research Methodology has considerably been employed to analyze the collected data. Researcher as a key instrument, collecting data through examining documents, and interviewing (Creswell, 2009). We have possibly adopted this methodology to analyse the non- numerical data to get the desired outcomes (Creswell 2018). To increase the validity of findings, multiple data collection devices or sources have been used. Taking these facts into consideration, the present study was conducted in a natural setting (Creswell ,2018). It was conducted in the classroom and different tools were used to analyse the data.

The study involves two students' recordings (pre and post-tests), pre-test and post-tests which yielded in a qualitative manner. It also presents the need for

qualitative data and administering it. Multiple sources of data, particularly from observations, interviews and documents (Creswell, 2009 & 2018). Further, it includes how data is analyzed. Thus, it prepares the ground for the presentation and interpretation of the data.

4. Intervention Programme (ip)

It deals with selected undergraduate-level students, and their interventional study that has considerably been imparted by us. Sample students have been selected based on the random test

Table 1

S. No	I Spell	II Spell
1	Picture narration	Small talk
2	Small talk	Picture narration
3	Think and share	Personal interview
4	Personal interview	Think and share

conducted for 105 undergraduate students. Based on the random test-score after employing CEFR CAN DO Descriptors to know about their speaking abilities, thirty-two students were chosen for the pre-test (Crewell, 2018). The IP lasted for five months and twenty-one days in a selected professional undergraduate engineering college that offers all professional undergraduate courses only. We have taught, discussed, and demonstrated speaking skills through Socratic Questioning Approach as a driving force and scaffolding element (Kayi-Aydar, H. (2013). We have used many critical thinking materials in the chosen framework (Counsel of Europe, 2018, p. 68, 85-87, 73, & 81) to enhance speaking skills over five months and twenty-one days.

The following table shows how the Intervention Program on the selected language aspects was conducted. Students were taught grammatical range and accuracy, phonological control, and contextual vocabulary (Counsel of Europe, 2018, p. 171) besides IP Spell I and II instructional frames.

5. Data, Its Analysis, And Interpretation

This section deals with the qualitative research analysis of the data. The researcher makes use of the qualitative data analysis to find out the results, and analyse the data. Most of the data analysis is an integrated point of the success of a study. It has been defined as the process of labeling and breaking down raw data and reconstructing them into patterns, themes, concepts, and propositions (Hindolf and Taylor, 2002). To analyse the data, qualitative approach was used. Qualitative approach (Schonfeld, D. J., & Dreyer, B. P., 2008) can be employed to find the multiple perspective views while observing and interviewing samples.

