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Building Lateral Thinking Strategies to Impart English Speaking Skills

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ABSTRACT

This study explores the benefits of implementing lateral thinking skills involving tertiary level learners to improve second language communication skills at a University in South India. The paper elaborates the concept of lateral thinking skills from two interrelated angles: (1) practical aspects covering the reasons for introducing and building lateral thinking skills in ESL learners, particularly University students of engineering in India, by proposing a checklist of lateral thinking strategies to be mastered, and (2) pedagogical aspects covering the methods for efficiently imparting lateral thinking strategies in the classroom setup.

Keywords: Education, India, Lateral thinking skills, Second Language teaching

INTRODUCTION

This study considers 'lateral thinking skills' as a strategy of practice to impart English speaking skills through growth mindset. It concerns with non-native speakers of English who are not exposed to English environment from their childhood. It aims at helping target learners to use lateral thinking factors, i.e. challenge, fraction, etc. in a consistent manner. The problem is addressed against the backdrop of teaching English with the same perspective to all ESL learners and the solutions proposed deal with practical, theoretical and pedagogical aspects of the matter. The central role of building lateral thinking strategies is assigned to English language teachers; the term 'building' denotes the process of creating and developing the lateral thinking features in the minds of the learners to acquire English speaking proficiency.

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Thinking and Language Learning - an extended summary

In the past few decades, English has established its standard internationally as the global *lingua franca*. Foreign languages could be characterised by looking at three attributes (Richards & Schemidt, 2002) as seen by the taught (a) they are not the first language of the country; (2) they are not the official language of the country; and (c) they are taught as a subject in schools. In the case of South Indian learners of rural background, though English is a second language, English has been taught as a subject and they have never been exposed to any English communication environment. Indeed, a number of researchers have confirmed the relationship that exists among learning, thinking and the environment (e.g., Vygotsky, 1962; Vygotsky, 1978). Thinking furnishes the mind with elevated concepts and the experience forms certain concepts, patterns and organisations to follow the preset pattern. The mind uses and creates patterns to sense and react. Once it starts forming a pattern, it continues to create the same sort of pattern automatically. The first language (L_1) users make use of communicative situations as frequently as possible and train the mind to follow a specific pattern. The thinking aspect of the mind does the duty of following the pattern of the individual's mind. The language of thinking is important for the learners to enhance the association of thinking with the relevant cognitive processes (Beyer, 1987; Tishman, Perkins, & Jay, 1995; Tishman & Perkins, 1997; Costa & Marzano, 2001; Fisher, 2003; McGuiness, 2003) but the target learners missed it. The thinking aspect of the mind considers individuals' assumptions and past experiences to expand perspectives by continual questioning (Edwards, 2007). Thinking considers different perspectives of the people to frame ideas and has the best ability to form new combinations of ideas to fulfil the needs (Halpern, 1997).

Why Lateral Thinking Skills

Thinking is a human activity that involves cognition (knowing), affect (feeling) and conation (wanting and willing) (Moseley *et al*., 2005). The target learners have a notion of powerlessness towards second language (L_2) acquisition and they require something to try possible ways to attain L_2 proficiency. The notion 'it is impossible' is prevalent in their mind. Replacing the word 'is' with 'can be' (De Bono, 1992, p. 62) is needed to change the belief and attitude of the target learners. The mind has a built-in inertia that opposes the change in the fettered pattern of mind, so it is necessary to escape from the old patterns to create new sequences. Lateral Thinking (LT) is needed to break the tentative pattern that was set up by the sequence of experience. LT does not develop the ideas of extreme evaluation on a single view but accommodates change in the pattern of the mind based on the situation. It has the ability to move across the patterns instead of moving along the track of normal thinking (De Bono, 1992). Moreover, LT enables individuals to consider a number

of views to reach the goal as it does not have the attitude of refusing ideas. Hence, the paper suggests LT skills as a mediating tool to repair the existing concepts and perception of the learners.

Lateral Thinking Factors for Target Learners

Lateral thinking factors such as concept formation, challenge, alternation, fractionation and provocation were considered in the study. They could help the learners to cut across patterns in the self-organising system (De Bono, 1992) and change the old perception according to the situations, thereby maximising the self-esteem of the person.

