

## A Critique of National Curriculum for English Language in Pakistan: Proposing Cognitive Strategy Instruction for ELT

Jamil Asghar  
Muhammad Iqbal Butt

### **Abstract**

*The paper proposes the integration of Cognitive Strategy Instruction (CSI) in the ELT practices in Pakistan at secondary level. The researchers have sought to make a case as to how the teaching of thinking can be made an integral part of ELT in Pakistan at school level. From the perspective of cognitive pedagogy, a thorough critique of the National Curriculum for English Language: Grades I–XII, (2006) prepared by Ministry of Education, Government of Pakistan, has been offered. Alternatively, the researchers have charted the ways as to how thinking can be taught in a more systematic and organized ways in order to help Pakistan students improve their cognitive functioning and operationalize it in various learning settings. The paper contends that it is paramount for English language learners in Pakistan to appreciate the fact that thinking is not a monolithic cerebral activity; instead, it implies a broad range of competencies which are at once cognitive, behavioral, psychological and affective. It has visuo-spatial as well as audio-temporal dimensions and a more inclusive language pedagogy would have to take all of its (meta)cognitive dimensions into account.*

**Keywords:** critical thinking, cognition, Pakistan, ELT, national syllabus

### **1. Introduction**

Effective thinking does not come by an accumulation of information in one's head and the cultivation of effective thinking is the major goal of any education true to its salt (Chipman, Segal & Glaser, 2013). The ultimate aim of teaching thinking is to make students not only autonomous and lifelong learners but also critical and conscientious citizens of the contemporary world (McLaren, 2005). A language pedagogy which fails to help students improve their thinking skills betrays its vocation. Language pedagogy in Pakistan suffers from lack of emphasis on the teaching and cultivation of thinking skills (Asghar, 2016).

The researchers contend that the teaching of thinking should be more profitably modelled upon the insights emerging from CSI—Cognitive Strategy Instruction. Cognitive Strategy Instruction is a pedagogic paradigm which stresses the cultivation of thinking skills and their exploitation to enlarge and enrich the learning experience (Israel & Duffy 2014). It seeks to empower all students to become more autonomous, creative, critical and strategic in their learning endeavors.

The main purpose of proposing CSI for language instruction in Pakistan is its flexibility, i.e. it can be utilized in combination with different techniques and teaching methods across a wide range of approaches (Reid, et al., 2013). Moreover, CSI posits that there exists an identifiable set of cognitive strategies (formerly thought to be 'reserved' for the bright students only) which can be taught to all the students across a broad cognitive spectrum. There is substantial evidence which correlates the use of these strategies with the better learning output (Jones & Idol, 2013).

In Pakistan, English language teaching is marred by, among other things, a serious compromise on the cognitive and critical development of students. Rote learning, memorization of vocabulary, excessive extrinsic motivation, uncritical internalization of 'rules', prescriptivist teaching, absence of reinforcement and writing-based and exam-centric assessment are some of the factors which lead to this compromise (Iqbal & Ahmad, 2015). In a report published in the *Nation*, one of the leading English newspapers, an educationist lamented this state of affairs in these words (Imami, 2015, p. 11):

*The causes [for the poor performance of English language learners] are manifold, but it boils down to the simple fact that our education system is grounded in rote learning. The system rewards rote learning, and even if it once allowed independent thinking, it does not anymore. The current crop of teachers were taught the same syllabus and the same methods and they refuse to budge from them, leading to them expecting the same answers they were given from their students now.*

Given these problems, it will take a substantial investment of time and effort to enhance English language learners' performance and cognitive development. Moreover, what is required is a theorization of critical and creative thinking linked to the teaching methods in the classrooms so that more objective assessment of the teaching of thinking could be made.

## 2. Literature Review

While writing the literature review, the research realized the dearth of research done in this area as there are just a few studies which indirectly touch upon this issue. There is no remarkable research which explicitly deals with English language teaching in Pakistan with reference to Cognitive Strategy Instruction. There are general newspaper articles, book chapters, research papers dealing with the educational and linguistic issues across a wide range of topics. But they do not particularly focus on the issue the present research is focusing upon. Here is an outline of these studies given in a chronological way.

