



INTERACTION EFFECT OF META-COGNITIVE LANGUAGE LEARNING STRATEGIES-BASED INSTRUCTION IN ENGLISH AND HEMISPHERICITY ON STUDENTS' SOCIAL SELF-CONCEPT--THE PEDAGOGICAL APPROACH OF NEP 2020

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Abstract:

This paper attempts to ascertain the interaction effect of meta-cognitive language learning strategies-based instruction in English and hemisphericity on students' social self- concept. For this purpose, an intervention programme based on meta-cognitive language learning strategies of about 32 hours was developed for students of standard eighth spreading over ten weeks. The aim of the research was to ascertain whether meta-cognitive language learning strategies instruction has any effect on social self-concept of students. Structured tools were used in the study. The participants of the study included 52 and 48 students in the experimental and control groups respectively. The effect size of intervention and hemisphericity, both on social self-concept of students was found to be 0.8 respectively, which is highest in magnitude.

Keywords: *Meta-cognitive Language Learning Strategies, Hemisphericity, Social Self-concept*

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Introduction:

Learning a second language is a socio-psychological activity involving habit formation which is achieved through very active participation, adopting various learning strategies to effectively achieve a favourable performance of the learner in the production of the target language (Gardnerⁱ, 1985; Noorⁱⁱ, 2005; Nwoguⁱⁱⁱ, 2002). The attainment of communicative competence is often seen as a herculean task by the learner especially in an unfavourable environment. So, the teacher has to provide a favourable environment to students to learn any language, in order to develop certain skills like meta-cognitive skills to attain language competence as stated in NEP 2020. A conscious effort is required by the students today to develop their study skills including their meta-cognitive skills. This in-turn can help students to develop their self-regulation to understand definition of the terms, to decode the words, to know its multiple contextual meanings, spelling, pronunciation and prosody during speech.

Language learning strategies can simply be described as characteristic ways in which learners acquire, remember and use a new language. The field of language learning strategies is complex and multi-layered. Since focused research began in the 1970s (Naimen^{iv}, et al., 1978; Rubin^v, 1975) much has been carried out with regard to

identifying and classifying these strategies, and isolating their use by specific learner types and in various learning contexts. However, there still appears to be discussion, and even debate, as to what strategies are available to learners, how they should be classified, and whether certain strategies are relevant to language acquisition, or language use, or perhaps both (Hsiao and Oxford^{vi}, 2002; Macaro^{vii}, 2001). What does seem clear, however, is that language learning strategies can be effective methods that help to create successful learners (Lessard-Clouston^{viii}, 1997; Oxford^{ix}, 1990). One resulting challenge appears to be continuing to isolate language strategies and presenting them to learners in such a way as to improve their ability to acquire, retain and use their new language, and place them on the path towards self-directed, autonomous learning (Chamot, 2005)^x.

Rationale of the Study:

The purpose of this study is to investigate the effect of meta-cognitive language learning-based instruction in English and hemisphericity on eighth standard school students' social self-concept. The variables focused on in the present study include meta-cognitive strategies-based instruction and hemisphericity as the independent variables and social self-concept as the dependent variable. The study is likely to enhance the use of meta-cognitive language learning strategies to improve students' English language skills. Since strategy used has been emphasized explicitly as one of the objectives of the study, it heightens the importance and significance of this study. Through the findings of this study, the researcher hopes to provide empirical evidence to show the effect of meta-cognitive language learning strategies on the students' social self-concept and also further provide implications for pedagogical practice for teachers according to NEP 2020

Need of the Study:

In Indian schools, meta-cognitive strategy training is not an internal part of teaching. Teachers do not seem to pay attention to these strategies while designing their lessons. Language skills do not receive its due importance and students do not seem to be sufficiently trained to use meta-cognitive language learning strategies. Although there have been a number of studies like this one in different contexts abroad, here the study emphasizes that more research is needed to investigate the role of meta-cognitive language learning strategy instruction in learning and improving English language and build students' self-concept.

Research Question:

Considering the purpose of this study and in an attempt to initiate more research in the field of meta-cognitive language learning in second and foreign language (L2) acquisition in India, the research question for this study has been formulated as follows:

What is the effect of meta-cognitive language learning strategy based- instruction in English learning and hemisphericity on social self-concept of the students?

Statement of the Problem:

Interaction Effect of Meta-cognitive Language Learning Strategies-based Instruction in English and Hemisphericity on Students' Social Self-Concept – A Pedagogical Approach to NEP 2020

Review of Related Literature:

Meta-Cognitive Language Learning Strategy and Self-concept:

Adsul (2011)^{xi} conducted a study on self-concept of high and low achieving adolescents. The findings show

that there is no significant difference between high and low achievers on self-concept namely - physical, social, emotional, moral and educational. But it was found that there was significant difference in high and low achievers on intellectual self- concept.

