

LATERAL THINKING AND ACHIEVEMENT IN ENGLISH OF IX STANDARD STUDENTS

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Abstract

Lateral thinking is closely related to creativity. But whereas creativity is too often only the description of a result, lateral thinking is the description of a process. One can only admire a result but one can learn to use a process. Lateral thinking is concerned with the generation of new ideas. Lateral thinking involves restructuring, escape and the provocation of new patterns. Liberation from old ideas and the stimulation of new ones are twin aspects of lateral thinking. There are three practical situations which encourage the use of lateral thinking and they are: description, problem solving and design. The present study deals with how lateral thinking develops problem solving ability using English as a language. This research attempts to find out the relationship between lateral thinking and achievement of IX standard students in East Singhbhum District of Jharkhand. The researcher randomly selected 300 samples from 12 schools. The study reveals that there is significant relationship between lateral thinking and achievement in English of IX standard students. The finding of the study was that girls of IX standard are better achievers and are better in Lateral Thinking than boys.

Key Words

Lateral thinking, problem solving, achievement, provocative statements and puzzles

INTRODUCTION

There is nothing more excitingthan thinking of a new idea There is nothing more rewarding.....than seeing a new idea work There is nothing more useful.....then a new idea that helps you meet a goal

Lateral thinking is a term developed in 1973 by Edward De Bono, with the publication of his book *Lateral thinking: creativity step by step*. Lateral thinking involves looking at a situation or problem from a unique or unexpected point of view. De Bono explained that typical problem-solving attempts involve a linear, step by step approach. More creative answers can arrive from taking a step "sideways" to re-examine a situation or

problem from an entirely different and more creative viewpoint. Edward de Bono divides thinking into two methods. He calls one 'vertical thinking' that is, using the processes of logic, the traditional-historical method. He calls the other 'lateral thinking', which involves disrupting an apparent sequence and arriving at the solution from another angle.

Lateral thinking is closely related to creativity. But whereas creativity is too often only the description of a result, lateral thinking is the description of a process. One can only admire a result but one can learn to use a process (Karl Albrecht, Steven Albrecht, 1987, p.104). Lateral thinking is concerned with the generation of new ideas (Stephen E. Kohn, Stephen E. Kohn and Vicent D. O'Connell, 2007, p, 167). Lateral thinking involves restructuring, escape and the provocation of new patterns (Edward De Bono, 1970, p.11). Liberation from old ideas and the stimulation of new ones are twin aspects of lateral thinking (Edward De Bono, 1977, p.11). There are three practical situations which encourage the use of lateral thinking and they are: description, problem solving and design (Educational Research Information Center, 1973, p.45).

When you are faced with fast-changing trends, fierce competition, and the need to work miracles despite tight budgets, you need Lateral Thinking.

Developing breakthrough ideas does not have to be the result of luck or a shotgun effort. Edward de Bono's proven methods provide a deliberate, systematic process that will result in innovative thinking. Creative thinking is not a talent; it is a skill that can be learnt. It empowers people by adding strength to their natural abilities which improves teamwork, productivity and where appropriate - profit.

Today, better quality and better service are essential, but they are not enough. Creativity and innovation are the only engines that will drive lasting, global success.

Lateral Thinking is:

- seeking to solve problems by apparently illogical means
- a process and willingness to look at things in a different way
- a relatively new type of thinking that complements analytical and critical thinking not part of our mainstream education - yet
- a fast, effective tool used to help individuals, companies and teams solve tough problems and create new ideas, new products, new processes and new services.
- a term that is used interchangeably with creativity

Joel Barker has told you to get out of your paradigms---- Edward de Bono shows you how!

DEFINITION OF THE TERMS

Critical thinking is primarily concerned with judging the true value of statements and seeking errors. Lateral thinking is more concerned with the movement value of statements and ideas. A person uses lateral thinking to move from one known idea to creating new ideas. Edward de Bono defines four types of thinking tools:

- Idea generating tools that are designed to break current thinking patterns—routine patterns, the status quo
- Focus tools that are designed to broaden where to search for new ideas
- Harvest tools that are designed to ensure more value is received from idea generating output
- Treatment tools that are designed to consider real-world constraints, resources, and support

