The International Journal of Indian Psychology ISSN 2348-5396 (e) | ISSN: 2349-3429 (p)

Volume 7, Issue 3, DIP: 18.01.064/20190703

DOI: 10.25215/0703.064

http://www.ijip.in | July - September, 2019

Research Paper



The Checkpoints for Lateral Thinking in Enhancing the Quality of Education in India

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ABSTRACT

The current research seeks to define 'quality of education' and understand the present standard of the Indian education system. It views lateral thinking as a possible alternative towards achieving an improved functioning of the education system. Participants were chosen for their work in close association with the education system - having experienced its functioning; they are likely to understand the impact of the current form of education on the students. Findings indicate that several drawbacks exist in the education system and possible solutions for the same have been derived from the interviews. However, a restricted exploration of possible solutions to educational issues was displayed by the participants. At the same time, the participants exhibited a simplistic understanding of the concept of lateral thinking. Implications of the findings, limitations of the current study and recommendations for future research are included.

Keywords: quality of education, lateral thinking, present standing of the education system, principals, school teachers

Lateral thinking is an ability that involves the generation of new ideas, and the use of inventive and unorthodox approaches to resolving the problem being posed. It involves moving beyond established ideas, generating novel ones and utilizing information to facilitate creative processes. It becomes crucial for students to develop this ability to keep up with the demands for skills involving innovative thought (More & Jagdeesh, 2017).

Reports on the status of education in India, however, indicate that the students are far from developing such ability (Annual Status of Education (Rural) Report - 2018, 2019; Annual Status of Education (Rural) Report - 2017, 2018). While there have been considerable improvements in the rate of enrolment into schools, students continue to display poor learning outcomes both in childhood and adolescence. Foundational skills of literacy and arithmetic are found lacking among school students as is seen in findings that reveal that only a quarter of third standard students can read fluently and only 15.4% of young adults displaying the capability to carry out simple financial calculations. Therefore, only a minuscule percentage of students show the ability to meet the curriculum expectations for

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each grade. Thus, emerges the need to focus on and understand the quality of education that a child receives within the school environment.

The existing discourse on the quality of the Indian education system, however, is scarce, lacking in specificity and does not display any uniformity in understanding what this concept constitutes (Billaiya et al, 2017; Mitra et al, 2008; Nussbaum, 2006; Kumar, 2005). This results in a vague understanding of the concept of quality of education, making it difficult to utilize for the betterment of the education system. Comparison of the steady rise in international literature on quality education (Kayode et al, 2013; Anna Saiti, 2012; Modisaotsile, B. M., 2012; Spronken-Smith, 2012) with the limited Indian literature, indicates that the importance of this concept has not yet been fully understood. Moreover, the consequences of the current quality of education in India may be undermined as a result.

A major drawback of the current education system is the focus on theoretical knowledge with no consideration for its applicability which causes stunted development of applicable skills, and the suppression of curiosity and true understanding of concepts among students (Agarwal, 2017; Nussbaum, 2006; Gautam et al, 2016). Similarly, international literature on current limitations of the education system indicates that students have trouble in and often fail at demonstrating transferability and application of their learning and that the availability of opportunities within the system which can help students develop such an ability is also scarce (Gardner, 2011; Bentley, 2003). Such a phenomenon has resulted in a class of students who find it strikingly difficult to cope with and are unable to thrive upon entering higher levels of education as well as the workforce (Gautam et al, 2016).

One ability that can help the students in holistically understanding and applying the concepts being taught by way of insight restructuring, inventive thinking and developing new ideas, is lateral thinking (More & Jagdeesh, 2017). Several studies support the understanding that lateral thinking is a highly lucrative ability for one to possess to facilitate non-linear thinking among students and enable greater effectiveness in organizational functioning (Aithal & Kumar, 2017(a); Aithal & Kumar, 2017(b); Arsad et al, 2011; Butler, 2010).

The picture that emerges, therefore, is of an Indian education system that fails to facilitate both the understanding and applicability of academic concepts resulting in a human capital that struggles to meet the occupational and higher education demands being placed on them. The current research identifies lateral thinking as the ability that will help the students in tackling these issues.

The present research stands out as it seeks to capture a more up-to-date picture of the current education system and its functioning. It does so by taking the perspective of principals and school teachers as they are most closely related to the system and thus, can observe and understand its operations and resulting consequences. At the same time, it looks to develop an operational definition of 'quality of education' tailored to the Indian context so that this understanding may be used to further enhance Indian education. Finally, it seeks to explore the understanding of educators about implementing lateral thinking within the educational framework.