Iqbal and Shayer (2000) laid down a mind map for accelerating the development of formal thinking in the language learners at the secondary schools in Pakistan. The researchers have been more concerned about formal thinking in a more structured way. According to them, the way formal thinking is practiced in our educational setting is highly superficial and unguided. Most of the time, this formal thinking remains submerged by the heavy duty tasks which are ultimately quite mechanical in nature. As the researchers have focused upon the secondary school students, their findings are not generalizable to the higher level. In spite of this delimitation, the researchers have addressed the policy makers at the higher education level. This constitutes an anomaly. The study is diachronic and seeks to bridge gaps and challenge unfounded assumptions, as per the claims of the researchers.

Zohar Degani, and Vaaknin (2001) wrote an insightful article titled *Teachers' Beliefs about Low-Achieving Students and Higher Order Thinking*. This is a good study and unmask many unfounded beliefs on the part of the teachers which are inhibitive of the cultivation of higher order thinking among the students. This study is based upon interviews and reveals the amount of misconceptions found in Pakistani academia as to the role and nature of higher-order thinking in language learning/teaching.

In an article titled *Tensions and Dilemmas of Cross-Cultural Transfer of Knowledge: Post-Structural/Postcolonial Reflections on an Innovative Teacher Education in Pakistan* (2005) by Yatta Kanu, cursory attention is paid to some of the psychological dimensions of language pedagogy in Pakistan. The researcher has talked about the significance of cognitive dimension in the actualization of learning but then there are lengthy digressions and the rest of the paper is more concerned with the cross-cultural structuring of the language learning experience of students. There are hardly any findings or recommendations pertaining to the principle of cognitive and psychological dimensions of learning.

Memon (2007) has tackled the issue of language education in general: "Until now the role of secondary and college education in Pakistan has been simply preparation for tertiary education, which in the minds of most people means strictly a university education" (p. 50). However, he has raised some significant questions regarding the psychology of education. Another strength of this research is that it contains considerable amount of quantitative data which can be quite helpful for other quantitative researches in the field.

Gul, et al., (2010) have raised the important question of curriculum reforms with reference to critical thinking. To the researchers, the major hurdle in the way of critical thinking is the very structuring of curriculum. However, the way researchers have treated a highly complex and challenging issue is quite sketchy and superficial. The data analysis does not mandate either the findings or the recommendations.

Saeed et al., (2012) have described certain strategies which can help Pakistani students cultivate critical thinking. This study proposes different ways as to how thinking skills can be 'taught' to students: "...education must focus on means that enable students to develop the processes of active learning, problem-solving, and critical thinking, in order to enable them to deal with the complexities" (p. 201).

Muborakshoeva (2012) in his book *Islam and Higher Education: Concepts, challenges and opportunities* has authored two chapters "Concepts of a University in Pakistan" and "Challenges Faced by Universities in Pakistan". In these chapters, the writer has shed substantial light on the plight of higher education in Pakistan. The writer qualitatively explores various concepts of university circulating in Pakistani academia with reference to a larger Muslim context. Contributing to the theoretical debates, the writer has discussed some of the most pressing challenges faced by the universities in Pakistan. Though the study is more concerned about the policy and monetary matters, it also pays some attention to the problems associated with the psychology of language education in Pakistan.

Lastly the mention must be made of Shahzad et al., (2016) - a study which has the elementary teacher education as its primary focus. The researchers have critiqued a number of language methodologies used by the elementary teachers and proposed a thorough overhauling of these teaching practices. The researchers have also shown the inefficacy of most of the so-called refreshing courses designed to train the teachers periodically. To the researchers, all these things are done in an exceedingly bureaucratic and mechanical way which compromises the achievability of the desired objectives. Besides, this mechanical way of doing the whole thing does not allow genuine thinking to be operationalized at any deeper level.

### 3. Research Methodology

The present study is primarily qualitative and is intended to challenge the contemporary language teaching methodologies practiced in Pakistan marked by lack of critical thinking and cognitive engagement of the learners. The study is situated at the interface between descriptive research and content analysis as it seeks to describe and analyze the overall situation of language pedagogy in Pakistan with reference to the central tenets of CSI. The objective of descriptive research is to describe aspects of a situation as they naturally occur (McMillan & Schumacher, 2014). Therefore, the present researchers also do not claim to exercise any control over the variables and is aimed to look at them as they are.

The rationale for using content analysis is to generate replicable and valid inferences by interpreting and evaluating the data. Moreover, by employing content analysis, the researchers are interested in examining the nuances of professional attitude of Pakistani teachers towards the cognitive involvement of their students. In this regard, content analysis has enabled the researchers to explore the perceptual and socio-cognitive constructs which were hard to investigate through conventional quantitative methods.