Concept Formation

The concept formation factor either creates concepts or extracts better ideas from a number of ideas based on the demand. Once the concept is formed, the factor strengthens and encourages it for action.

The Factor 'Challenge'

"Challenge is one of the most fundamental processes of lateral thinking" (De Bono, 1992, p. 314). It considers the existing approach as one of the approaches to be tried, and so looks for better ways to allow the mind to free itself from past concepts through continuity. It challenges the shaping factors of ideas such as dominating concepts, assumptions, boundaries, essential factors and polarisations to discharge the mind from fixed patterns.

Alternatives

The very word 'lateral' suggests the movement-sideways to generate alternative patterns. Alternatives produce as many different plans as possible. The purpose of the 'lateral alternative search' is to loosen up the rigid patterns to promote new ones. It is not a matter of finding an appropriate fixed point but finding out a number of suitable fixed points.

Fractionation

Fractionation helps to generate alternatives. It looks for a standard view of the situation and provides material to stimulate a restructuring for the situation. "The purpose of fractionation is to escape from the inhibiting unity of a fixed pattern to the generative situation of several fractions" (De Bono, 1990, p. 140).

Provocation

Provocation hunts for the perceptions to move it away from the usual directions and involves the mechanism of escape from one pattern to another. It can be obtained either deliberately or in the course of thinking or through conversation.

This paper aims at implementing the above mentioned factors through specific activities.

Lateral Thinking and Mindset

Learners' beliefs about their ability play a significant role in language learning which is called as mindset. Mindset affects the

whole system of the individual and has the ability to interact with all the key factors of the mind as strategies, motivation, personality, proficiency, self-concepts and aptitudes. Individuals are said to have any one of these mindsets (namely a growth mind set or a fixed mind set) (Dweck, 2002). Any person who believes that natural talent is the gift needed for successful learning has a fixed mind set and a person who believes in his own efforts and hard work to reap the fruits of success has a growth mindset (Mercer & Ryan, 2010). Dweck (2002) found evidence for differing mindsets across different domains such as music, sports, geography and language learning. Similarly, learners have different mindsets across the domains in the aspects of language learning. Learners' beliefs about their speaking skills differ from their writing skills. In the present study, the target group exhibited a fixed mindset towards second language learning. They strongly believed that they did not have the natural talent of second language communication skills as they were brought up in the environment where communication in second language was not entertained. They refused to accept the fact that effective second language communication is possible at the tertiary level. The fixed mindset caused an inhibition in the target group from acquiring second language communication skills. Hence, the present study recommends lateral thinking as a mediating variable to change the mindset of the learners.

RESEARCH PROBLEM

The target learners were entry level Under Graduate students pursuing their education through first language (L_1=Tamil). The needs of the learners differed at every stage of their academics. As the target learners were undergraduate students of technology departments they needed English proficiency in order to read, communicate orally on technical subjects with the specialists they may come into contact with during the undergraduate course or during their professional careers in their home countries or at international conferences (Rivers, 1983). As mentioned by Wreikat *et al*. (2014), they faced many difficulties in terms of the second language learning environment inside and outside the campus. Two major causes for rural pupils' low proficiency levels were poor learning environment and lack of resources (Wreikat *et al*., 2014). The classroom discourse maximises the learning benefits as it has been found that "making classroom talk more dialogic, organising time for talk and peer listening, teacher's revoicing, questioning techniques, waiting time, assigning intellectual roles and employing differential treatment is beneficial for learning" (Dass *et al.*, 2014 p. 926). The target learners, however, did not get any opportunity to communicate in the second language in the classroom as well. They studied English as one of the subjects for twelve years. They could string standalone sentences with some errors but they could not string and bring sentences together to communicate ideas

in English because they had developed a fixed mindset due to the above mentioned reasons.

HYPOTHESES

Below are the hypotheses formulated for the current study:

1. Lateral thinking skills can transform the mindset of the learners.
2. Lateral thinking skills and the growth mindset can work with the suggested tasks to improve the communication skills of the learners.