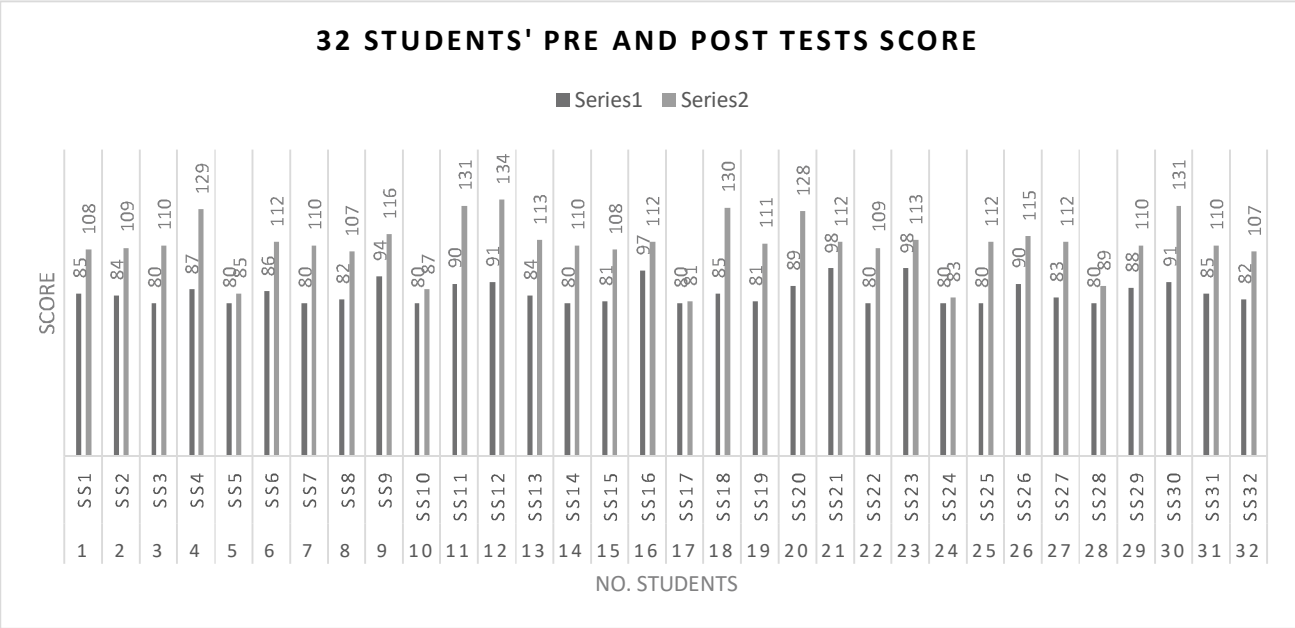

Fig. 1

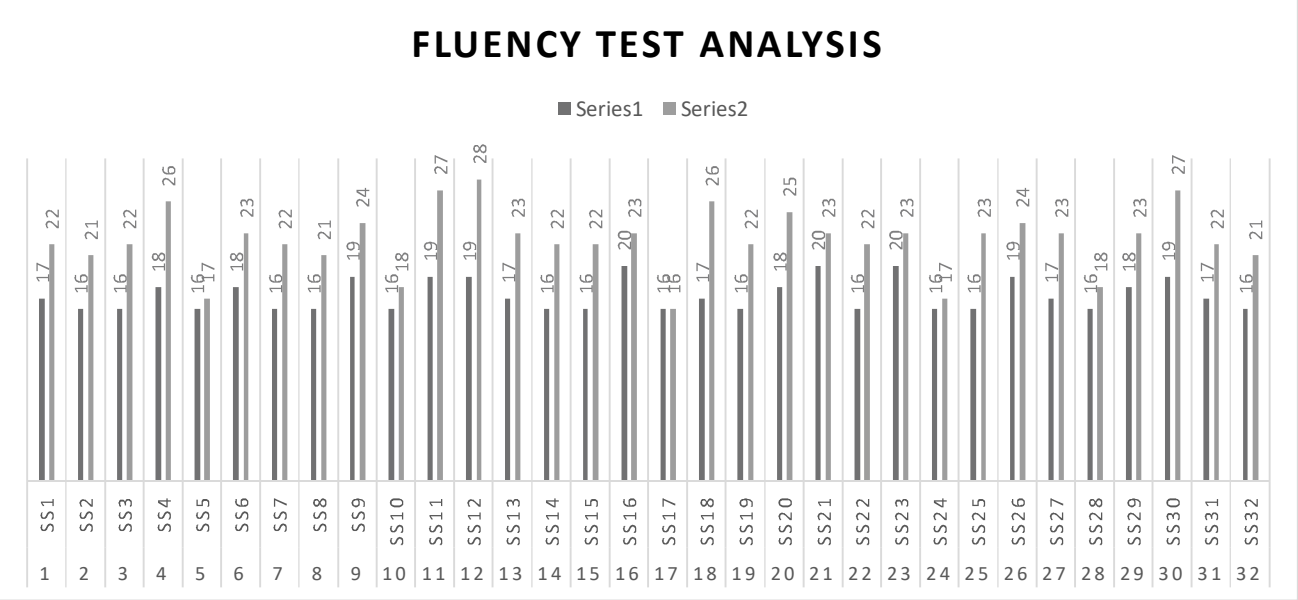

Fig. 2

Quantitative approaches attempt to control all the variables in an experiment to prove a causative relationship between two things by keeping everything else constant. (Creswell, 2018). They then attempt to convince the reader of the validity of their theories through measurement of the changes and statistical manipulation. Qualitative approaches, on the other hand, prefer to allow the theories to reveal themselves naturally from, often, intense and prolonged contact in the field. (Gilmore 2007, p.106).

The data are usually descriptive in nature and adopted visual techniques of data presentation. Hence, frequencies and percentages, and forms of graphical presentation were used while presenting the data. While analyzing the data from tests, bar charts were used as they are useful for presenting categorical and discrete data. It is felt that bar charts are useful for showing proportions. When it comes to data gathered from interviews, it was analyzed qualitatively using the 'thick-description' technique and grouped into categories and themes. Data is presented in the form of figures, tables, and various statistical instruments (Tang, G. M., 1991). The data collected from pre and post-tests have meticulously and considerably been analysed with in-depth interviews during and after the selected Intervention Programme. The study demanded to collected the data from two sources such as pre-test, and post-test. To assess the thirty-two sample-students' speaking skills, CEFR speaking rubrics are adopted, Fluency, Thematical Development, Grammatical Range and Accuracy, Contextual Vocabulary, Phonological Control (Council of Europe, 2018, p. 171).

6. Significant Findings And Conclusion

It discusses the findings of the study, the conclusions, the limitations of the study, and offers suggestions. The researcher could identify the significant findings in speaking skills after using Socratic Questioning Approach at the undergraduate level It also discusses the implications of the study for all stakeholders and the scope for further research.

The below table shows the significant findings of pre and post-tests conducted after the selected intervention program on Socratic Questioning Approach.

The table (II) evidentially illustrates that 32 students are a part of the intervention program conducted for five months and twenty-one days. 21 students (65%) could obtainA2 in post-test as they got A1 in the pre-test, 6 students (19%) could significantly enhanced from A1 to B1, and 5 (16%) students did not show any progress in their both tests as they retained the same CEFR levels even in the post-test, it shows that intervention program has not showed any positive impact on them. On whole ,85% students (65% and 19%) have greatly improved their scores and CEFR levels in post-test. It clearly indicated that the Intervention Program on Socratic Questioning Approach has improved students' speaking skills.

Bar graph 1 shows about students' performance in both pre and post tests. 32 students were selected from the random test, after their speaking levels had been observed with help of CEFR adopted speaking rubrics. These 32 students were a part of the selected intervention study conducted for 5 months 21 days in the selected professional under graduation college.

Table IV demonstrates the students' Fluency, Cohesion, Grammatical Range and Accuracy, Contextual Vocabulary, and Phonological Control in pre and post-tests. It also shows students' scores and CEFR levels. The data significantly show that students are classified broadly into three kinds based on the scores they secured in pre and post tests respectively: They are Significant Improvement (SI), Moderate Improvement (MI), and No Improvement (NI). SI shows that students have greatly improved their scores through which their CEFR levels have considerably been obtained in post-test. MI demonstrates that students have improved their scores and levels from pre-test to post-test, whereas NI shows that students have not improved anything, and they have no impact on scores and levels.

It is evident from the table that the students' post-test scores were substantially increased as compared to the pre-test scores. Table 2 indicates that some students (6 of 32) S4, S11, S12, S18, S20, and S30 scored 43.5%, 45%, 45.5%, 42.5%, 44.5%, and 45.5% (87, 90, 91, 85, 89, 91 marks) respectively in the pre-test, while their scores in the post-test were significantly increased up to 64.5%, 65.5%, 67%, 65%, 64%, and 65.5% (129, 131, 134, 130, 128, 131 marks). Therefore, the data indicate that these students' scores increased up to 20-25% on average when compared to the pre-test scores. Some students (21 of 32) S1, S2, S3, S6, S7, S8, S9, S13, S14, S15, S16, S19, S21, S22, S23, S25, S26, S27, S29, S31 and S32 have increased their levels in posttest when it is compared to pretest (table 1& 2). These 21 students also have enhanced their scores and levels in post-test. Some students (5 of 32) have retained the same levels even in the post-test.

Hence, it is understood from the data that the majority of the students (21 of 32) showed a little progress in Fluency, Cohesion, Grammatical Range and Accuracy, Contextual Vocabulary, and Phonological Control after the intervention study, while some of the students (6 of 32) did show significant progress in the post-test. While the remaining (5 of 32) did not show any progress in the post. S5, S10, S17, S24, and S28 have secured 40%, 40%, 40%, 40%, and 40% in pre-test, and 45%, 43.5%,40.5%, 41.5%, and 45.5%, in post-test respectively without any improvement. It indicates that the intervention has no impact on these students' over language aspects that are adopted from CEFR. However, improvement is noticed in these speaking aspects, and the results are disappointing as they are not up to the level of expectation. It is noticeable in the mean scores and standard deviation of both the pre-test and post-test.