The conventional and uncritical pedagogic practices prevalent in ELT settings in Pakistan have been taken into consideration by analyzing the contents of National Curriculum for English Language: Grades I-XII (2006). Therefore this foundational document constitutes the core sampling of the research. This data has been critically assessed in the light of the pedagogic principles emerging from Cognitive Strategy Instruction.

#### 3.1 Research Questions

1. How has thinking been conceptualized in National Curriculum for English Language: Grades I-XII, 2006?
2. To what extent is this conceptualization of thinking in accordance of the principles of Cognitive Strategy Instruction?
3. In what ways can ELT in Pakistan be made more thinking-oriented while banking upon the insights emerging from Cognitive Strategy Instruction?

#### 3.2 Significance of the Study

The study makes a case for the inclusion of Cognitive Strategy Instruction in the ELT practices in Pakistan. There is plenty of empirically validated research which establishes a correlation between Cognitive Strategy Instruction and the improved performance of language learners in such areas as reading comprehension, writing, vocabulary learning and oral communication (Gurses & Adiguzel, 2013). The paper succinctly describes the relevance of Cognitive Strategy Instruction to language pedagogy in Pakistan and a feasibility of its application.

Moreover, the present research, unlike many conventional researches, does not merely focus upon the classroom learning. It seeks to connect the classroom learning with the larger socio-cognitive structures. In a goal-oriented way, the researchers have demonstrated as to how Cognitive Strategy Instruction can provide students with a more relishing and more meaningfully negotiated learning experiences. The significance of the study is also established due to the applied nature of its recommendations as the researchers have laid down strategies and techniques which can be employed by the teachers in the formal learning settings in Pakistan. The study is beneficial for a

wide range of readers which may include teachers, students, researchers, policy makers and educationists in Pakistan.

### 3.3 Statement of the Problem

Cognitive Strategy Instruction holds great promise for the ELT practices in Pakistan. Language teaching in Pakistan suffers from a plethora of problems when it comes to the cultivation of thinking skills. The Annual UNESCO Report 2010 says with reference to the education policy of Pakistan: “Primary school certification programs are relics of the 19th century schooling. They neither provide general education necessary to foster thinking nor promote content knowledge” (United Nations Educational, Scientific and Cultural Organization, 2012). The report further concludes:

*The various levels of teacher educators themselves are caught in the same cycle of poor teaching quality and delivery. They administer their classes in the traditional teaching style of lecture giving, dictation and notes. Trainers fail to cultivate any creative thinking, inquiry and problem solving among their trainees.*

It is against the backdrop of these problems that the present study has been organized. The researchers seek to ameliorate this state of affairs in the ELT practices in Pakistan by drawing upon the main features of Cognitive Strategy Instruction.

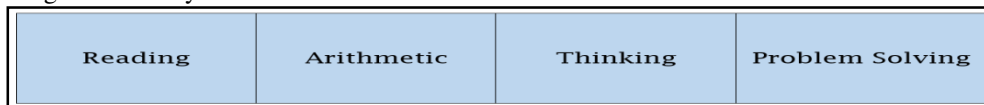
## 4. Data Analysis and Discussion

This data analysis section is complex and multilayered. It primarily examines one of the flagship educational documents of Pakistan—National Curriculum for English Language: Grades I-XII (2006). This section has been divided into various headings and subheadings but the first challenge is to identify the problem.

### 4.1 Identifying the Problem

National Curriculum for English Language: Grades I-XII (2006) is a leading policy document which was drafted by the Ministry of Education in Pakistan. This document gives detailed guidelines to English language teaching from grade I to XII across the country. In this document, however, there is a fundamental problem with reference to the teaching of thinking skill and that is the very conceptualization of thinking. Thinking, in a long series of abilities, has been taken just as one more ability like any other ability. For example, under the heading: “Process of Curriculum Development”, thinking skill has been bracketed with such other skills as reading, writing and oral communication (Government of Pakistan, Ministry of Education, 2006, p. 2).