METHODOLOGY

Research Questions

Based on a review of the existing literature, the following research questions were developed: "What does 'quality of education' mean to the teaching fraternity in the Indian context?"

"What are the limitations of the current Indian education system in accommodating lateral thinking strategies?"

Study Setting and Participants

The current research took place in schools providing education to students from classes L.K.G to 10th standard. The participant population chosen for the current research was Principals of these schools and school teachers for classes L.K.G to 10th standard in Bengaluru, Karnataka. This set of participants was selected due to their closeness to the education system, the experience of its workings and understanding of the impact of the current form of education on students. The researcher was granted permission by the Principals of two schools to conduct the interviews.

A semi-structured interview schedule was developed for the collection of data. The participants were interviewed in the school premises for the benefit of the flexibility afforded to them in accommodating the interview process into their routine and for them to better express their thoughts about the very environment in which they work. Before the interview, participants were given a printed informed consent form to fill out so that they may fully understand the nature of the research and their rights as participants in it. Data collection was halted when the researcher perceived theoretical saturation to have been reached after having interviewed 10 participants (9 teachers and 1 Principal).

Data Collection

Socio-demographic details were obtained from the participants using a printed demographic details sheet before the interview. Questions of the semi-structured interview were posed to the participants with the researcher posing additional questions when required. The questions were asked in the following general order:

Opening Questions

- "What according to you is/constitutes quality of education?"
- "Does the same definition stand when it comes to the Indian context? If no, what other factors come into play?"

Introductory Questions

- "Given this definition, what do you think is the current standing of our education system?"
- "What factors do you think are contributing to the current state of our education system?"

Key Question

"Research indicates that lateral thinking is an essential ability that a student needs to have in order to meet the evolving workplace and higher education demands. In your opinion, are school students given an opportunity to develop this ability?"

Follow-up Questions

If the response to the previous question posed was 'yes': "Which factors contribute to the development of lateral thinking among students?"

If the response to the previous question posed was 'no': "Which factors act as impediments and may be modified to enhance lateral thinking among students?"

"In your opinion, what improvements are needed in our education system to enhance lateral thinking among students?"

The interviews were recorded using an audio recording mobile application.

Study Design

The semi-structured interview was conducted in English and it was ensured beforehand that the participants were able to understand and speak the language. Each interview lasted for a duration of 30 minutes to an hour. All the participants interviewed were women.

Data Analysis

All interviews were recorded in the form of audio files and subsequently transcribed. Given that there does not exist much prior data to answer the research questions of the present research, the grounded theory research paradigm was adopted. This paradigm employs the research process to gather and analyze data systematically to develop a theory that is, as its name suggests, fully grounded in and built from data (Strauss & Corbin, 1998). Thematic analysis was used for analyzing data. It involves discerning commonalities of meaning among the data, bringing similar ones together to form categories and to ultimately combine them into broad themes (Willig, 2013). The current research sought to follow this process to recognize codes which contributed to the formation of themes that answer the research questions posed.

RESULTS

The participant pool that was interviewed consisted of 1 Principal and 9 school teachers. All the participants who were interviewed identified themselves as women. The average age of the participant pool was 39 years. None of the participants reported any chronic illnesses or psychological problems for which they were undergoing treatment.

Findings

By way of the interviews conducted, the mother theme that emerged from the codes and themes identified after a thorough analysis of the data gathered is – *Viewing Educational Drawbacks through Existing Approaches*. This mother theme is inclusive of all the themes that emerged out of the data.

Through the data, it was observed that the participants had a framework in mind as to what the *Ideal Quality of Education* ought to be. They juxtaposed this framework with the present scenario of the education system wherein there is a *Skewed Focus in Education* on obtaining high marks and percentages and passing its students in exams.

Given these drawbacks that were identified, when introduced to the concept of lateral thinking, the participants focused on solutions that could be derived from modifying the status quo such as reducing the *Burdensome Syllabus* and thereby alleviate the issue of the *Resultant Lack of Time* to teach everything and well. Quite a few participants also displayed a *Favorable View of the Past Methods*, indicating a desire for methods which were known to them and they had faith in. The emergence of both these themes resulted in an approach wherein the participants displayed *an unwillingness to Look for New Approaches* and a lack of openness to accepting them. Given that the participants were looking into known practices to resolve current issues in education, they displayed a *Simplistic view of Lateral Thinking* by relegating it to the use of activities-based learning, different modes of teaching, values and thinking process.

