Analyses of Life Skills Development Practices in Secondary Schools of Islamabad

Abstract
The study was designed to make analysis for developing Life Skills practices in the secondary schools of Islamabad. It was descriptive survey study. All 1039 SSTs, all 146 principals of public secondary schools working under FDE at Islamabad were population of the study. Five hundred and seventy (570) SSTs; one hundred and forty (140) principals were selected by using stratified random sampling technique. A questionnaire having 36 items were developed by the researcher on five point Likert scale. Mean, Standard Deviation, and t-test, were applied to analyze the data. There was moderate level of practice of skill development in secondary schools. Male teachers were better performing in developing communication skills and critical thinking while female teachers were better for developing problem solving skills. Development of strategy and proper training of teachers and principals, by the government, for life base skill education was recommended.

Key Words: Life skills, Education, Communication, Critical Thinking, Problem Solving

Introduction
Education is a pathway, leads to the development of a nation. It develops the sense among the persons to behave positively in different situations. It plays a significant role in socioeconomic development due to which the people become well off and play their individual part for national progress. Despite, the dire efforts of educationists of Pakistan, the system of education has still unsuccessful to control the growing financial, social, and political swamp in the country (Rehman, and Khan, 2011).

School is considered the best place to prepare the children for future. It helps to provide foundation for higher learning in future. Basic Life Skills are essential to meet the challenges of practical life. Students often memorize the school experiences throughout their life. Their higher education also depends upon those learning experiences; they got at their school level. Life skills practices at school level develop the abilities of thinking, managing, organizing, coping with stress and emotions, communicating effectively, and solving the problems in the students and prepare them for different fields of life (Altun, Bintas, Yazgan & Arslan, 2007).

Life skills education is the requirement of today which makes a child able to deal with the related situation successfully, distinguish the accessible chances, to make full utilization of resources and to meet the societal challenges. A child can cope up with the challenges of future life by making use of existing resources even in difficult situations, if empowered with Life Skills (Bharath and Kishor, 2010). There are many life skills for the behavioral development of children but only those ten are mentioning here which are enlisted by World Health Organization, such as, self-awareness, decision making, thinking critically, communicating effectively, thinking creatively, empathy, social skills, emotional management, stress handling, and problem-solving (WHO, 1997). Among these, three most significant skills, to develop the Life Skills practices in secondary schools’ students are; effective communications, thinking critically, and solving problems wisely.

Effective communication means a capability of expressing, orally and by gestures, that are suitable for the specific philosophies and conditions. It refers having competency of conveying thoughts, requirements, needs as well as doubts. It might be understood, having the capability to...
make request to have counseling and support at the need of hours. By using effective communication, information is exchanged from one person to another by verbal or non-verbal procedure. Usually, verbal communication method is used with particular sense. Hence it is a bi-directional approach, giving reply when message is received. Communication skills help to share feelings, thoughts and opinions to achieve some specific goal (Altun, Bintas, Yazgan & Arslan, 2007).

Globally, it is noticed that development of communication skills practices in an educational institute has of great significance (lush, 2011; Gorton & Alston, 2010; and OECD, 2008). To communicate effectively, is considered as the main objective of the new school system of twenty first century that visualize the enhancement of communication skills in the people and the development of associations in difficult and challenging situations (Reimers & Chung, 2016).

Effective and positive communication skills are required to develop in the students at school level to prepare them for future life. Good communication environment of the school offers the opportunities to the students to learn better communication skills (Ihmeideh, et al. 2010). Therefore, the school must provide the activities to expose the communication skills of the students (Harlav et al., 2008).

To think critically, is one of the ten essential life skills, listed by WHO. It is a fundamental skill that if once developed, in the secondary schools’ students, they may perform more confidently, in their future life. This skill of critical thinking will assist them before taking any decision. To develop the skills of thinking in the learners, is an important aim of the education, at school level, such activities are required to design that enhance the critical thinking skills in the students like puzzles, presentations, projects etc. The students become active when they grasp the skill of thinking critically (Elder & Paul, 2008).

The importance of the critical thinking was ever recognized by various educationists, years ago (Dewey, 1910; Galinsky, 2010; Paul & Elder, 2008, 2014a, 2014b; Paul, Elder, & Bartell, 1997; Sternberg, 1997). In the current era too, the skill of critical thinking has been acknowledged as a vital life skill (Galinsky, 2010). To think in a critical manner, is considered as a mental procedure. By this procedure, individuals make concept, application, analyzation, synthetization, and evaluation of the information very actively and then easily reach to the conclusion (Costa and Kallick, 2014). Critical thinking is an ability to distinguish between important and unimportant information. The ability to analyze and adjusting in the novel circumstances is related with the skill of thinking critically thus, strategies of thinking critically may helpful for the enhancement of academic performance in the secondary school students (Hove, 2011).