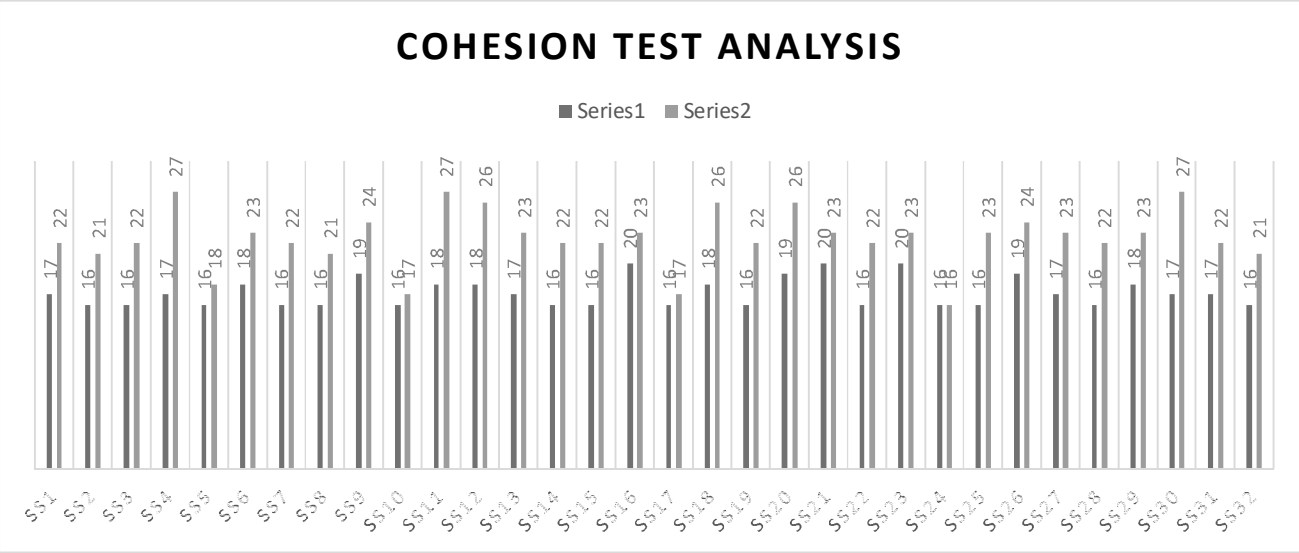

Fig. 3

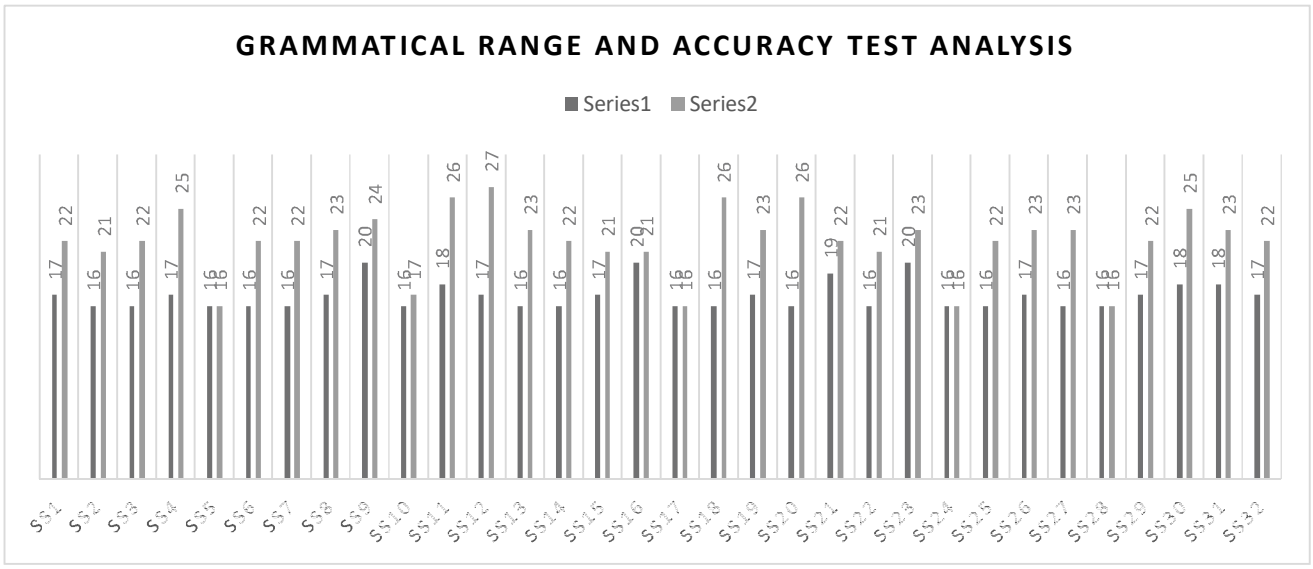

Fig. 4

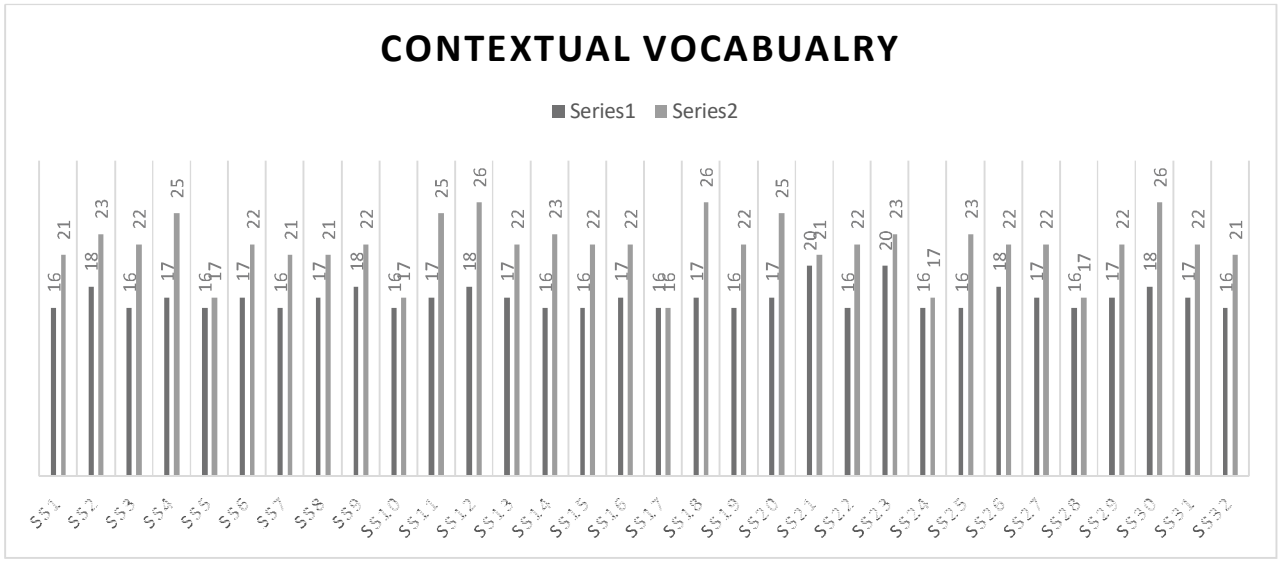

Fig. 5

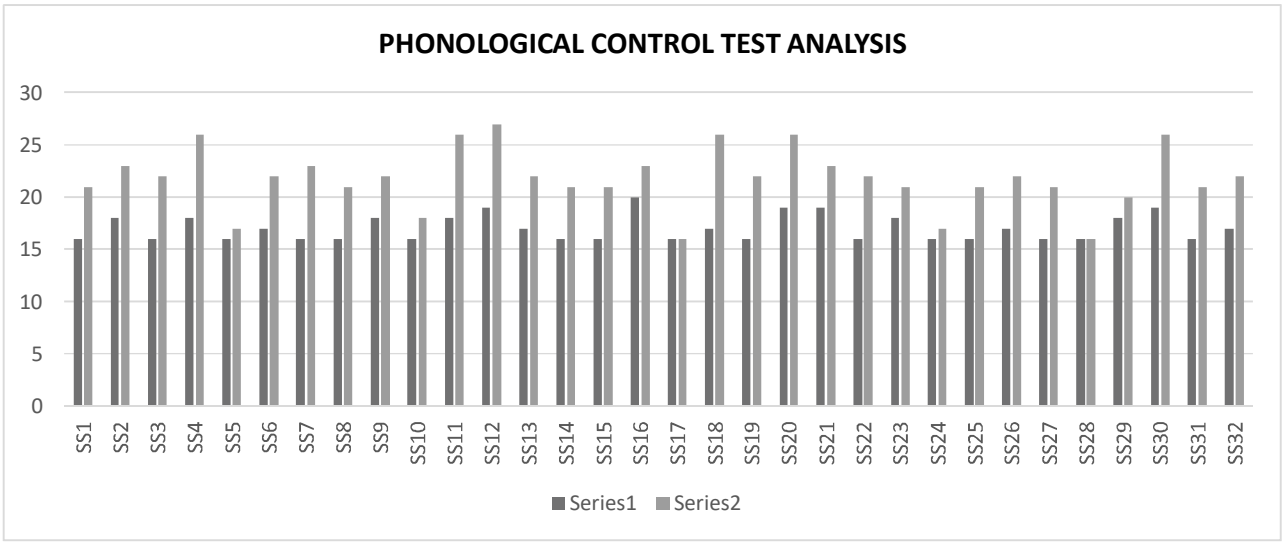

Fig. 6

PRE-TEST AND POST-TEST MEAN AND STANDARD DEVIATION CALCULATION

Pre-test

Standard Deviation, σ: **5.6380924023556**

Count, N: 32
Sum, Σx: 2731
Mean, μ: 85.34375
Variance, σ^2: 31.7880859375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

$=(85 - 85.34375)^2 + ... + (82 - 85.34375)^2/32$
$=1017.21875/32$
$=31.7880859375$

$\sigma = \sqrt{31.7880859375}$
$= 5.6380924023556$

Post-test

Standard Deviation, σ:
Count, N: 32
Sum, Σx: 3534
Mean, μ: 110.4375
Variance, σ^2: 182.18359375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

$\sigma = \sqrt{182.18359375}$
$= 13.497540285178$

Table 3: 32 Students' Pre And Post Test Scores And Cefr Levels

S. No	Student(s)	Pre-test		Post-test		Observation
		Score	CEFR level	Score	CEFR level	
1	SS1	85	A1	108	A2	Enhanced
2	SS2	84	A1	109	A2	Enhanced
3	SS3	80	A1	110	A2	Enhanced
4	SS4	87	A1	129	B1	Significantly enhanced
5	SS5	80	A1	85	A1	No improvement
6	SS6	86	A1	112	A2	Enhanced
7	SS7	80	A1	110	A2	Enhanced
8	SS8	82	A1	107	A2	Enhanced
9	SS9	94	A1	116	A2	Enhanced
10	SS10	80	A1	87	A1	No improvement
11	SS11	90	A1	131	A2	Significantly enhanced
12	SS12	91	A1	134	A2	Significantly enhanced
13	SS13	84	A1	113	A2	Enhanced
14	SS14	80	A1	110	A2	Enhanced
15	SS15	81	Pre-A1	108	A2	Enhanced
16	SS16	97	A1	112	A2	Enhanced
17	SS17	80	A1	81	A1	Not Improved
18	SS18	85	A1	130	B2	Significantly enhanced
19	SS19	81	A1	111	B1	Enhanced
20	SS20	89	A1	128	B2	Significantly enhanced
21	SS21	98	A1	112	A2	Enhanced
22	SS22	80	A1	109	A2	Enhanced
23	SS23	98	A1	113	A2	Enhanced
24	SS24	80	A1	83	A1	No improvement
25	SS25	80	Pre-A1	112	A2	Enhanced
26	SS26	90	A1	115	A2	Enhanced
27	SS27	83	A1	112	A2	Enhanced
28	SS28	80	A1	89	A1	Not Improved
29	SS29	88	A1	110	A2	Enhanced
30	SS30	91	A1	131	B1	Significantly enhanced
31	SS31	85	A1	110	A2	Enhanced
32	SS32	82	A1	107	A2	Enhanced
	Total	2731		3534		

The above table (II) presents the mean and the standard deviation of the pre-test and post-test scores of all adopted rubrics. The pre-test mean and Std. Deviation are 85.34 and 5.63 respectively, while post-test mean and Std. Deviation are 110.43 and 13.49. It shows that the results of the pre and post-tests are statistically demonstrated.