Therefore, while the participants identify that there are several drawbacks in the education system that need to be repaired, they are not looking outside the scope of those practices that are known to them when it comes to looking for a means to resolve the issues in the educational system. They have, instead, developed an almost singular approach to resolving the issues at hand. The following were the sub-themes that emerged out of the gathered data:

Ideal quality of education. While describing what quality of education was according to them, the participants showed the tendency to describe it in terms of making up for those things that they found to be lacking in the current education scenario. Three major elements emerged in this process. The first element that emerged was that quality of education meant that the students had to learn to apply the knowledge received by them by way of the education process. It is reflected in the following participant statements -

"learned in theory in class should be applied to their day-to-day life"; "it's not only just by-hearting and producing it an answer sheets, but in which he can put into practice what he's learning"

The second element that emerged was that quality of education constituted not just curriculum knowledge but must also inculcate values. Multiple participants stated that quality of education meant that the students possessed several moral values by way of being part of the education system. This understanding is seen in the following statements, phrases, and words:

"learn to respect, share and care for everyone around them"; "even moral values"; "respect the elders"; "Value education"; "understand the values and how to apply in their daily life"

The third element that emerged is the focus on teacher role in relation to delivering quality education. It includes aspects of teacher competence, empathy, care, understanding, and equal treatment of students. This is seen in the following statements:

"should recognize each child then we should understand them, how they are what is their background? According to that we should teach"

"child has to love coming to school"; "treat all the children equally"; "a motherly care, a motherly touch, a motherly love"

Therefore, an operational definition of what quality of education means to the teaching fraternity would emerge from a synthesis of the above three elements.

Skewed focus in education. One important aspect of the current research was to understand the current quality of education that is being delivered to the students. Only two participants believed the introduction of activities in the curriculum had added to the quality of education. Several participants expressed similar opinions about the current quality of education – that the current practices are not fostering an atmosphere where the children can truly gain knowledge and that there is an excessive focus on certain aspects of education. Participants' statements reflecting this understanding include –

"they just read, only bookish knowledge they have"; "just mug up and they vomit it on the paper"; "all are forced to study, study, study, study"; "concentration on the ranks, marks-oriented"; "everybody want the result, finally"; "confined within the four walls and made to sit and learn"; "the child is having a very bad mental pressure from the parents and the institution"; "they only aim for marks and the quality of

education is not.."; "So the child...the te... who has secured a 98% also they're not able to give the answers for the basic questions".

On similar lines, one participant states that the focus is on helping the students in passing their exams and that this idea is voiced by most of the stakeholders, i.e., parents, the Department of Education and the school management. The participant expresses this understanding as follows-

"The child has to pass. That's all. Manager.. management also has the same thing, department also say us the same thing, parents also has the same thing. None of the department has asked, none of the parent has asked, what the quality of education has been given to the child. So, this is the standard that we are having now"

As a result, it appears through participant responses that the students are not truly understanding that which they are taught in class. Moreover, the student focus too has shifted towards getting marks rather than trying to gain knowledge. This is reflected in some participants' views as –

"Even writing a sentence also they are not capable to do it. That is the way the quality of education is going. Nothing is there. When they're writing some one sentence also... writing in SMS format only"

"They're not understanding, they just wanted to have a percentage"; "you give any application problem in that, they are not able to".

Burdensome syllabus and resultant lack of time. Upon being asked what the possible hindrance for the students could be to develop lateral thinking as well as what improvements can be made for the same, all the participants emphasized syllabus reduction. Participant responses discussing this, were as follows:

"Syllabus itself is so vast"; "no time for these extra things"

"time is not sufficient. It's beyond that, now what we say lateral thinking is beyond that... If the child is interested, they can search for so many things"

"when syllabus is cut down and the subjects are less, this teachers can completely give what see when you take a concept, you can cover all the areas in that"

Two participants also expressed the opinion that reducing the syllabus would help the children in improving their learning and in understanding the concepts being taught. This indicates that currently, it is felt that an expansive syllabus results in students not being able to focus on truly learning every concept. This view can be understood by the following response-

"One more thing here, if you reduce a little bit of content in the portions no.. the child will be able to learn much better. Right, they can think beyond tha..the teacher also will have a time to say"

Favorable view of the past methods. One theme that emerged is several participants expressed a much favorable view of the olden days, older methods or the education during the earlier times than for the present working of the education system. Therefore, many participants drew parallels between both those methods, as is seen in their responses -

"olden days when we were young, we used to give a lot of importance to education, not just to pass exams, but to gain knowledge, we used to go with that intention to schools and colleges. But nowadays, children are becoming so attractive to these medias multimedias and all that mobile phones, Internet, and so many other

distractions, they're having, they are into it. So, because of that they're not giving that much importance as we had given in our earlier days, to education"

"olden method makes the child to learn the whole text, whole text they have to learn. Here no, they only go with the question paper, with the certain questions where they have to do it because they have to score only 28 marks"

"stop this CCE and go with the old method only"; "olden education was much better".