Problem solving is a life skill that deals the problems of daily life in a positive manner. It is the ability to find a well understood solution of a problem in a limited frame of time. Some important problems, when remain unsolved, gives mental stress. Problem solving is a skill that is as much essential as it may be used at every geniture of life. It is the skill that must be developed in the children since school level, so that they may use this skill afterwards in their practical life (Leng, 2008; Posamentier & Krulik, 2009).

When students start the process of problem solving, they may face many difficulties. Students use the present information to solve a problem and develop more knowledge when they are required (Wyndham and Saljo, 1997). For solving a problem, it is necessary to understand the problem, gather the required information, choose the available options, and then reach to the possible solution. To follow these basic elements to solve the problem is not an easy task (Olkun and Toluk, 2004). The strategies used for problem solving are making the list of its factors systematically, thinking in a logical way, consider possible solutions, and choose the best one (Herr & Johnson, 2002; Posamentier & Krulik, 2008;).

Development of life skills education at secondary school level is as very essential as academic education. Since the educational policy of 1998 to now, a great emphasis was given on the development of life skills practices at school level as not only, it prepares the students to meet the challenges of future life but also significant to develop a good civic sense (Government of Pakistan, 2017). Keeping the vital role of Life Skills development practices at school level in view, the topic "Analysis of life skills development practices in secondary schools of Islamabad" was chosen by the researcher.
Objectives of the Study
1. To analyze the life skills development practices in term of communication, critical thinking, and problem solving in Secondary Schools of Islamabad.
2. To compare the life skills development practices in Girls and Boys Secondary Schools of Islamabad.

Research Questions
1. To what extent, communication skill is being developed in Secondary Schools of Islamabad?
2. To what extent, ability of critical thinking is being developed in Secondary Schools of Islamabad?
3. To what extent, problem solving skill is being developed in Secondary Schools of Islamabad?
4. What is the difference in the development of life skills development practices regarding communication skill between Girls and Boys Secondary Schools of Islamabad?
5. What is the difference in the development of life skills development practices regarding critical thinking between Girls and Boys Secondary Schools of Islamabad?
6. What is the difference in the development of life skills development practices regarding problem solving skill between Girls and Boys Secondary Schools of Islamabad?

Delimitation of the Study
The study was delimited as follow;
1. Students enrolled in Islamabad model schools.
2. Only three life skill communication, creative thinking and problem solving were studies.

Significance of the Study
This study may be of great significance for students, teachers, principals and top-level management of education. It will be beneficial for students of secondary classes as they will be given life skill base education; i.e. the skills, to communicate in a good manner to think critically, and to solve the problems, wisely. The outcomes of the research may be helpful for educators and principals to understand the importance of life base skill education. Its conclusion will also be fruitful for top level management of education as they will understand the present situation of life base skill education in secondary schools of Islamabad and as a result, they may develop plans to implement the life base education in schools.

Procedure
The type of the study was descriptive, and followed survey method to collect the data. Following procedure was adopted to conduct the study;

Population
All 1039 SSTs, (406 Male and 633 Female); all 146 principals (72 Male and 146 Female) of public secondary schools working under FDE at Islamabad were population of the research.

Table 1. Description of Population

| Designation | Male | Female | Total |
|-------------|------|--------|-------|
| SSTs        | 406  | 633    | 1039  |
| Heads       | 72   | 74     | 146   |
| Total       | 478  | 707    | 1285  |
Sample

The sample size of 710 respondents was taken as it was ensured the appropriateness of each category as per suggestions of famous educationist; Gay (2016). The detail of sample is as;

i. Five hundred and seventy (570) SSTs (300 Male, and 270 Female) were selected randomly.

ii. One hundred and forty (140) principals (70 Male, and 70 Female) were selected randomly.

Table 2. Description of Sample

| Designation | Male | Female | Total |
|-------------|------|--------|-------|
| SSTs        | 300  | 270    | 570   |
| Heads       | 70   | 70     | 140   |
| Total       | 370  | 340    | 710   |

Instrument

Questionnaire was developed self, on five points Likert scale for SSTs and principals of public secondary schools at Islamabad. The developed Questionnaire was regarding three parameters of Life Skills i.e. effective communication, critical thinking and problem solving. Total 30 statements were developed in the questionnaire while, ten statements were related to each parameter.

Validity

Face and content validity were confirmed by the principals, secondary school teachers and experts of educational field.

Pilot Testing

For pilot testing, questionnaire was given to 20 SSTs and was found readable and understandable.

Reliability

The inter item reliability of the questionnaire was checked on the collected data for pilot testing. Combrash Alpha technique was used to check the reliability. It was 0.97 which indicates that the instrument is highly reliable.