To make matters more complicated, it has also been bracketed with such paralinguistic phenomenon as ‘appropriate ethical and social development’ also (p. 3). Just one page later, thinking skill has been bracketed with such other generic aptitudes as reasoning, creativity and problem solving (p. 4). This fundamentally flawed conceptualization of thinking can be mapped out diagrammatically:

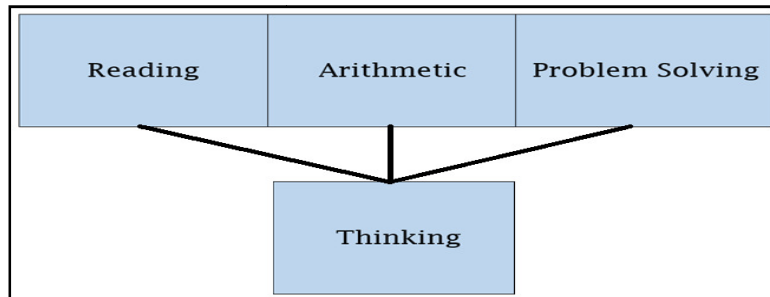


There is something seriously faulty with this conceptualization of thinking. It is arguably the corollary of this fallacious conceptualization of thinking embedded in the very structure of the national curriculum of English that the teachers tend to take thinking as a mere 'skill' like other skills. This is appallingly untrue.

Thinking is not just one more skill like any other skill; instead, it is the *fundamental* skill which undergirds all the other skills, abilities, aptitudes and competencies (Costello, 2013). This treatment of thinking features at other places in the document also. For example, in the Section XI, under the heading *Assessment*, the document refers to the evaluation of MCQs and even here thinking is horizontally bracketed with other skills:

*Multiple questions about the same information allow higher cognitive skills and their application to be measured in greater depth. They can assess interpretation, analysis, application, critical thinking, and other reasoning skills separately from content knowledge of the subject (p. 4).*

Look at the underlined part of the sentence and notice how thinking has been lumped together with other so-called "reasoning skills". This is to accord partial justice to thinking. So the diagram presented above should be something like this:



This proposed diagrammatic conceptualization of think correctly describes the real location of thinking vis-à-vis other skills and/or abilities. Here thinking appears not as one more skill like any other skill but as the most fundamental skill. The diagram also shows that the relation between thinking and other skills is not horizontal it is vertical—not that of degree but of kind. This problem get further compounded when, a few pages later, five *competencies* in learning the English language are identified:

Competency 1	Reading and thinking skills
Competency 2	Writing skills
Competency 3	Oral Communication skills
Competency 4	Formal and lexical aspects of language
Competency 5	Appropriate Ethical and Social Development (p. 7).

The issue with this kind of identification of competencies can clearly be detected as it confines thinking just to the practice of reading, or at least, associate it just with the practice of reading. The bracketing of thinking with only one skill — reading — is technically unwarranted and

pedagogically preposterous. One can easily see that thinking is equally relevant to writing or to oral communication as well. In this 184-page lengthy policy document, most of the time thinking has been associated with and confined to reading (comprehension) as if rest of the competencies flow from some non-thinking human cognition. There is yet another problem and that is relegating thinking to the last benchmark. The documents has laid down three benchmark and the thinking has been relegated to the last of them:

**Benchmark I:** Recognize and practice values and attributes such as tolerance, humanism, patience, equity, justice, honesty, empathy, etc., relevant for peaceful coexistence between individuals, groups and nations.

**Benchmark II:** Develop and portray through actions, a sense of importance of individual worth; simultaneously valuing diversity and equality among people.

**Benchmark III:** Understand and evaluate contemporary social, economic and scientific developments/ issues so as to participate in the global society as aware and thinking individuals (p. 37).

The first two benchmarks do not make any mention of thinking at all and only the last benchmark registers the value of “thinking individuals”. Surprisingly, such essential traits as tolerance, humanism, patience, equity, justice, honesty, empathy, peaceful coexistence, diversity and equality have been mentioned without any reference to thinking at all. This illustrates the low priority assigned to thinking and a flawed view that essential socio-existential traits are achievable without cultivating thinking. The place accorded to thinking in the national curriculum has elicited criticism from various quarters. For example the Annual UNESCO Report 2010 says with reference to the national curriculum of Pakistan:

*The current curricula being taught does not focus on nurturing a creative and learning environment involving questioning and problem solving. There is no attempt to integrate subject knowledge with pedagogical skills. For most programs, teacher trainees employ rote learning to pass the examinations...Trainers fail to cultivate any creative thinking, inquiry and problem solving among their trainees (pp. 4-5).*

#### 4.2 Addressing the Problem

In this section the researchers have proposed different practical ways and techniques which can be exploited by the English language teachers in Pakistan in order to cultivate higher-order thinking in the students. First and foremost, the very roles of the students and the teachers need to be re-assessed and re-thought. In Pakistan, usually students are expected to *receive* rather than *give* information. Besides, any time spent on (individual) thinking, is mostly considered to be time wasted. The researchers overheard the following exchange in one of the primary schools in Islamabad:

*[Shaheer, a fourth-grade student, was sitting at his desk with the palm of his right hand under his chin and the elbow on the desk].*

*Teacher:* Hello Shaheer, what are you doing?