The Thinking Techniques: ALTERNATIVES: How to use concepts as a breeding ground for new ideas. Sometimes we do not look beyond the obvious alternatives. Sometimes we do not look for alternatives at all. This session shows how to extract the concept behind a group of alternatives and then use it to generate further alternatives. **FOCUS:** When and how to change the focus of your thinking. The discipline of defining your focus and sticking to it is required. The attitude should be on focusing on matters that are not problem areas i.e. how to generate and use a Creative Hit List. **CHALLENGE:** Breaking free from the limits of the accepted ways of operating. With Challenge, we believe that the present way of doing things is not necessarily the best. Challenge is not an attack or criticism. It is the willingness to explore the reasons why we do things the way we do and whether there are any alternatives. **RANDOM ENTRY:** Using unconnected input to open up new lines of thinking. **PROVOCATION & MOVEMENT:** Generating provocative statements and then using them to build new ideas. This session explores the nature of perception and how it limits our creativity. The provocation techniques are designed to challenge these limitations. Movement is a new mental operation that we can use as an alternative to judgment. It allows us to develop a provocative idea into one that is workable and realistic. **HARVESTING:** At the end of a Creative Thinking session one takes note of specific ideas that seem practical and have obvious value. We need to make a deliberate harvesting effort to collect ideas and

concepts that are less well developed. **TREATMENT OF IDEAS:** How to develop ideas and shape them to fit an organization or situation.

LATERAL THINKING AND PROBLEM SOLVING

Problem Solving: When something creates a problem, the performance or the status quo of the situation drops. Problem solving deals with finding out what caused the problem and then figuring out ways to fix the problem. The objective is to get the situation to where it should be.

Creative Problem Solving: Using creativity, one must solve a problem in an indirect and unconventional manner.

Creative Problem Identification: Many of the greatest non-technological innovations are identified while realizing an improved process or design in everyday objects and tasks either by accidental chance or by studying and documenting real world experience.

Lateral Problem "Solving": Lateral thinking will often produce solutions whereby the problem appears as "obvious" in hindsight. That lateral thinking will often lead to problems that you never knew you had, or it will solve simple problems that have a huge potential.

Lateral thinking puzzles: These are puzzles that are supposed to demonstrate what lateral thinking is about. However any puzzle that has only one solution is "not" lateral. While lateral thinking may help you construct such puzzles, the lateral thinking tools will seldom help you solve puzzles.

You are driving down the road in your car on a wild, stormy night, when you pass by a bus stop and you see three people waiting for the bus:

1. An old lady who looks as if she is about to die.
2. An old friend who once saved your life.
3. The perfect partner you have been dreaming about.

Knowing that there can only be one passenger in your car, whom would you choose?

Another example

Two policemen walked into a room with no windows and found a dead man who obviously hung himself from the ceiling, though they couldn't figure out how. He was hanging from the middle of a large room with a 10 foot ceiling. There was no chair beneath him that he might have jumped off of, or a table. Just a puddle of water. How'd he do it?

Solution: He climbed on a block of ice put the rope on and then waited for the ice to melt.

Example

A man is replacing a wheel on his car, when he accidentally drops the four nuts used to hold the wheel on the car, and they fall into a deep drain, irretrievably lost. A passing girl offers him a solution which enables him to drive home. What is it? (keep you mind out of the drain)

Solution: Use one nut from each of the four other wheels.

Example

A man comes up to the border of a neighboring country on his motorcycle. The customs officer at the border crossing stops him and searches the man. He finds nothing so he lets him cross. The next day the same thing happens. This goes on every day for several months. Then one day, the man doesn't show up. The border official meets up with him in a restaurant in the city. The officer says, "I know you're smuggling something and it's driving me crazy. It's all I think about. I can't even sleep. Just between you and me, what are you smuggling?" What is the man smuggling?

Solution: Motorcycles.

REVIEW OF RELATED LITERATURE

Hong, Peng O'Neil and Wu (2013) examined the effects of gender and item content of domain-general and domain-specific creative-thinking tests on four subscale scores of creative-thinking such as fluency, flexibility, originality, and elaboration. The results show that domain-general creative-thinking scores were not different across gender in any of the four subscales. In domain-specific creative thinking, female students showed dominance over males in the case of fluency, flexibility and elaboration whereas, significant difference was not found for originality. The findings on both gender and item effects support the contention that personal interest and life experience influence the generation of creative solutions.

Newton (2013) in an article draws on research to describe aspects of creative thought and problem-solving, moods and emotions, and some of their interactions. It uses these to construct a framework to help teachers of students at all levels plan for, think about, manage and mediate creative thinking in classrooms. The framework takes into account the flow of changing moods and emotions as tasks progress and accommodates individual thinking and collaborative group work.