One more aspect that emerged is that participants spoke about the lack of moral values that students possess in relation to how in the olden days, education emphasized such values -

"education used to teach us to respect the elders at the same time and make apply that to the life"

"Child has to learn good manners, good values like how we were taught in our traditional way"

Not looking for new approaches. Only one participant considered a new approach to dealing with the current issues in the education system where the quality of education has lowered. She expressed that lateral thinking is a requirement in today's environment –

"is very much needed"; "focusing on the theory is not enough for the present world."

However, most of the participants did not show an openness to the possibility of a new approach being helpful at all. Moreover, some participants openly expressed that weaving a new concept such as lateral thinking into the curriculum was not required or not possible. Such an unaccepting approach towards introducing anything new into the educational framework is seen in the following participant statements -

"Children if they are interested by themselves, they can go for it; difficult for us to put that (referring to lateral thinking) along with the curriculum"

"I feel when the syllabus is less, less automatically the child will learn little and if the child is not able to understand rather than looking for other ways the teacher herself can explain it 2,3,4,5 times. That is why we are here, we are here we are paid for, we are being paid only for that one no..so we can give time"

"being a teacher, I can tell you, at home we can do that; in school it is impossible"

Simplistic view of lateral thinking. This theme prevailed across all the interviews conducted in this research. The current theme refers to the researcher's understanding that the participants' view of lateral thinking is highly simplistic, and that they are unable to understand all the facets of this concept. This was seen in relation to all the questions that the researcher asked regarding lateral thinking.

When asked if the current education system provided the students with the opportunity to develop lateral thinking, every participant stated that it did. All the participants believed the current CCE activity-based pattern of learning was helpful for the children to develop lateral thinking. One of the participants stated that –

"the curriculum itself is providing activities and project works chapter-wise".

The participants viewed lateral thinking as an ability that could be developed by the introduction of or retention of curriculum-related tasks such as –

"activities and projects", "riddles", "puzzles", "connective readings", "competitions", "debate", "elocution", "field trips and other education trips", "period of art and craft", "self-study material", "comparative reading", "competitive exams".

However, when asked to give an example of how these aides would help the students in developing the lateral thinking ability, the participants were unable to give responses that captured the true understanding of lateral thinking. One of the examples given by a participant was –

"I tell the child to enact. So, I'm giving a chance for the child to enact and say, that they're able to do it much better".

This simplistic understanding of the concept of lateral thinking is reflected in one participant statement –

"pictures, or project or activity whatever it may be, which is related to the topic, if we provide, definitely they will think."

Therefore, lateral thinking is being confused with the ability to think in general as opposed to "mugging up" i.e., learning a concept without gaining a comprehensive understanding of it. One participant viewed lateral thinking as something that is employed when the students cannot follow the method being taught in the class —

"So according to me, that is what I feel, the smarter ones will follow only one method, the average and the below average only will look for some other way where I put... somehow reach and get the answer what the others have got".

When asked if the students are given the opportunity within the education system to develop lateral thinking, another participant expressed an understanding of lateral thinking as the competitive spirit of the children, learning outside the classroom setup and the values that a child learns –

"See we have the olden games, right? where we used to play this gilli-danda all that, right? and climb the trees, we'll play a monkey game all that. You al... I don't know you remember or not. But such a games give the children challenging, things to do it, right when they play among their playmates, they used to have a competition - okay I'm the first, I have to win. Okay, so while climbing the tree also, I should climb first, right all this we had. Now who.. I've just said they have introduced so many things, but it is within the classroom, right? Within the classroom. So how long the child will be in the classroom. So, the child is not knowing the other way of getting with other other people and playing or sharing their views with them. When the child plays outside the classroom also among that is okay with the neighbours all that, the child really develop a aspect of listening and giving important for the others also - I will have a patience for the next person to play and finish the game all that but not it's not like that with a smartphone or a smart board."

As a result of this simplistic understanding, when asked what improvements could be made in the current education system for students to develop lateral thinking and what could be done from a teacher's perspective, most of the responses were either vague or had to do with qualities that a teacher has to possess. One participant stated that –

"if the child is coming up with some thought process or child is doing like I will do this this first so let the child do that okay, don't force the child".

Teacher qualities of motivation and encouragement were mentioned by some participants, as is evident in the following response –

"content knowledge is compulsory, subject knowledge, along with that communication, motivation, motivating the students, inspiring the students. The way

you talk, the way you approach the student is definitely hundred percent it will work on the student".