*Shaheer:* Sir, I am thinking.

*Teacher:* Would you please stop wasting your time and listen to me?

This example, which is typical of a wide-ranging behavior, illustrates the amount of misunderstanding found among the teachers about the centrality of thinking in the learning process. To overcome this problem in a radical way, the teachers should create what the cognitive psychologists have termed 'normative environment' in the class (see Howie, 2011). Such an environment will ensure the inclusion of all the student in the process of thinking. The main features of this environment will include:

1. Provision of exposure to normative stimulus.
2. Creation of positive environmental pressures.
3. Transformation of learners from perpetually protected entities to bearers of responsibility (p. 76).

At the same time, the teachers should provide adequate linguistic challenge to all the students. Usually, the challenge presented by the teachers is either too difficult or too easy. In both the cases, the principle of inclusion suffers. Another thing to be done periodically by the teachers is the *content evaluation*. The following set of questions is proposed for the English language teachers in Pakistan to evaluate the content of their pedagogy:

- What is the importance of this linguistic content for the students?
- Which of it is irrelevant to the point that I could eliminate it?
- How can the students make use of this linguistic content beyond the classroom?
- What components of this content are likely to be understood by the students quickly?
- What components of this content are likely to be understood by the students slowly?
- How should I pace the lecture?
- Which kind of evaluation will help me assess the understanding of my student with regard to this content?

#### 4.3 From Convention to Creativity

In this section, the researchers have contrasted conventional pedagogic tasks with proposed alternative pedagogic tasks. Instead of conventional pedagogy, the teachers should think about incorporating the alternative pedagogy suggested here. Moreover, the proposed pedagogic tasks are more thinking-oriented and less language-oriented, i.e. the cognitive component has been foregrounded more than linguistic content.

The researchers in the course of their visit to a school had a disturbing experience. The teacher was teaching the lesson on *Transportation* to the fifth-grade students. The teacher pointing to a picture of a train on the book, told the students: "This is a train". Suddenly a student from the second row said: "Sir, it is a big bus". The teacher abruptly and flatly negated him: "No, no. It is a train. It is not a bus. Bus is different. You must understand. OK?". "Yes sir, OK", said the child who was this time visibly cowed and dismayed.

The researchers propose that the teacher should have done it in a different and more profitable way. The teacher could have asked: "OK, how is it like a big bus?" or "It has wheels. What else is like a bus?" Once the student is done with the similarities, the teacher could have drawn the student's attention towards the differences: "This is, in fact, a train. You have not seen it before perhaps. Never mind. How is it different from a bus?" The teacher could have drawn a two-



column table on the white board: one for similarities and the other for differences. Each difference or similarity would have been a topic of brief discussion. This is how the teacher could have created a *real-life learning* situation in the class.

In this way, all this could have been done in a much better way. The way that teacher dealt with it is highly detrimental to the cultivation of thinking. The teacher could have dealt with the observation of that that student quite differently. What the teacher had failed to achieve was to extend the students' power of speculation and analogical reasoning.

Another methodological problem is that teachers sometimes compare the low performers with the high performers in a class. At times, the low performers are asked to 'follow' the high performers, as if it were a matter of choice for them. This is once again antithetical to the spirit of Cognitive Strategy Instruction which is our main concern in this paper is. Here, valuable insights can be taken from a cognitive experiment proposed B. S. Bloom and L. J. Broder (see Silver, 2013).

The teacher can take ten low performers and ten high performers. He/she should ask a high performer to describe his/her thought process regarding a problem. Then he/she should ask a low-performer to describe his/her thought process regarding another problem. Then the teacher should give them five minutes to engage in a conversation during which the low performer should compare his thought process with that of the high performer. Once it is done, the teacher should move on to the next pair and repeat the same exercise. However this entire exercise should take place in front of the whole class. Each time a pair performs this exercise before the class, the rest of the students should be seated on their chairs.