Figure 2 demonstrates the students' fluency in pre and post-tests. Table 4 shows students' scores and CEFR levels. A number of the students, who were a part of the Intervention Program, was taken on the X-axis and their CEFR levels were considered on the Y-axis. The data significantly show that there are three kinds of results based on the levels that they have obtained in pre and post-tests respectively. They are divided into three segments: Significant Improvement (SI), Moderate Improvement (MI), and No Improvement (NI). SI shows that students have greatly improved their scores through which their CEFR levels have considerably been obtained in post-test. MI demonstrates that students have improved

Table 4: Summary of 32 Students' Pre And Post Tests Analysis

		Pres-test								Post-test								
S.No	Student(s)	F	TD	GR	CV	PC	Total	CEFR levels	%	F	TD	GR	CV	PC	Total	CEFR levels	%	Category
1	SS1	17	17	17	17	17	85	A1	42.5	22	22	22	21	21	108	A2	54	MI
2	SS2	16	16	16	18	18	84	A1	42	21	21	21	23	23	109	A2	54.5	MI
3	SS3	16	16	16	16	16	80	A1	40	22	22	22	22	22	110	A2	55	MI
4	SS4	18	17	17	17	18	87	A1	43.5	26	27	25	25	26	129	B1	64.5	SI
5	SS5	16	16	16	16	16	80	A1	40	17	18	16	17	17	85	A1	42.5	NI
6	SS6	18	18	16	17	17	86	A1	43	23	23	22	22	22	112	A2	56	MI
7	SS7	16	16	16	16	16	80	A1	40	22	22	22	21	23	110	A2	55	MI
8	SS8	16	16	17	17	16	82	A1	41	21	21	23	21	21	107	A2	53.5	MI
9	SS9	19	19	20	18	18	94	A1	47	24	24	24	22	22	116	A2	58	MI
10	SS10	16	16	16	16	16	80	A1	40	18	17	17	17	18	87	A1	43.5	NI
11	SS11	19	18	18	17	18	90	A1	45	27	27	26	25	26	131	B1	65.5	SI
12	SS12	19	18	17	18	19	91	A1	45.5	28	26	27	26	27	134	B1	67	SI
13	SS13	17	17	16	17	17	84	A1	42	23	23	23	22	22	113	A2	56.5	MI
14	SS14	16	16	16	16	16	80	A1	40	22	22	22	23	21	110	A2	55	MI
15	SS15	16	16	17	16	16	81	A1	40.5	22	22	21	22	21	108	A2	54	MI
16	SS16	20	20	20	17	20	97	A1	48.5	23	23	21	22	23	112	A2	56	MI
17	SS17	16	16	16	16	16	80	A1	40	16	17	16	16	16	81	A1	40.5	NI
18	SS18	17	18	16	17	17	85	A1	42.5	26	26	26	26	26	130	B1	65	SI
19	SS19	16	16	17	16	16	81	A1	40.5	22	22	23	22	22	111	A2	55.5	MI
20	SS20	18	19	16	17	19	89	A1	44.5	25	26	26	25	26	128	B1	64	SI
21	SS21	20	20	19	20	19	98	A1	49	23	23	22	21	23	112	A2	56	MI
22	SS22	16	16	16	16	16	80	A1	40	22	22	21	22	22	109	A2	54.5	MI
23	SS23	20	20	20	20	18	98	A1	49	23	23	23	23	21	113	A2	56.5	MI
24	SS24	16	16	16	16	16	80	A1	40	17	16	16	17	17	83	A1	41.5	NI
25	SS25	16	16	16	16	16	80	A1	40	23	23	22	23	21	112	A2	56	MI
26	SS26	19	19	17	18	17	90	A1	45	24	24	23	22	22	115	A2	57.5	MI
27	SS27	17	17	16	17	16	83	A1	41.5	23	23	23	22	21	112	A2	56	MI
28	SS28	16	16	16	16	16	80	A1	40	18	22	16	17	16	89	A1	44.5	NI
29	SS29	18	18	17	17	18	88	A1	44	23	23	22	22	20	110	A2	55	MI
30	SS30	19	17	18	18	19	91	A1	45.5	27	27	25	26	26	131	B1	65.5	SI
31	SS31	17	17	18	17	16	85	A1	42.5	22	22	23	22	21	110	A2	55	MI
32	SS32	16	16	17	16	17	82	A1	41	21	21	22	21	22	107	A2	53.5	MI