Anwar, Aness, Khizar, Naseer and Gulam (2012) explored the relationship between lateral thinking and academic achievements of secondary school students. Results

revealed a statistically significant relationship between lateral thinking and students' academic achievements on different aspects of test of lateral thinking as well as lateral thinking and academic achievements.

Baum and Newbill (2010) highlighted a project focused on a virtual Native American village and the development of supporting instructional materials. The materials combine instruction on content-area material, technology and critical and creative thinking skills. The concept of critical and creative thinking skills was guided by a model that includes idea generation, reflective judgment, attitudes and dispositions and self-regulation. Through the process of designing instruction to teach critical and creative thinking skills, the investigators recognized that critical and creative thinking skills are essential in the design process.

Tabrizi, Talib and Yaacob (2011) studied the relationship between lateral thinking and anxiety among adolescent boys and girls in Tehran, Iran aged 12 to 15 years. The findings showed a strong negative correlation between lateral thinking and anxiety among Iranian adolescent students in Tehran's secondary schools.

Siswono (2011) had a research on level of student's creative thinking in classroom mathematics. The result of this research pointed out the five levels of creative thinking that are of level 0 to level 4 which has different characteristics based on fluency, flexibility, and novelty in mathematical problem solving and problem posing.

Shawareb (2011) examined the effect of early computer experience on creative thinking among Jordanian kindergarten children. The findings showed statistically significant differences between the experimental and the control groups on creative thinking total score. All dimensions showed no significant differences between boys and girls, and no effect of interaction between group and gender.

OBJECTIVES OF THE STUDY

The following are the objectives of the present study:

1. To find out the high, average and low level of lateral thinking of IX standard students of East Singhbhum district of Jharkhand.
2. To find out the high, average and low level of achievement in English of IX standard students of East Singhbhum district of Jharkhand.
3. To find out the difference between boys and girls of IX standard of East Singhbhum district of Jharkhand. in their lateral thinking.

4. To find out the difference between Hindi and English medium IX standard students of East Singhbhum district of Jharkhand. in their lateral thinking.

HYPOTHESIS OF THE STUDY

The following are the hypotheses of the present study:

1. There is no difference between boys and girls of IX standard of East Singhbhum district of Jharkhand. in their lateral thinking.
2. There is no difference between boys and girls of IX standard of East Singhbhum district of Jharkhand. in their achievement in English.
3. There is no difference between Hindi and English medium IX standard students of East Singhbhum district of Jharkhand. in their achievement in English.
4. There is no significant relationship between lateral thinking and achievement in English of IX standard students of East Singhbhum district of Jharkhand with respect to gender.

METHODOLOGY

John W Best (1986) states that, "The survey method involves interpretation, comparison, measurement, classification, evaluation and generalization all directed towards a proper understanding and solution of significant educational problems." The researcher chose the survey method for the study. The survey method is used to study the relationship between Lateral thinking and achievement in English of IX standard students. The Investigator selected 300 IX standard students from 12 higher secondary schools of East Singhbhum District of Jharkhand by the stratified random sampling technique. The Lateral Thinking Questionnaire (LTQ) tool was designed and the researcher took the help of Dr. Edward de bono (adapted) tool for lateral thinking and translated into easy language for both the medium students. Questionnaire containing Lateral thinking puzzles was prepared by the researcher to measure the achievement in English of IX standard students. The questionnaire prepared was given to the IX grade student's containing lateral puzzles. They were asked to think about the solution and choose the option they find appropriate.

SAMPLE

A stratified random sampling of 300 IX standard students from 12 higher secondary schools of East Singhbhum District of Jharkhand was selected. The sample of 300 students includes 175 boys and 125 girls of IX standard from 7 English and 5 Hindi medium schools of east singhbhum district of Jharkhand.

TOOLS USED

The researcher used the following tools for the study:

1. The researcher took the help of Dr. Edward de bono (adapted) tool for lateral thinking and translated into easy language for both the medium students.
2. Questionnaire containing Lateral thinking puzzles was prepared by the researcher to measure the achievement in English of IX standard students.

STATISTICAL TECHNIQUES USED

Statistical techniques such as mean, standard deviation, correlation and t test have been used.

DELIMITATIONS

1. The research is delimited to IX grade students only.
2. The research is delimited to high secondary schools only.
3. The research is delimited to schools of East Singhbhum district only.
4. Only 7 English and 5 Hindi medium schools were randomly selected.