This is how the low performers can actually benefit from the thought processes of the high performers. This technique is far more profitable than merely asking the low performers to 'follow' the high performers.

## 5. Findings and Conclusion

In this paper, the researchers have made a critique of the National Curriculum for English Language: Grades I-XII (2006) from the perspective of Cognitive Strategy Instruction. It has been demonstrated that the curriculum suffers serious and fundamental problems with reference to the cultivation of thinking skills. The poor performance of the English language students in Pakistan has something directly to do with the kind of teaching being practiced which is marked by emphasis on rote learning and in certain cases indifference, passivity and complacency. Inept pedagogy and a kind of defeatism also contributes to this state of affairs. As the world has already entered the new millennium, what is the level of our preparedness to respond to the linguistic challenges of pedagogy? This question is hovering over the academic landscape of Pakistan where Cognitive Strategy Instruction is yet to move from its research origins to classrooms. Incorporation of CSI is critical not only to English language teaching but also to the overall educational success. The researchers would like to end his paper on the following premonitory words of Richard Paul:

The fundamental characteristic of the world students now enter is ever-accelerating change; a world in which information is multiplying even as it is swiftly becoming obsolete and out of date; a world in which ideas are continually restructured, retested, and

rethought; where one cannot survive with simply one way of thinking...We have never had to face such a world before. Education has never before had to prepare students for such dynamic flux, unpredictability, and complexity for such ferment, tumult, and disarray (cited in Mirci & Jungwirth, 2014, p. 21).

## 6. Recommendations

1. The teacher should ensure a shared construction of meaning and empathy in the class which could contribute to the understanding of broader social world outside the classroom.
2. While dealing with any learning modality, the teacher should speak less so that students have to think more.
3. Instead of “explaining” the text to the students, the teacher should help them read it. He/she should let them learn how to make sense of the text themselves with the least intervention.
4. The teacher should focus more on essential concepts with high generalizability.
5. Wherever possible, the teacher should present ideas in the framework of their use. This is how ideas can be operationalized as functional tools for the analysis and solution of significant issues.
6. At times, the teacher should think aloud in front of the class. He/she should let them register his/her verbal thinking. In this process, he/she should proceed slowly so that students could internalize his/her thinking.
7. The teacher should question his/her students Socratically, i.e. investigating various aspects of their thinking, challenging their interpretations and presenting alternatives to their conclusions.
8. The teacher should frequently call on those students who do not tend to have their hands up. Once one of them is done, he/she should ask another student to summarize in his/her own words what the first student said. This would make them listen to one another actively.
9. He/she should bring concrete examples to elucidate abstract concepts but he/she should not over-explain or oversimplify. Sometimes, concrete examples tend to distort the actuality of the abstract concept.
10. The teacher should lead the discussions on the kind of thinking that is required to accomplish the tasks and assignments in the class.
11. The teacher should continually foreground the basic concepts and weave all discussion around them. He/she should explain the whole with reference to the parts and the parts with reference to the whole.
12. In the very first lecture, the teacher should elucidate as completely as possible, his/her philosophy of education, preferred pedagogic practices and expectations from the class.

## References

- Asghar, J. (2016). Teacher, Text and Thinking. *Journal of Research in Social Sciences*. National University of Modern Languages, Islamabad. 4(2), 41-52.
- Butler, H. A. (2015). Assessing critical thinking in our students. *The Routledge International Handbook of Research on Teaching Thinking*, 305.