DISCUSSION

Since the present research looked to formulate an operational definition of quality of education in the Indian context according to the teaching fraternity, the development of the theme of *Ideal Quality of Education* contributed largely to it. Therefore, in answer to the first research question, quality of education may be defined as -"An education driven by teacher competency, empathy, and care which not only equips the students with the ability to apply their knowledge into day-to-day practice but also helps them in developing a sound value system."

This operational definition, however, was perceived by all the participants as being absent in the existing practices of the education system. The prevailing opinion is that the focus of the current education system is mainly on assisting students in securing marks and ranks by way of memorization of concepts rather than developing a proper understanding of the same. This notion is reflective of similar observations made in recent research articles (Agarwal, 2017; Gautam et al, 2016). It also corresponds to the criticism of correct-answer emphasis rather than focusing on concept comprehension (Gardner, 2011). As a result of such a *Skewed Focus in Education*, ultimately, the quality of education received by the students suffers. They are not truly looking to understand the concepts that are being taught to them. It is seen, therefore, that the students are not gaining any lasting knowledge. These findings are congruent with the understanding that the students are unable to have a deeper understanding of their subject matter and to transfer the same knowledge to different areas (Annual Status of Education (Rural) Report - 2017, 2018; Agarwal, 2017; Bentley, 2003).

While discussing the hindrances to the development of lateral thinking among students, all the participants view the *Burdensome Syllabus and Resultant Lack of Time* as a major problem. They displayed an unwillingness to think of other ways to deal with the current issues in the education system while this problem exists. The result is participant responses that reducing the syllabus as an almost universal remedy to identified educational issues. An associated pattern that emerges is a *Favorable View of Past Methods* in education. It is observed that there is a clear mental distinction made by these participants wherein the past working of the education system was good while the present one is not. Such an emphasis on the glorification of the past opens the possibility that participants are *less likely to look for newer methods* for better development of the intellectual capacity of the students. This perspective would hinder the introduction of lateral thinking into the educational system. This is detrimental as research clearly indicates the importance of lateral thinking in facilitating innovative thought, greater quality outputs within the educational and occupational contexts and thereby a better quality of human resource in the country (More & Jagdeesh, 2017; Aithal & Kumar, 2017; P.S Aithal et al, 2017; Arsad et al, 2011; Butler, 2010).

A major finding in the current research has been that despite having reiterated the concept of lateral thinking at different points in the interview, participants showed a lack of clarity in their understanding of the concept. They displayed a tendency to view it from the framework of other existing concepts such as thinking, values, activity-based learning among others. The outcome, therefore, is a participant pool that believes that the education system already provides students with this opportunity and a teaching force that is likely to struggle to incorporate methods that can truly facilitate the development of lateral thinking in students.

All the above findings collectively, therefore, help in providing an answer to the second research question. The gap between the ideal quality of education and the present quality of education, the focus on existing or past approaches to bridge it, along with an absence of openness to new approaches and a very simplistic view of lateral thinking - all operate as limitations of the current Indian education system in accommodating lateral thinking strategies. Given the emergence of these findings, it becomes important to study their implications.

The above research findings imply that an education system intently focused on gaining the top marks and ranks via memorization is likely to produce such human resources in the country, out of whom most would struggle or be unable to contribute meaningfully to their varied fields of work and academic progress. At the same time, those working in schools are currently only *Viewing Educational Drawbacks through Existing Approaches*. A workforce that refuses to look beyond this limited scope shows clear signs of being resistant to the introduction of any change, even if this change may be helpful in the broader framework. At the same time, their simplistic understanding of lateral thinking is likely to act as a major hindrance if modules to develop this ability are introduced in the education system.

However, much remains to be studied in this area. The primary limitation of the current research is that all the stakeholders that emerge when the education system is being discussed i.e., parents, policymakers, and students themselves were not interviewed. Interviewing other stakeholders would have provided a more holistic picture in understanding the research questions posed. Another limitation is that all the participants were from Bengaluru, Karnataka. Educators and other stakeholders in the other states of India were not included. Future researchers can focus on interviewing the other stakeholders in the educational process to gain richer knowledge. Intervention studies may be conducted to better ascertain the effects of developing the ability of lateral thinking among students. A wider sample which is representative of the stakeholders in the other states in India can also be sought in future researches.

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Acknowledgements

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author declared no conflict of interests.

How to cite this article: Shenolikar. S & Hebbani. S (2019). The Checkpoints for Lateral Thinking in Enhancing the Quality of Education in India. International Journal of Indian Psychology, 7(3), 593-603. DIP:18.01.064/20190703, DOI:10.25215/0703.064