ANALYSIS OF DATA

Table 1

Level of lateral thinking of IX standard students

LOW		AVERAGE		HIGH	
Count	%	Count	%	Count	%
58	19.33	210	70	32	10.66

It is inferred from the above table that 19.33% of IX standard students have low, 70% of them have average and 10.66% of them have high level of lateral thinking.

Table 2

Level of achievement in English of IX standard students

LOW		AVERAGE		HIGH	
Count	%	Count	%	%	Count
62	20.66	168	56	70	23.33

It is inferred from the above table that 20.66% of IX standard students have low, 56% of them have average and 23.33% of them have high level of achievement in English.

NULL HYPOTHESIS 1

There is no difference between boys and girls of IX standard in their lateral thinking.

Table 3

Difference between boys and girls of IX standard in their lateral thinking

Gender	Count	Mean	Standard Deviation	Calculated t value	Significance
Boys	175	11.27	4.023	0.975	NS
Girls	125	10.65	3.874		

It is inferred from the above table that there is no significant difference between boys and girls of IX standard in their lateral thinking.

NULL HYPOTHESIS 2

There is no difference between boys and girls of IX standard in their achievement in English.

Table 4

Difference between boys and girls of IX standard in their achievement in English

Gender	Count	Mean	Standard Deviation	Calculated t value	Significance
Boys	175	11.09	4.985	8.71	S
Girls	125	17.31	6.528		

It is inferred from the above table that there is significant difference between boys and girls of IX standard in their achievement in English.

NULL HYPOTHESIS 3

There is no difference between Hindi and English medium IX standard students in their achievement in English.

Table 5

Difference between Hindi and English medium IX standard students in their achievement in English It is inferred from the above table that there is significant

Medium	Count	Mean	Standard Deviation	Calculated t value	Significance
English	168	14.54	3.876	4.68	S
Hindi	132	10.39	7.621		

difference between English and Hindi medium IX standard students in their achievement in English.

NULL HYPOTHESIS 4

There is no significant relationship between lateral thinking and achievement in English of IX standard students with respect to gender.

Table 6

Relationship between lateral thinking and achievement in English of IX standard students with respect to gender

Background Variable	Category	Correlation Value	Remark
Gender	Boys	0.319	NS
	Girls	0.387	S

It is inferred from the above table that there is no significant relationship between lateral thinking and achievement in English of IX standard boys. But there is significant relationship between lateral thinking and achievement in English of IX standard girls.

FINDINGS OF THE STUDY

1. 19.33% of IX standard students have low, 70% of them have average and 10.66% of them have high level of lateral thinking.
2. 20.66% of IX standard students have low, 56% of them have average and 23.33% of them have high level of achievement in English.
3. There is no significant difference between boys and girls of IX standard in their lateral thinking.
4. There is significant difference between boys and girls of IX standard in their achievement in English. While comparing the mean scores of boys (mean=11.09) and girls (mean=17.31), girls are better in their achievement in English than the boys.
5. There is significant difference between English and Hindi medium IX standard students in their achievement in English. While comparing the mean scores of English medium school (mean= 14.54) and Hindi medium school (mean=10.39), English medium students are better in their achievement in English.
6. There is no significant relationship between lateral thinking and achievement in English of IX standard boys. But there is significant relationship between lateral thinking and achievement in English of IX standard girls.

CONCLUSION

Our minds are trained to find typical and predictable solutions to problems. We can master the tools for innovative thinking. Lateral thinking helps us with strategic planning and thinking outside the box of everyday issues. Lateral Thinking is a way of thinking that seeks a solution to an intractable problem through unorthodox methods or elements that would normally be ignored by logical thinking. When you are faced with fast-changing trends, fierce competition, and the need to work miracles despite tight budgets, you need Lateral Thinking. Developing breakthrough ideas does not have to be the result of luck or a shotgun effort. Lateral thinking will also help with strategic planning and thinking outside the box of everyday issues. The lateral puzzles given to IX standard students were interesting and helpful for them. Educational institutes should give importance to lateral thinking and should provide training programs so that we don't just produce bookworms but individuals who can help the country to prosper. In this male dominated society, it is believed that boys are better in all jobs than girls. This research proves that girls of IX Standard are better achievers and are also better than boys with regard to Lateral Thinking. Thus girls can prove themselves to be better problem solvers than boys in later life. I do suggest further research on this to prove the point in detail.

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