Data Collection

As the principal author is working in public sector school of Islamabad; therefore, it was convenient for her to collect data personally. It took three months for the researcher. The response rate was 91%.

Data Analysis

To analyze the data, descriptive as well as inferential statistics were used. Standard Deviation and Mean were applied to assess the life base skills development practices, while to determine the difference of practices, at boys and girls' secondary schools, t-test was used.

Table 3. Principals’ Perception about Life Skills Development Practices in public Schools of Islamabad

| Sr. No. | Skills            | N    | Mean  | Means of Mean | Std. Deviation |
|---------|-------------------|------|-------|---------------|----------------|
| 1       | Communication skill | 132  | 41.83 | 3.48          | 6.49           |
| 2       | Critical thinking  | 132  | 38.37 | 3.12          | 6.94           |
| 3       | Problem solving   | 132  | 39.40 | 3.28          | 5.52           |

Table 3 shows the Principals' perception about Life Skills development practices in public schools of Islamabad. It indicates the values of standard deviation and mean for the three
parameters of Life Skills such as Communication skills (Mean = 41.83, SD = 6.49), Critical thinking (Mean= 38.37, SD = 6.94), and Problem solving (Mean =39.40, SD = 5.52). The values of means of mean were calculated by dividing the mean with 12 because there were 12 statements for each parameter. Means of mean of all three parameters is greater than 3 which show that according to principals' point of view secondary schools are moderate in developing life base skills in secondary schools of Islamabad.

**Table 4.** SST's Perception about Life Skills Development Practices in Public Schools of Islamabad

| Sr. No. | Skills          | N   | Mean | Means of Mean | Std. Deviation |
|---------|-----------------|-----|------|---------------|----------------|
| 1       | Communication skill | 556 | 39.18 | 3.26          | 3.890          |
| 2       | Critical thinking | 556 | 38.94 | 3.24          | 4.326          |
| 3       | Problem solving  | 556 | 38.06 | 3.17          | 4.263          |

Table 4 shows the SSTs' perception about Life Skills development practices in public schools of Islamabad. The table 4 also explores the mean and standard deviation of the three parameters of Life Skills such as Communication skills (Mean= 39.18, SD = 3.890), Critical thinking (Mean= 38.94, SD = 4.326), and Problem solving (Mean =38.94, SD = 4.263). Means of mean values> 3 fall in category of moderate effectiveness which indicate that according to teachers' secondary schools of Islamabad are moderate affective for developing life base skills in their education.

**Table 5.** Principals' opinion about the Development of Life Skills Practices in the Students Regarding Communication Skills

| Gender | N   | Mean   | SD    | Df  | t    | P    |
|--------|-----|--------|-------|-----|------|------|
| Female | 67  | 39.85  | 6.96268 | 190 | -1.105 | 0.000 |
| Male   | 65  | 44.800 | 4.30915 |     |       |      |

Table 5 explores the female and male principals' opinion to analyze the Life Skills development practices related to communication skills in public secondary schools of Islamabad capital territory. The female principals having (Mean= 39.85, SD = 6.96268) where N= 67, whereas male principals having (Mean = 44.80, SD = 4.30915) where N = 65 regarding to the development of Life Skills practices as t = -1.105; and p value = 0.000 < 0.05, the level of significance. The value of mean is (44.80) for male principals is greater than mean value (39.85) of female principals. It reveals that the male schools are playing better role in the development of Life Skills practices regarding communication skills.

**Table 6.** SSTs’ opinion about the Development of Life Skills Practices in the Students Regarding Communication Skills

| Gender | N   | Mean  | SD   | Df  | t    | P    |
|--------|-----|-------|------|-----|------|------|
| Female | 292 | 38.84 | 3.904 | 494 | -2.036 | 0.04 |
| Male   | 264 | 39.56 | 3.848 |     |       |      |

Table 6 explores the female and male SSTs' opinion to analyze the Life Skills development practices related to communication skills in public secondary schools of Islamabad capital territory. The female SSTs having (Mean = 38.84, SD = 3.90) where N= 292, whereas male SSTs having (Mean = 39.56, SD = 3.848) where N 64 regarding to the development of Life Skills practices as t = -2.036; and p value = 0.04 <0.05, the level of significance. Value of mean is (39.56) for male SSTs, is greater than mean value (38.84) of female SSTs. It reveals that the male schools are playing better role in the development of Life Skills practices regarding to communication skills.
Table 7. Principals' opinion about the Development of Life Skills Practices in the Students Regarding Critical Thinking Skills

| Gender | N  | Mean | SD     | df  | t     | P     |
|--------|----|------|--------|-----|-------|-------|
| Female | 67 | 35.77| 6.86857| 190 | -6.544| 0.000 |
| Male   | 65 | 42.26| 4.98835|     |       |       |

Table 7 explores the female and male principals' opinion to analyze the Life Skills development practices related to critical thinking in public secondary schools of Islamabad capital territory. The female principals having (Mean = 35.77, SD = 6.86) where N = 67, whereas male principals having (Mean = 42.26, SD = 4.98) where N = 65 regarding to the development of Life Skills practices as t = -6.544; and p value = 0.000 < 0.05 level of significance. Mean value (42.26) of male principals is greater than mean value (35.77) of female principals.