RESEARCH QUESTIONS

1. How do the suggested activities implement lateral thinking skills?
2. How does task based learning help lateral thinking skills to change the mindset of the learners?
3. How do the lateral thinking skills and growth mindset improve the second language communication skills of the learners?

MATERIALS AND METHODS

In the words of De Bono (1992), Lateral Thinking could be used either as a set of systematic techniques to change concepts and perceptions or as a number of possibilities and approaches to generate a new perception. This study used lateral thinking as a set of systematic techniques to change the perception of the mind.

Implementation of lateral thinking skills and the transformation of mindset

The task based approach was used to attain the objectives of the study. "Task based approach to language teaching and learning looks at communicative knowledge as a unified system where there are communication tasks which focus upon the actual sharing of meaning through spoken or written communication" (Foley, 1991). When an individual faces a task, he externalises the inner order to regulate himself. It shows that the self-regulated individual has the access to object to or accept the regulations when he faces the tasks. The designed activities were related to L_2 speaking skills. They included pair and group activities. Stensko and Arievitch (1997) stated that "psychological process emerges first in collective behaviour, in co-operation with other people, and only subsequently becomes internalised as the individual's own possession" (p. 161). Each activity had the objective of implementing lateral thinking strategies to change the mindset of the learners. Ruggerio and Ryan (1988) opined that specified thinking skills could be implemented through purposeful activities. Though the focus was more on speaking, the learners were given explicit instructions at all junctures. Each task incited the learners to voice their background knowledge and social experience to participate in the classroom activities. The tasks were designed by following the specific norms indicated by Nunan (2004), Nunan (1989), Ellis (2003), Skehan (2001), Skehan (1998),

Brown (1984), and Prabhu (1987). The introduction of the type of task was done through oral instructions. Further, the tasks were graded based on code complexity and cognitive complexity. Content of tasks was related to general situations and the tasks were reasonably challenging at each level. Specific norms followed in the study were:

a) Objective: The goal was to achieve ability through practice
b) Input: The medium of input was oral and visual
c) Conditions: Information was presented as two-way interaction at every stage
d) Process: Cognitive complexity was included in every stage in the method of responding to the input.
e) Outcome: The medium of outcome was oral.

RESEARCH PROCEDURES

The respondents for this study were first year undergraduate engineering students with exposure to learning English as a second language for twelve years. The research tools used on the target sample were questionnaire, document analysis and observations. In addition, quantitative data analysis was obtained from the respondents' diagnostic tests. The diagnostic tests were administered to the first year students. The items in the test were divided into four sections: (i) Language proficiency (learners' grammar, vocabulary and sentence formation skill), ii) Motivation level (learners' ability to sustain the conversation with goal seeking attitude); iii) Independent Thinking (ability to accept various points of views, and managing the complications given by the peers and the task); and iv) Creativity level (innovative ideas and information). The background information of the respondents was also collected through the questionnaire in order to ensure the objectivity and reliability. Individual profiles were prepared and a number of sheets were maintained to record the progress of the learners. The responses of the diagnostic test were considered for the scores of the pre-test.

It was found that though the learners had been exposed to learn English as an L2 for twelve years, most of them had never had the opportunity to use the language. In fact, 85% of them were the first generation of English learners. Meanwhile, 15% of the respondents were the second generation learners but their parents had not been exposed to English at all. Therefore, none of them had had any opportunity to speak English at home.

As for the collection of qualitative data, classroom observation and document analysis were done by the researcher. Four different activities were given to them. Forty sessions were conducted. The 40-session experiment was conducted in the span of two months.

Activities

Task 1 - Clips from cartoon movies, with subtitles, were shown. The learners were asked to note down the functional words used in the scene (the specific scenes were shown twice). They were asked to imagine, if the same situation happened to them,

what would their reaction be and they were also asked to frame dialogues for the same. The learners were asked to use the noted functional words in the script. Their dialogues were checked and appreciated (ex. A). Have they ever been in the middle of greenery as shown in tangled? B) Have they ever been scared of anything as shown in The Lion King?, etc.).