F- Fluency C- Cohesion/Thematic Development GR- Grammatical Range and Accuracy V-Vocabulary PC-Phonological Control

MI- Moderate Improvement SI- Significant Improvement NI-Not Improvement

Table 5: Mean And Standard Deviation Scores of Pre-and Post-test Of 32 Students.

Number	Pre-test		Post-test	
	Mean	Std. Deviation	Mean	Std. Deviation
32	85.34	5.63	110.43	13.49

Table 6 : Analysis Of Fluency Test

S. No	Student(s)	Pretest		Posttest		Observation
		Score	CEFR level	Score	CEFR level	
1	SS1	17	A1	22	A2	Enhanced
2	SS2	16	A1	21	A2	Enhanced
3	SS3	16	A1	22	A2	Enhanced
4	SS4	18	A1	26	B1	Significantly enhanced
5	SS5	16	A1	17	A1	No improvement
6	SS6	18	A1	23	A2	Enhanced
7	SS7	16	A1	22	A2	Enhanced
8	SS8	16	A1	21	A2	Enhanced
9	SS9	19	A1	24	A2	Significantly enhanced
10	SS10	16	A1	18	A1	No improvement
11	SS11	19	A1	27	B1	Significantly enhanced
12	SS12	19	A1	28	B1	Significantly enhanced
13	SS13	17	A1	23	A2	Enhanced
14	SS14	16	A1	22	A2	Enhanced
15	SS15	16	A1	22	A2	Enhanced
16	SS16	20	A1	23	A2	Enhanced
17	SS17	16	A1	16	A1	Not Improved
18	SS18	17	A1	26	B1	Significantly enhanced
19	SS19	16	A1	22	A2	Enhanced
20	SS20	18	A1	25	B1	Significantly enhanced
21	SS21	20	A1	23	A2	Enhanced
22	SS22	16	A1	22	A2	Enhanced
23	SS23	20	A1	23	A2	Enhanced
24	SS24	16	A1	17	A1	No improvement
25	SS25	16	A1	23	A2	Enhanced
26	SS26	19	A1	24	A2	Enhanced
27	SS27	17	A1	23	A2	Enhanced
28	SS28	16	A1	18	A1	Not Improved
29	SS29	18	A1	23	A2	Enhanced
30	SS30	19	A1	27	B1	Significantly enhanced
31	SS31	17	A1	22	A2	Enhanced
32	SS32	16	A1	21	A2	Enhanced
Total		552		716		

Table 7 : Mean And Standard Deviation Scores Of Pre-and Post-test Of Fluency.

Number	Pre-test		Post-test	
	Mean	Std. Deviation	Mean	Std. Deviation
32	17.25	1.41	22.37	2.84

their scores and levels from pre-test to post-test, whereas NI shows that students have not improved anything, and they have no impact on scores and levels. It is evident from the bar graph that the students' post-test scores were substantially increased as compared to the pre-test score. Bar graph indicates that some students (6 of 32) S4, S11, S12, S18, S20, and S30 scored 45%, 47%, 47%, 42%, 45%, and 47% (18, 19, 19, 17, 18, 19 marks) respectively in the pre-test, while their scores in the post-test were

significantly increased up to 65%, 67%, 70%, 65%, 62%, and 67% (26, 27, 28, 26, 25, 27 marks). Therefore, the data indicate that these students' scores increased up to 25% on average when compared to the pre-test scores. Some students (22 of 32) S1, S2, S3, S6, S7, S8, S9, S13, S14, S15, S16, S19, S21, S22, S23, S25, S26, S27, S29, S31 and S32 have increased their levels in posttest when it is compared to pretest. These 21 students also have enhanced their scores and levels in post-test. Some students (5 of 32) have retained the same levels even in the post-test.

Hence, it is understood from the data that the majority of the students (21 of 32) showed a little progress in the fluency aspect after the intervention study, while some of the students (6 of 32) did show significant progress in the post-test. While the remaining (5 of 32) did not show any progress in the post. S5, S10, S17, S24, and S28 have secured 40%, 40%, 40%, 40%, and 40% in pre-test, and 42%, 45%,40%, 42%, and 45%, in post-test respectively without any improvement. It indicates that the intervention has no impact on these students' fluence. However, improvement is noticed in this speaking aspect the results are disappointing as they are not up to the level of expectation. It is noticeable in the mean scores and standard deviation of both the pre-test and post-test.