Pandith et al (2012)^{xii} undertook to study the self-concept, level of aspiration and academic achievement of normal and physically challenged secondary school students of district Baramullah (J and K). The result of the study highlight that the 67 normal secondary school students had high real self, level of aspiration and academic achievement as compared to physically challenged students. On the other hand, physically challenged students were found to have high ideal self as compared to normal students.

Hemisphere	Reliability
Right Hemisphere	0.89
Left Hemisphere	0.71
Integrated Hemisphere	0.65

Scoring of the Tool:

There are two columns given in the test for each item. The student has to put a tick mark either in one of these columns or both. A tick mark in the first column shows the dominance of the right hemisphere. A tick mark in the second column shows the dominance of the left hemisphere. A tick mark in both columns shows the dominance of the both hemispheres and integrated hemisphere. The illustrations of the items pertaining to the hemispheric dominance which are included in the Hemispheric Dominance Test are as follows:

The examples of the items indicate the right hemispheric dominance are,

1A – I understand clearly the information passed through gestures and actions. 2A – I have the habit of taking while reading or writing.

The examples of the items indicate the left hemispheric dominance are,

1B – I understand clearly the information when passed through words by others. 2B – I need complete silence while reading or writing.

The examples of the items indicate the integrated hemispheric dominance are,

1A – I understand clearly the information passed through gestures and actions. 1B – I understand clearly the information when passed through words by others.

The minimum possible score for right hemispheric dominance is 1 whereas maximum possible score is 49. The minimum possible score for left hemispheric dominance is 1 whereas maximum possible score is 49. The minimum possible score for integrated hemispheric dominance is 1 whereas maximum possible score is 49.

Social Self-Concept (Pandya, 2009):

This tool measures a student's social self-concept. The items in this scale include aspects such as students' ability to form and maintain relationships with peers and teachers for social self-concept. It consists of 22 items social self-concept measured on a five point scale with response categories ranging from strongly agree to strongly disagree.^{xxvi}



Reliability:

Type of Reliability	Co-Efficient of Reliability
Internal consistency	0.81
Test-Retest	0.78

It consists of some statements regarding opinion about yourself. Next to each statement, there are five columns with the following columns heading:

- SA : Strongly agree a: Agree
 UN : Undecided D : Disagree
 SD : Strongly disagree

Students had to indicate their response to each statement by putting a tick mark in the appropriate column.

Intervention Programme:

The duration of the intervention programme was 32 hours. The control group was taught using the traditional method. The experimental group was taught by using the intervention programme based on CALLA (Cognitive Academic Language Learning Approach model) which had five steps as follows:

1. **Preparation** (Activate background knowledge)
2. **Presentation** (Explain, Model)
3. **Practice** (Prompt use of strategies, Give feedback)
4. **Self- Evaluation** (Assess strategies)
5. **Expansion** (Support transfer)

The teaching units were selected from the syllabus prescribed for the schools affiliated to the SSC board for the state of Maharashtra and included the topics on Noun, Adjective and Adverb Formation, Noun and Adjective Clauses, Remove and Use “too, enough, so that...cannot, hardly, scarcely”, text book poems and prose, Letter writing, Narrative essay, Expansion of ideas, Report writing, Speechwriting.

Data Analysis:

Null Hypothesis 1: There is no significant effect of the (a) intervention, (b) hemisphericity and (c) interaction between intervention and hemisphericity on the following variable:

Self-Concept:

- i. Social Self-Concept

The technique used to test this hypothesis is the two-way factorial analysis of covariance (ANCOVA).

The following Table 1 - shows the relevant statistics of adjusted mean Social Self- concept of students by intervention and hemisphericity.

TABLE 1

ADJUSTED MEAN OF SSC BY INTERVENTION AND HEMISPHERICITY

Groups	HEMISPHERICITY			Total
	Both	Left	Right	
	N	N	N	N
EG	3	10	39	52





CG	5	4	39	48
Total	8	14	78	100
	Mean	Mean	Mean	Mean
EG	83.10	81.54	78.56	79.39
CG	72.83	75.81	72.57	72.86
Total	76.68	79.90	75.56	76.26

Figure 1 shows the bar graph on the mean SSC by intervention and hemisphericity.