Task 2 - Thrice the clips of cartoon movies were shown without subtitles. The learners were asked to enact situations related to the scenes that were shown.
Note: The popular cartoon such as The Lion King, Tangled, Snow white etc. were used for the tasks as the learners found them interesting.

Task 3 - The learners were asked to enact open-ended situations given by the researcher. Example: a) Early morning you are going for a walk…, b) You are having your lunch …

Task 4 - Learners were asked to enact any simple situations relating to real life using L_2. (The researcher did not give any topics for this task)

The learners were informed that they needed to think and express possible responses for the given task. The assessment of each activity was done based on the same criteria: i) Language proficiency (learners' grammar, vocabulary and sentence formation skill); ii) Motivation level (learners' ability to sustain the conversation with goal seeking attitude); iii) Independent Thinking (ability to accept various points of views, and managing the complications given by the peers and the task); and iv) Creativity level (innovative ideas and information) followed for the diagnostic test.

RESULTS

The data analysis was done in two stages. Initially Factor Analysis was used to test the reliability of the variables in the study. Then, Multiple Serial Mediation Analysis was used to test the relationship between the activities, the lateral thinking skills, the growth mindset and the communication skills. The overall reliability of the scores of the variables was assured by Cronbach Alpha. The results are presented in Table 1. The results ensured the content validity of the concepts (the standardised factor loadings of the variables in all the four concepts were found to be greater than 0.50.)

TABLE 1
Reliability of the Variables

S. No	Dimensions	No. of variables	Cronbach alpha
1	Activity	7	0.715
2	Lateral thinking	10	0.827
3	Mindset	5	0.890
4	Communication skills	10	0.651

Testing of Conceptual Model

The statistical implication of the mediation analysis has been used to explain how the specified activities influenced the communication skills. The proposed conceptual model (see Fig.1) shows the interrelationship of the four constructs. The correlation method establishes only the relationship between two variables (activities and communication skills) but fails to demonstrate the mechanism(s) that causes and operates the effect to establish their boundary conditions whereas Mediation analysis explained "How" and "By what means" the two variables are correlated (e.g., Judd & Kenny, 1981; Baron & Kenny, 1986; Hayes & Preacher, 2004). As the study found more than one mediating variable between the independent and the dependent variable, the Multiple Mediation (Preacher & Hayes, 2008) model was used to find the relationship between the variables. The present research focused on the impacts of the mediating variables such as lateral thinking skills and growth mindset on communication skills. As per Hayes' model, multiple mediators were linked serially in a causal chain and then Andrew Hayes and Preacher's macros were used to find out the mediation effects of lateral thinking skills and growth mindset on communication skills with the help of bootstrapping tests. Meanwhile, bootstrapping testing analysis was used to find out the indirect mediation effect accurately (Bollen & Stine, 1990; Shrout & Bolger, 2002). From each of these samples, the indirect effect was computed and a sampling distribution was empirically generated. The result showed that the specified activities (X) causally influenced two (k) mediators, as illustrated in Fig.1.

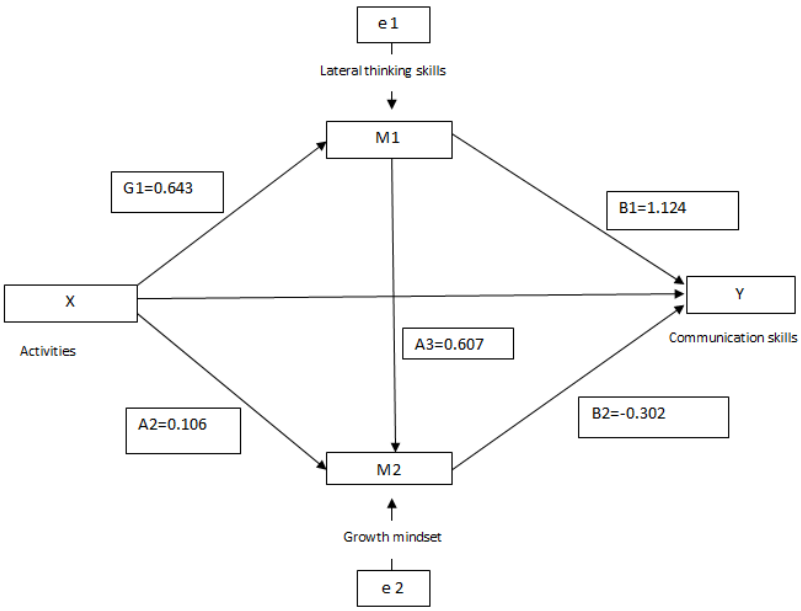

Fig 1: A statistical diagram of the serial multiple mediator model.
Note: e1, e2 and e3 are errors