Table 8: Analysis Of Coherence/thematical Development Test

S. No	Student(s)	Pretest		Posttest		Observation
		Score	CEFR level	Score	CEFR level	
1	SS1	17	A1	22	A2	Enhanced
2	SS2	16	A1	21	A2	Enhanced
3	SS3	16	A1	22	A2	Enhanced
4	SS4	17	A1	27	B1	Significantly Enhanced
5	SS5	16	A1	18	A1	No improvement
6	SS6	18	A1	23	A2	Enhanced
7	SS7	16	A1	22	A2	Enhanced
8	SS8	16	A1	21	A2	Enhanced
9	SS9	19	A1	24	A2	Enhanced
10	SS10	16	A1	17	A1	No Improvement
11	SS11	18	A1	27	B1	Significantly enhanced
12	SS12	18	A1	26	B1	Significantly enhanced
13	SS13	17	A1	23	A2	Enhanced
14	SS14	16	A1	22	A2	Enhanced
15	SS15	16	A1	22	A2	Enhanced
16	SS16	20	A1	23	A2	Enhanced
17	SS17	16	A1	17	A1	Not Improved
18	SS18	18	A1	26	B1	Significantly Enhanced
19	SS19	16	A1	22	A2	Enhanced
20	SS20	19	A1	26	B1	Significantly enhanced
21	SS21	20	A1	23	A2	Enhanced
22	SS22	16	A1	22	A2	Enhanced
23	SS23	20	A1	23	A2	Enhanced
24	SS24	16	A1	16	A1	No Improvement
25	SS25	16	A1	23	A2	Enhanced
26	SS26	19	A1	24	A2	Enhanced
27	SS27	17	A1	23	A2	Enhanced
28	SS28	16	A1	22	A2	Enhanced
29	SS29	18	A1	23	A2	Enhanced
30	SS30	17	A1	27	B1	Significantly Enhanced
31	SS31	17	A1	22	A2	Enhanced
32	SS32	16	A1	21	A2	Enhanced
Total		549		720		

Table 9: Mean And Standard Deviation Scores Of Pre-and Post-test Of Fluency.

Number	Pre-test		Post-test	
	Mean	Std. Deviation	Mean	Std. Deviation
32	17.15	1.34	22.50	2.71

Pre-test and Post-test Mean and Standard Deviation calculation

Pres-test

Standard Deviation, σ: **1.4142135623731**
Count, N: 32
Sum, Σx: 552
Mean, μ: 17.25
Variance, σ^2: 2

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

σ = √2
= 1.4142135623731

Post-test

Standard Deviation, σ: **2.8476964374736**
Count, N: 32
Sum, Σx: 716
Mean, μ: 22.375
Variance, σ^2: 8.109375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

σ = √8.109375
= 2.8476964374736

Table 10: Analysis Of Grammatical Range And Accuracy Test

S. No	Student(s)	Pretest		Posttest		Observation
		Score	CEFR level	Score	CEFR level	
1	SS1	17	A1	22	A2	Enhanced
2	SS2	16	A1	21	A2	Enhanced
3	SS3	16	A1	22	A2	Enhanced
4	SS4	17	A1	25	B1	Significantly Enhanced
5	SS5	16	A1	16	A1	No Improvement
6	SS6	16	A1	22	A2	Enhanced
7	SS7	16	A1	22	A2	Enhanced
8	SS8	17	A1	23	A2	Enhanced
9	SS9	20	A1	24	A2	Enhanced
10	SS10	16	A1	17	A1	No Improvement
11	SS11	18	A1	26	B1	Significantly Enhanced
12	SS12	17	A1	27	B1	Significantly Enhanced
13	SS13	16	A1	23	A2	Enhanced
14	SS14	16	A1	22	A2	Enhanced
15	SS15	17	A1	21	A2	Enhanced
16	SS16	20	A1	21	A2	Enhanced
17	SS17	16	A1	16	A1	Not Improved
18	SS18	16	A1	26	B1	Significantly Enhanced
19	SS19	17	A1	23	A2	Enhanced
20	SS20	16	A1	26	B1	Significantly Enhanced
21	SS21	19	A1	22	A2	Enhanced
22	SS22	16	A1	21	A2	Enhanced
23	SS23	20	A1	23	A2	Enhanced
24	SS24	16	A1	16	A1	No Improvement
25	SS25	16	A1	22	A2	Enhanced
26	SS26	17	A1	23	A2	Enhanced
27	SS27	16	A1	23	A2	Enhanced
28	SS28	16	A1	16	A1	Not Improved
29	SS29	17	A1	22	A2	Enhanced
30	SS30	18	A1	25	B1	Significantly Enhanced
31	SS31	18	A1	23	A2	Enhanced
32	SS32	17	A1	22	A2	Enhanced
Total		542		703		

Table 11:Mean And Standard Deviation Scores Of Pre-and Post-test Of Grammatical Range And Accuracy.

Number	Pre-test		Post-test	
	Mean	Std. Deviation	Mean	Std. Deviation
32	16.93	1.24	21.96	2.93

The above table presents the mean and standard deviation of the pre-test and post-test scores on fluency. The pre-test mean and Std. Deviation are 17.25 and 1.41 respectively, while post-test mean and Std. Deviation are 22.37 and 2.84. It shows that the results of the pre and post-tests are statistically demonstrated. Table 8 and graph 3 demonstrate the students' Coherence/Thematical Development in pre and post-tests. It shows students' scores and CEFR levels. A number of the students, who were a part of the Intervention Program, was taken on the X-axis and their CEFR levels were considered on the Y-axis. The data significantly shows that they are three kinds of results based on the levels that they have obtained in pre and post-tests respectively. They are divided into three segments: Significant Improvement (SI), Moderate Improvement (MI), and No Improvement (NI). SI shows that students have greatly improved their scores through which their CEFR levels have considerably been obtained in post-test. MI demonstrates that students have improved their scores and levels from pre-test to post-test, whereas NI shows that students have not improved anything, and they have no impact on scores and levels.

Table 12 : Analysis Of Vocabulary Test

S. No	Student(s)	Pretest		Posttest		Observation
		Score	CEFR level	Score	CEFR level	
1	SS1	16	A1	21	A2	Enhanced
2	SS2	18	A1	23	A2	Enhanced
3	SS3	16	A1	22	A2	Enhanced
4	SS4	17	A1	25	B1	Significantly Enhanced
5	SS5	16	A1	17	A1	No Improvement
6	SS6	17	A1	22	A2	Enhanced
7	SS7	16	A1	21	A2	Enhanced
8	SS8	17	A1	21	A2	Enhanced
9	SS9	18	A1	22	A2	Enhanced
10	SS10	16	A1	17	A1	No Improvement
11	SS11	17	A1	25	B1	Significantly Enhanced
12	SS12	18	A1	26	B1	Significantly Enhanced
13	SS13	17	A1	22	A2	Enhanced
14	SS14	16	A1	23	A2	Enhanced
15	SS15	16	A1	22	A2	Enhanced
16	SS16	17	A1	22	A2	Enhanced
17	SS17	16	A1	16	A1	Not Improved
18	SS18	17	A1	26	B1	Significantly Enhanced
19	SS19	16	A1	22	A2	Enhanced
20	SS20	17	A1	25	B1	Significantly Enhanced
21	SS21	20	A1	21	A2	Enhanced
22	SS22	16	A1	22	A2	Enhanced
23	SS23	20	A1	23	A2	Enhanced
24	SS24	16	A1	17	A1	No Improvement
25	SS25	16	A1	23	A2	Enhanced
26	SS26	18	A1	22	A2	Enhanced
27	SS27	17	A1	22	A2	Enhanced
28	SS28	16	A1	17	A1	Not Improved
29	SS29	17	A1	22	A2	Enhanced
30	SS30	18	A1	26	B1	Significantly Enhanced
31	SS31	17	A1	22	A2	Enhanced
32	SS32	16	A1	21	A2	Enhanced
Total		541		698		

Table 13 : Mean And Standard Deviation Scores Of Pre-and Post-test Of Contextual Vocabulary.