- Chipman, S. F., Segal, J. W., & Glaser, R. (2013). *Thinking and Learning Skills: Volume 2: Research and Open Questions*. Routledge.
- Corno, L., & Anderman, E. M. (Eds.). (2015). *Handbook of educational psychology*. Routledge.
- Costello, P. J. (2013). *Thinking skills and early childhood education*. Routledge.
- Gavrilova, T., Carlucci, D., & Schiuma, G. (2013, June). Art of visual thinking for smart business education. In *Proceedings of the 8th international forum on knowledge asset dynamics (IFKAD-2013), Zagreb, Croatia* (pp. 12-14).
- Government of Pakistan, Ministry of Education. (2006). "National Curriculum for English Language: Grades I – XII." Retrieved from [http://bise-pk.com/downloads/curriculum/Grades-I-XII/pk\\_al\\_eng\\_2006\\_eng.pdf](http://bise-pk.com/downloads/curriculum/Grades-I-XII/pk_al_eng_2006_eng.pdf)
- Gul, R., Cassum, S., Ahmad, A., Khan, S., Saeed, T., & Parpio, Y. (2010). Enhancement of critical thinking in curriculum design and delivery: A randomized controlled trial for educators. *Procedia-Social and Behavioral Sciences*, 2(2), 3219-3225.
- Gurses, M. O., & Adiguzel, O. C. (2013). The effect of strategy instruction based on the Cognitive Academic Language Learning Approach over reading comprehension and strategy use. *Journal of Education and Learning*, 2(2), 55.
- Howie, D. (2011). *Teaching students thinking skills and strategies: A framework for cognitive education in inclusive settings*. Jessica Kingsley Publishers.
- Imami, A. S. (2015, September 8). Rote learning: The fault in our schools. *The Nation*. Retrieved January 13, 2017, from <http://nation.com.pk/blogs/08-Sep-2015/rote-learning-the-fault-in-our-schools>.
- Iqbal, H. M., & Shayer, M. (2000). Accelerating the development of formal thinking in Pakistan secondary school students: Achievement effects and professional development issues. *Journal of research in Science Teaching*, 37(3), 259-274.
- Iqbal, J., & Ahmad, A. (2015). Effect of Extensive Rote Learning Experience on Subsequent Academic Achievement. *Pakistan Journal of Academic Research*, 65(4), 510-514.
- Israel, S. E., & Duffy, G. G. (2014). *Handbook of research on reading comprehension*. Routledge.
- Johnson, R. H. (2014). *The rise of informal logic: Essays on argumentation, critical thinking, reasoning and politics* (Vol. 2). University of Windsor.
- Jones, B. F., & Idol, L. (Eds.). (2013). *Dimensions of thinking and cognitive instruction*. Routledge.
- Kanu, Y. (2005). Tensions and dilemmas of cross-cultural transfer of knowledge: post-structural/postcolonial reflections on an innovative teacher education in Pakistan. *International Journal of Educational Development*, 25(5), 493-513.
- McLaren, P. (2005). *Capitalists and conquerors: A critical pedagogy against empire*. Rowman & Littlefield Publishers.
- McMillan, J. H., & Schumacher, S. (2014). *Research in education: Evidence-based inquiry*. Pearson Higher Ed.
- Memon, G. R. (2007). Education in Pakistan: The key issues, problems and the new challenges. *Journal of Management and Social Sciences*, 3(1), 47-55.
- Mirci, P., & Jungwirth, L. (2014). A Commentary on Etienne Wenger's Keynote Presentation at the 2012 California Association of Professors of Educational Administration (CAPEA) Conference. *Educational Leadership and Administration*, 25, 22.
- Muborakshoeva, M. (2012). *Islam and Higher Education: Concepts, challenges and opportunities*. Routledge.
- Reid, R., Lienemann, T. O., & Hagaman, J. L. (2013). *Strategy instruction for students with learning disabilities*. Guilford Publications.

- Saeed, T., Khan, S., Ahmed, A., Gul, R., Cassum, S., & Parpio, Y. (2012). Development of students' critical thinking: the educators' ability to use questioning skills in the baccalaureate programmes in Pakistan. *Journal of the Pakistan Medical Association*, 62(3), 200-3.
- Shahzad, A., Valcke, M., Tondeur, J., & Zulfqar, A. (2016). The critical state of initial teacher education (ITE) in Pakistan: need for urgent reforms. *PONTE*, 72(4), 216-236.
- Silver, E. A. (Ed.). (2013). *Teaching and learning mathematical problem solving: Multiple research perspectives*. Routledge.
- Sumner, W. G. (2013). *Folkways-A Study Of The Sociological Importance Of Usages, Manners, Customs, Mores And Morals*. Read Books Ltd.
- United Nations Educational, Scientific and Cultural Organization (UNESCO).(2012). "World Data on Education Données mondiales de l'éducation Datos Mundiales de Educación." Retrieved from <http://www.ibe.unesco.org/sites/default/files/Pakistan.pdf>
- Zohar, A., Degani, A., & Vaaknin, E. (2001). Teachers' beliefs about low-achieving students and higher order thinking. *Teaching and Teacher Education*, 17(4), 469-485.