$M_1=i_1+ a_1X+e_1$
$M_2=i_2+ a_2X+a_3M_1+e_2$
$Y=i_3+c_1'X+b_1M_1+b_2M_2+e_3$

Estimated values of a1, a2, a3, b1 & b2, with standard error, were found by using the above mentioned equation. The p-value illustrated in Table 2 and Fig.1 assured the significant relationship between the estimated values.

TABLE 2
The Estimated Values of A1, A2, A3, B1 & B2 with Standard Error

	Estimates	**Standard error**	**p-value**
a1	0.643	0.073	0.000
a2	0.106	0.070	0.013
a3	0.607	0.080	0.000
b1	1.124	0.387	0.005
b2	-0.302	0.441	0.050
c1'	-0.157	0.248	0.530

TABLE 3
Direct effect of X (Suggested Activities) on Y (Communication Skills)

				95% CI	
Effect	SE	t	P	LL	UL
0.257	.248	-0.633	.053	.010	.357

Note: CI = confidence interval LL = Lower limit; UL = Upper limit

Table 3 and Table 4 illustrate direct and indirect effects of the activities (X) by using the coefficients. The direct effect of X (Suggested activities) on Y (communication skills) is estimated by c1' (0.2566) indicating one unit in X change. Change of one unit (component/concept) in activities influences 0.25 times directly on communication skills of the learners. The table indicates that the activities developed the communication skills of the learners at 0.25 times. Indirect effects of X (activities) on Y (communication skills) are estimated as the product of coefficients because the variables linked X to Y through more than one mediator. In this model, there are three such specific indirect effects: one through M 1 (a 1 b 1), another one through M 2 (a 2 b 2), and the other through both M 1 and M 2 in serial (a 1 a 3 b 2). These seem to yield the total indirect effect of X on Y (a 1 b 1 + a 2 b 2 + a 1 a 3 b 2). When added to the direct effect, the result is the total effect of X on Y, from c 1 from equation 10. That is c 1 = c' 1 + a 1 b 1 + a 2 b 2 + a 1 a 3 b 2, and so c 1 – c' 1 = a 1 b 1 + a 2 b 2 + a 1 a 3 b 2.

TABLE 4
Indirect Effect of X on Y

			95% CI	
	Effect	Boot SE	Boot LL	Boot UL
TOTAL	.5731	0.2066	0.1620	0.9757
(Activities -> lateral thinking -> comm_ski)	0.7226	0.2227	0.3219	1.1873
(Activities -> lateral thinking -> Growth mindset -> comm_ski)	0.1176	0.1726	0.04717	0.2387
(Activities -> mindset -> comm_ski)	0.0320	0.0549	0.002173	0.0421

Note: CI = confidence interval BootLL = Bootstrapping Lower limit; UL = Bootstrapping Upper limit

The indirect effect of X on Y is illustrated in Table 4. The bootlimits between the variables (activities, lateral thinking, growth mindset and communication skills) are as follows: the upper limit between activities and lateral thinking skills is 0.3219 and the lower limit is 1.1873. The upper limit between the activities, lateral thinking, growth mindset and communication skills is 0.04717 and the lower limit is 0.2387. The upper limit between activities, mindset and communication skills is 0.607. Therefore, it has been proved that the suggested activities have significantly developed communication skills through lateral thinking skills and growth mindset.

DISCUSSION

How do the suggested activities implement lateral thinking skills?