Number	Pre-test		Post-test	
	Mean	Std. Deviation	Mean	Std. Deviation
32	16.90	1.07	21.81	2.61

Table 14: Analysis Of Phonological Control Test

S. No	Student(s)	Pretest		Posttest		Observation
		Score	CEFR level	Score	CEFR level	
1	SS1	16	A1	21	A2	Enhanced
2	SS2	18	A1	23	A2	Enhanced
3	SS3	16	A1	22	A2	Enhanced
4	SS4	18	A1	26	B1	Significantly Enhanced
5	SS5	16	A1	17	A1	No Improvement
6	SS6	17	A1	22	A2	Enhanced
7	SS7	16	A1	23	A2	Enhanced
8	SS8	16	A1	21	A2	Enhanced
9	SS9	18	A1	22	A2	Enhanced
10	SS10	16	A1	18	A1	No Improvement
11	SS11	18	A1	26	B1	Significantly Enhanced
12	SS12	19	A1	27	A2	Significantly Enhanced
13	SS13	17	A1	22	A2	Enhanced
14	SS14	16	A1	21	A2	Enhanced
15	SS15	16	A1	21	A2	Enhanced
16	SS16	20	A1	23	A2	Enhanced
17	SS17	16	A1	16	A1	Not Improved
18	SS18	17	A1	26	B1	Significantly Enhanced
19	SS19	16	A1	22	A2	Enhanced
20	SS20	19	A1	26	B1	Significantly Enhanced
21	SS21	19	A1	23	A2	Enhanced
22	SS22	16	A1	22	A2	Enhanced
23	SS23	18	A1	21	A2	Enhanced
24	SS24	16	A1	17	A1	No Improvement
25	SS25	16	A1	21	A2	Enhanced
26	SS26	17	A1	22	A2	Enhanced
27	SS27	16	A1	21	A2	Enhanced
28	SS28	16	A1	16	A1	Not Improved
29	SS29	18	A1	20	A1	Not Improved
30	SS30	19	A1	26	B1	Significantly enhanced
31	SS31	16	A1	21	A2	Enhanced
32	SS32	17	A1	22	A2	Enhanced
	Total	545		697		

Table 15 : Mean and Standard Deviation scores of pre-and post-test of Phonological Control.

Number	Pre-test		Post-test	
	Mean	Std. Deviation	Mean	Std. Deviation
32	17.03	1.21	21.78	2.83

Pre-test and Post-test Mean and Standard Deviation calculation

Pres-test

Standard Deviation, σ: **1.3488276159317**

Count, N: 32
Sum, Σx: 549
Mean, μ: 17.15625
Variance, σ^2: 1.8193359375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

σ = √1.8193359375

= 1.3488276159317

Post-test

Standard Deviation, σ: 2.7156951228001

Count,N: 32

Sum, Σx: 720

Mean, μ: 22.5

Variance, σ2: 7.375

Steps

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

It is evident from the bar graph that the students' post-test scores were substantially increased as compared to the pre-test scores. Bar graph indicates that some students (6 of 32) S4, S11, S12, S18, S20, and S30 scored 42%, 45%, 45%, 45%, 47%, and 42% (17, 18, 18, 18, 19, 17 marks) respectively in the pre-test, while their scores in the post-test were significantly increased up to 67%, 67%, 65%, 65%, 65%, and 67% (27, 27, 26, 26, 26, 27 marks). Therefore, the data indicate that these students' scores increased up to 25% on average when compared to the pre-test scores. Some students (22 of 32) S1, S2, S3, S6, S7, S8, S9, S13, S14, S15, S16, S19, S21, S22, S23, S25, S26, S27, S29, S31 and S32 have increased their levels in posttest when it is compared to pretest. These 22 students also have enhanced their scores and levels in post-test. Some students (4 of 32) have retained the same levels even in the post-test.

Hence, it is understood from the data that the majority of the students (22 of 32) showed a little progress in the fluency aspect after the intervention study, while some of the students (6 of 32) did show significant progress in the post-test. While the remaining (4 of 32) did not show any progress in the post. S5, S10, S17, and S24 have secured 40%, 40%, 40%, 40%, and 40% in pre-test, and 45%, 42%,42%, and 40%, in post-test respectively without any improvement. It indicates that the intervention has no impact on these students' fluence. However, improvement is noticed in this speaking aspect the results are disappointing as they are not up to the level of expectation. It is noticeable in the mean scores and standard deviation of both the pre-test and post-test.

The above table presents the mean and standard deviation of the pre-test and post-test scores on fluency. The pre-test mean and Std. Deviation are 17.15 and 1.34 respectively, while post-test mean and Std. Deviation are 22.50 and 2.71. It shows that the results of the pre and post-tests are statistically demonstrated.

Figure 4 and table 10 demonstrate the students' Grammatical Range and Accuracy in pre and post-tests, and shows students' scores and CEFR levels. A

$\sigma = \sqrt{7.375}$

$= 2.7156951228001$

Pre-test and Post-test Mean and Standard Deviation calculation

Pres-test

Standard Deviation, σ: **1.2484365222149**

Count, N: 32
Sum, Σx: 542
Mean, μ: 16.9375
Variance, σ^2: 1.55859375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

$\sigma = \sqrt{1.55859375}$

$= 1.2484365222149$

Post-test

Standard Deviation, σ: **2.9313432820978**

Count, N: 32
Sum, Σx: 703
Mean, μ: 21.96875
Variance, σ^2: 8.5927734375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

$\sigma = \sqrt{8.5927734375}$

$= 2.9313432820978$

number of the students, who were a part of the Intervention Program, was taken on the X-axis and their CEFR levels were considered on the Y-axis. The data significantly shows that they are three kinds of results based on the levels that they have obtained in pre and post-tests respectively. They are divided into three segments: Significant Improvement (SI), Moderate Improvement (MI), and No Improvement (NI). SI shows that students have greatly improved their scores through which their CEFR levels have considerably been obtained in post-test. MI demonstrates that students have improved their scores and levels from pre-test to post-test, whereas NI shows that students have not improved anything, and they have no impact on scores and levels.

It is evident from the figure that the students' post-

test scores were substantially increased as compared to the pre-test scores. Bar graph indicates that some students (6 of 32) S4, S11, S12, S18, S20, and S30 scored 42%, 45%, 42%, 40%, 40%, and 45% (17, 18, 17, 16, 16, 18 marks) respectively in the pre-test, while their scores in the post-test were significantly increased up to 62%, 65%, 67%, 65%, 65%, and 62% (25, 26, 27, 26, 26, 25 marks). Therefore, the data indicate that these students' scores increased up to 30% on average when compared to the pre-test scores. Some students (22 of 32) S1, S2, S3, S6, S7, S8, S9, S13, S14, S15, S16, S19, S21, S22, S23, S25, S26, S27, S29, S31 and S32 have increased their levels in posttest when it is compared to pretest. These 21 students also have enhanced their scores and levels in post-test. Some students (5 of 32) have retained the same levels even in the post-test.