MEAN SSC BY INTERVENTION AND HEMISPHERICITY

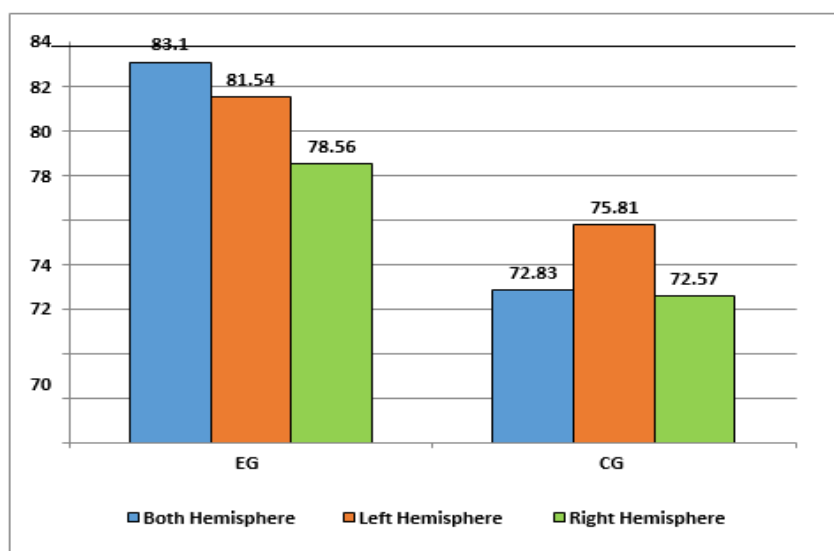


Figure 1

The following table shows the ANCOVA for social self-concept by intervention and hemisphericity after partialling out the effect of the pre-test scores of social self-concept of students.

TABLE 2

ANCOVA FOR SOCIAL SELF-CONCEPT OF STUDENTS BY INTERVENTION (I) AND HEMISPHERICITY (H)

Source	SS	df	MS	F	P
Rows (I)	898.28	1	898.28	16.81	0.0001
Columns (H)	224.36	2	112.18	2.1	0.1282
Interaction (IxH)	-72.33	2	-36.17	-0.68	<.0001
Error	4969.9	93	53.44		
Total	6164.87	98			

- i. Intervention Effect: Table 2 - shows, F- ratio for intervention effect is significant at 0.0001 level. Hence the null hypothesis is rejected with reference to the intervention effect for SSC.
- ii. Hemisphericity Effect: Table 2 - shows, F- ratio for hemisphericity effect is not significant. Hence the null hypothesis is accepted with reference to the hemisphericity effect for SSC.

iii. Interaction Effect: Table 2 - shows, F- ratio for interaction effect is significant at 0.0001 level. Hence the null hypothesis is rejected with reference to the interaction effect for SSC.

Since the F-ratio, for intervention effect and interaction effect are significant, the t - test is applied for further analysis as shown in Table 3. The t - test has been used to determine which groups on hemisphericity differ significantly.

The following table gives the numerical data and level of significance for computing mean differences in SSC of students by intervention and hemisphericity.

TABLE 3
NUMERICAL DATA AND LEVEL OF SIGNIFICANCE FOR MEAN DIFFERENCES IN SSC BY INTERVENTION AND HEMISPHERICITY

No.	Group	N	df	Mean	SD	t	I.o.s.
1.	EG - Both	3	6	83.10	7.31	1.92	NS
	CG- Both	5		72.83	7.31		
2.	EG - Left	10	12	81.54	7.31	1.33	NS
	CG- Left	4		75.81	7.31		
3.	EG - Right	39	76	78.56	7.31	3.42	0.01
	CG- Right	39		72.57	7.31		
4.	Both (total)	8	20	76.68	7.31	1	NS
	Left (total)	14		79.90	7.31		
5.	Left (total)	14	90	79.90	7.31	2.05	0.05
	Right (total)	78		75.56	7.31		
6.	Both (total)	8	84	76.68	7.31	0.41	NS
	Right (total)	78		75.56	7.31		

Interpretation of t

1. EG-Both Hemisphericity and CG-Both Hemisphericity

The obtained $t=1.92$ which is less than the tabulated value of $t=2.44$ at 0.05 level of significance. This shows that there is no significant difference in the mean SSC of the students using both hemispheres of EG and CG.

2. EG-Left Hemisphericity and CG-Left Hemisphericity

The obtained $t=1.33$ which is less than the tabulated value of $t=2.18$ at 0.05 level of significance. This shows that there is no significant difference in the mean SSC of the students using left hemisphere of EG and CG.

3. EG-Right Hemisphericity and CG-Right Hemisphericity

The obtained $t=3.42$ which is greater than the tabulated value of $t=2.64$ at 0.01 level of significance. This shows that there is significant difference in the mean SSC of the students using right hemisphere of EG and CG. The mean SSC of students of EG using right hemisphere is significantly higher than those students of CG using right hemisphere.