In keeping with the research done on the language activities of cartoon and movies, cartoons have been found to greatly improve different language skills (Rule & Ague, 2005) and movies were also considered as appropriate teaching materials (Heffernan, 2005) for second language learners. Clark (2000) mentioned that cartoons have the potential to motivate thinking processes and discussion skills. The suggested activities using cartoon movies stipulated the learners to follow lateral thinking strategies such as concept formation, provocation and fractionation. Concept formation was used as the primary technique to implement lateral thinking skills. Finding alternatives

was implemented through fractionation and provocation. Fractionation and provocation was induced through tasks to find alternatives. As the content of each task changes from one subject to the other, their ability to transfer the skills from one context to another became part of the training. If the learners were to respond to the task, lateral thinking factors had to be used indirectly. Out of repertoire of skills required for learners at the college level, a few skills were focused to maintain the construct validity of the tasks independently.

These included the following:

- Transforming information from one medium to the other
- Ability to carry out the task to find solution
- Identifying and constructing arguments for the goal
- Identifying the main idea of the task in predicting the content
- Self-learning and self-assessing ability
- Being aware of the structure of the context
- Understanding the relationship between the task and life situations
- Guessing and remembering suitable words for the given context
- Expressing ideas clearly
- Identifying different methods and ways to solve the problem
- Applying different methods to solve the problem
- Applying a maximum number of skills to attain the objective
- Arranging the information and ideas according to the demand
- Finding new ways and ideas to attain success
- Attaining the objective by trying all possible (both difficult and easy) methods.

How does task based learning help lateral thinking skills to change the mindset of the learners?

The activities encouraged the learners to be involved in the sessions. They enjoyed the concepts and the language of cartoon movies such as The Lion King, Tangled, etc. "It is also believed that audiovisual programs such as cartoons, movies, songs, and documentaries are types of programs that are rich sources of authentic language input" (Taher Bahrani & Tam Shu Sim, 2014, p. 144). The tasks were repeated using clips from different movies. The concept "in order to progress we may have to backtrack and change to another pattern which is more appropriate for the conditions" (De Bono, 1995, p. 51) was maintained in the choice of the movies. The factor 'challenge' and 'alternative' was provided through the repetition of similar kind of tasks. It instilled in their mind the need to look at things from various points of views and provided more deliberate means for pattern switching than being curtailed by mistakes. Lateral Thinking served as a source for information as perceptions.

It changed their initial perceptions on communication in the second language. Their belief in acquiring second language skills was transformed as confidence was instilled in them. Learners' involvement in carrying out the tasks explicated the change in the mindset.

How does the lateral thinking skills and growth mindset improve second language communication skills of the learners?

The statistic implication of mediation analysis is used to explain how the specified activities influenced the communication skills. Indirect effect of activities (X) on communication skills (Y) through growth mindset and lateral thinking has assured the outcome of the study. It is in fact a restructuring of the learners' insight. It encouraged learners to cope better with setbacks and accept failures as encouragement to develop positive attitudes and to acquire effective communicative competence. Their effort of using new words and different sentence structures, as demanded by the situations, assured the application of lateral thinking skills and a change in the mindset.

CONCLUSION

Motivation towards alternation and concept formation skills through the specified tasks transformed their mindset towards second language learning. The provocation of alternatives loosened up the rigid patterns to provoke new ones and enabled a number of suitable points for the given context. It took away the perceptions of the mind from the usual directions thereby enabling the mind to develop the flow of second language communication skills. Lateral thinking factors restructured the pattern of the mind instead of developing any readymade pattern. Repetition of tasks was done as a "reference to one's own achievements and subsequent developing of a sense of personal progress may help to nurture a growth mind set" (Mercer & Ryan, 2010, p. 442). The results of mediation analysis assured the effective correlation between activities, mindset, lateral thinking skills and communication skills. Learners' refusal of accepting the possibility of acquiring second language skills was found extremely less at the end of the sessions. The growth mind set became a motivator for attaining second language skills. Thus, the study found a change in the implanted notions of the mind regarding the acquisition of second language (an insight restructuring) and displayed a drastic improvement in the second language communication skills through the suggested model frame work of developing lateral thinking of the learners for L2 pedagogy.

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