Hence, it is understood from the data that the majority of the students (21 of 32) showed a little progress in the fluency aspect after the intervention study, while some of the students (6 of 32) did show significant progress in the post-test. While the remaining (5 of 32) did not show any progress in the post. S5, S10, S17, S24, and S28 have secured 40%, 40%, 40%, 40%, and 40% in pre-test, and 40%, 42%,40%, 40%, and 40%, in post-test respectively without any improvement. It indicates that the intervention has no impact on these students' Grammatical Range and Accuracy. However, improvement is noticed in this speaking aspect the results are disappointing as they are not up to the level of expectation. It is noticeable in the mean scores and standard deviation of both the pre-test and post-test.

Pre-test and Post-test Mean and Standard Deviation calculation

Pres-test

Standard Deviation, σ: **1.0711960313127**

Count, N: 32
Sum, Σx: 541
Mean, μ: 16.90625
Variance, σ^2: 1.1474609375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

σ = √1.1474609375
= 1.0711960313127

Post-test

Standard Deviation, σ: **2.6153094941135**

Count, N: 32
Sum, Σx: 698
Mean, μ: 21.8125
Variance, σ^2: 6.83984375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

σ = √6.83984375
= 2.6153094941135

The above table (13) presents the mean and the standard deviation of the pre-test and post-test scores on Contextual Vocabulary. The pre-test mean and the Std. Deviation are 16.90 and 1.07 respectively, while post-test mean and Std. Deviation are 21.81 and 2.61. It shows that the results of the pre and post-tests are statistically demonstrated.

Table XIV and Figure 6 demonstrate the students' Phonological Control in pre and post-tests, and also show students' scores and CEFR levels. A number of the students, who were a part of the Intervention Program, was taken on the X-axis and their CEFR levels were considered on the Y-axis of figure 6. The data significantly shows that they are three kinds of results based on the levels that they have obtained in pre and post-tests respectively. They are divided into three segments: Significant Improvement (SI), Moderate Improvement (MI), and No Improvement (NI). SI shows that students have greatly improved their scores through which their CEFR levels have considerably been obtained in post-test. MI demonstrates that students have improved their scores and levels from pre-test to post-test, whereas NI shows that students have not improved anything, and they have no impact on scores and levels.

It is evident from the figure that the students' post-test scores were substantially increased as compared to the pre-test scores. Bar graph indicates that some students (6 of 32) S4, S11, S12, S18, S20, and S30 scored 45%, 45%, 47%, 42%,47%, and 47% (18, 18, 19, 17, 19, 19 marks) respectively in the pre-test, while their scores in the post-test were significantly increased up to 65%, 65%, 67%, 65%, 65%, and 65% (26, 26, 27, 26, 26, 26 marks). Therefore, the data indicate that these students' scores increased up to 30% on average when compared to the pre-test scores. Some students (20 of 32) S1, S2, S3, S6, S7, S8, S9, S13, S14, S15, S16, S19, S21, S22, S23, S25, S26, S27, S31 and S32 have increased their levels in posttest when it is compared to pretest. These 20 students also have enhanced their

scores and levels in post-test. Some students (5 of 32) have retained the same levels even in the post-test.

Hence, it is understood from the data that the majority of the students (20 of 32) showed a little progress in the fluency aspect after the intervention study, while some of the students (6 of 32) did show significant progress in the post-test. While the remaining (6 of 32) did not show any progress in the post. S5, S10, S17, S24, S28 and S29 have secured 40%, 40%, 40%, 40%,40% and 45% in pre-test, and 42%, 45%,40%, 42%, 40%, and 50%, in post-test respectively without any improvement. It indicates that the intervention has no impact on these students' Phonological Control. However, improvement is noticed in this speaking aspect the results are disappointing as they are not up to the level of expectation. It is noticeable in the mean scores and standard deviation of both the pre-test and post-test.

Pre-test and Post-test Mean and Standard Deviation calculation

Pres-test

Standard Deviation, σ: **1.2115169984363**

Count, N: 32
Sum, Σx: 545
Mean, μ: 17.03125
Variance, σ^2: 1.4677734375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

Post-test

Standard Deviation, σ: **2.8365292943137**

Count, N: 32
Sum, Σx: 697
Mean, μ: 21.78125
Variance, σ^2: 8.0458984375

$$\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$$

$\sigma = \sqrt{8.0458984375}$
$= 2.8365292943137$

The above table (XV) shows about the mean and the standard deviation of the pre-test and post-test scores on Phonological Control. The pre-test mean and Std. Deviation are 17.03 and 1.21 respectively, while post-test mean and Std. Deviation are 21.78 and 2.83. It shows that the results of the pre and post-tests are statistically demonstrated.

8. Scope And Limitations Of The Article

The scope of the study has implicitly and explicitly been chalked out to draw some of the inferences applied and implemented in the day-to day life and its mundane activities to be reasoned and rational citizens as well. The study can further be applied to all language skills and sub-skills. The scope does not confine to speaking skills at Professional undergraduate levels, it possibly also extends to professional courses and their levels.

Learners can become independent thinkers before speaking any topic/issue/problem. Intellectual humility, Intellectual autonomy, fair-minded, reasoning, and open-minded thinking abilities can surely be developed through Socratic Questioning Approach.

Some suggestions for conducting further studies are discussed below:

- Further studies can include both a control group and an experimental group.
- A longitudinal study can be conducted to trace students' development in speaking.
- Future studies can be conducted for a large sample with a team of teachers.
- Further studies can be undertaken with different proficiency levels such as secondary and intermediate levels.
- Further studies can examine other sub-skills of speaking.
- Further studies can compare the development of speaking skills for rural and urban learners.

The article has some inevitable limitations which are stated below:

1. A Professional undergraduate degree college has been selected for this article.
2. Availability and willingness of the teachers were other constraints.
3. The research study was conducted for a short span of time i.e., 5 months.

4. This research study was conducted for ESL learners in a semi-urban setting.

5. This study was conducted to develop speaking skills for a limited number of students.

8. Implications of the study

The study found that the Socratic Questioning Approach is effective in developing speaking skills at the Professional undergraduate level and yielded positive results. From the findings, the study has identified some implications for teachers, and the student community to understand what is required of students both in the classroom and in real-life situations as well. The significance of the study is that it examines the issues in teaching/learning speaking which may be useful in similar second language teaching/learning situations in general and teaching of speaking in particular.

The above table (XV) shows about the mean and the standard deviation of the pre-test and post-test scores on Phonological Control. The pre-test mean and Std. Deviation are 17.03 and 1.21 respectively, while post-test mean and Std. Deviation are 21.78 and 2.83. It shows that the results of the pre and post-tests are statistically demonstrated.

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