4. Both Hemisphericity and Left Hemisphericity

The obtained $t=1$ which is less than the tabulated value of $t=2.09$ at 0.05 level of significance. This shows that there is no significant difference in the mean SSC of the students using both hemispheres and left hemisphere.

5. Left Hemisphericity and Right Hemisphericity

The obtained $t=2.05$ which is more than the tabulated value of $t=1.99$ at 0.05 level of significance. This shows that there is significant difference in the mean SSC of the students using left hemisphere and right hemisphere. The mean SSC of students using left hemisphere is significantly higher than those students using right hemisphere.

6. Both Hemisphericity and Right Hemisphericity

The obtained $t=0.41$ which is less than the tabulated value of $t=1.99$ at 0.05 level of significance. This shows that there is no significant difference in the mean SSC of the students using both hemispheres and right hemisphere.

Conclusion:

- The Mean SSC of students from the EG is significantly greater than that of the CG. This indicates the meta-cognitive language learning program was effective in enhancing SSC of students of experimental group.
- The mean SSC of students using right hemisphere of EG is significantly higher than the students using right hemisphere of CG. However, there is no significant difference in the mean SSC of students using left hemisphere of the EG and CG respectively and both hemispheres of EG and CG respectively.
- There is significant difference in the mean SSC of students using left and right hemispheres. The mean SSC of students using left hemisphere is higher than that of students using right hemisphere. However, there is no significant difference found in the mean SSC of students using both and left hemispheres and of students using both and right hemispheres.
- Interaction effect of meta-cognitive language learning strategies-based instruction in English and hemisphericity on SSC of students is shown in the following figure.

INTERACTION EFFECT OF INTERVENTION AND HEMISHERICITY ON SSC

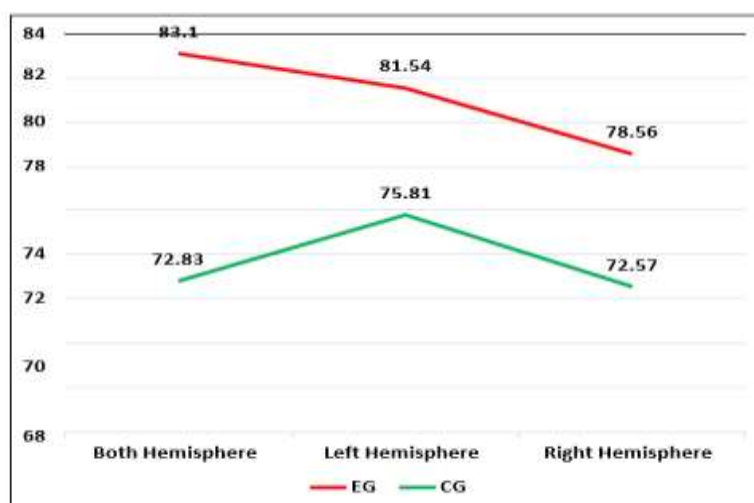


Figure 2

Effect Size

The following table shows the effect size:

Table 4
Effect Size

	Effect size	
	Magnitude	Interpretation
Intervention Programme	0.8	Large
Hemisphericity	0.8	Large

Discussion:

The meta-cognitive language learning strategies-based instruction program in English designed by the researcher proved to be effective in developing social self-concept of standard eighth students. Students using right hemisphere were found to have higher scores on social self-concept as compared to those using left and both hemispheres. Right hemisphere handles spatial information and visual comprehension and the left hemisphere is more of logic and language. The students having right hemisphere dominant are creative and might be happy with average scores. So, they might have developed positive academic self-concept. Self-concept is the positive image of oneself. The meta-cognitive language learning strategies-based instruction program in English may have boosted students' academic scores. This could have helped in boosting the confidence of students. Even teachers, parents and friends must have praised the students for their academic performance. All this could have helped in building positive social self-concept of the right hemisphere dominant students.

Both learners and teachers need to become aware of learning styles and strategies through strategy instruction. Attempts to teach students to use learning strategies have produced good results (Rubin & Thompson, 1994). The main objective of such attempts is to allow students to become more aware of their preferred learning strategies and to help them become more responsible for meeting their own objectives. Such objectives can be only achieved when students are trained in strategy use so that they become more independent and effective. There is a need for more comprehensive research on a wide range of variables affecting language learning strategies use.

Finally, the idea of self-concept and empowerment with strategic instruction will possibly prove more effective in certain contexts. Where learners of ESL have been educated in a more teacher-centered, top-down curriculum rather than one that promotes learners' autonomy and independence, strategy instruction could prove most effective.

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