Table 8. SSTs' opinion about the Development of Life Skills Practices in the Students Regarding Critical Thinking Skills

| Gender | N  | Mean | SD     | df  | t     | P     |
|--------|----|------|--------|-----|-------|-------|
| Female | 292| 39.25| 4.241  | 494 | 1.527 | 0.127 |
| Male   | 264| 38.66| 4.392  |     |       |       |

Table 8 explores the female and male SSTs' opinion to analyze the Life Skills development practices related to critical thinking in public secondary schools of Islamabad. The female SSTs having (Mean = 39.25, SD = 4.241), is better than male SSTs having (Mean = 38.66, SD = 4.392) regarding to the development of Life Skills practices but the t = 1.527; and p value = 0.127 > 0.05 indicate this difference in means is not significant. It reveals that both female and male schools are playing same role in the development of Life Skills practices regarding to critical thinking.

Table 9. Principals' opinion about the Development of Life Skills Practices in the Students Regarding Problem Solving

| Gender | N  | Mean | SD     | df  | t     | P     |
|--------|----|------|--------|-----|-------|-------|
| Female | 67 | 41.78| 5.79   | 190 | 4.793 | 0.000 |
| Male   | 65 | 37.80| 4.10   |     |       |       |

Table 9 explores the female and male principals' opinions to analyze the Life Skills development practices related to problem solving in public secondary schools of Islamabad capital territory. The female principals having (Mean = 41.78, SD = 5.79) where N = 67, whereas male principals having (Mean = 37.80, SD = 4.10) where N = 65 regarding to the development of Life Skills practices as t = 4.793; and p value = 0.000 < 0.05 level of significance. Mean value (41.78) of female principals is greater than mean value (37.80) of male principals. It reveals that the female schools are playing better role in developing Life Skills practices regarding the skill of problem solving.

Table 10. SSTs' opinions about the Life Skills Development Practices in the Students Regarding Problem Solving

| Gender | N  | Mean | SD     | df  | t     | P     |
|--------|----|------|--------|-----|-------|-------|
| Female | 292| 38.15| 3.986  | 494 | 0.436 | 0.663 |
| Male   | 264| 37.98| 4.507  |     |       |       |

Table 10 explores the female and male SSTs' opinion to analyze the Life Skills development
practices related to problem solving in public secondary schools of Islamabad capital territory. The female SSTs having (Mean = 38.15, SD = 3.986) where N= 292, whereas male SSTs having (Mean = 37.98, SD =4.507) where N = 264 regarding to the development of Life Skills practices as t =0.436; and p value = 0.663 < 0.05, the level of significance. Value of mean is (38.15) for female SSTs, is greater than mean value (37.98) of male SSTs. It reveals that the female schools are playing better role in the development of Life Skills practices regarding problem solving.

Conclusions
1. Secondary schools of Islamabad are moderate effective in developing life base skills in terms of communication skills, critical thinking, and problem solving.
2. There is significant difference between the life skill development practices of girls and boys’ schools. Boys schools are playing comparatively better role in developing skills of effective communication, and thinking critically in a positive manner while girls’ schools show better performance in developing skills of solving problems wisely.

Discussion
The objective of the article was to analyze the development about life skills practices, regarding communicating effectively, to think critically, and to solve the problems in public schools at Islamabad. In Pakistan, especially in Islamabad no research work seemed to be taken out but in other part of the world, many research studies have already been conducted associated with the development of these life skills in secondary school students by keeping their importance in view.

The 1st life skill understudy was effective communication. It has a great value and importance throughout the life. It may differ from culture to culture but its significance cannot be denied. Keeping the vital need of effective communication in view, it is required to develop these skills in the students from school level. Effective skills of communication are also required for better teaching and learning process. Effective communication provides the chance to the learner to learn with ease, to build a strong bonding between student and teacher, and to develop a constructive environment to learn. An effective and good communication is helpful to develop the standard of learning in a positive manner because process of learning and effective communication is connected with each other. Due to its significance in schools, the researcher has assessed the practice of communication skills in secondary schools.

Many research studies related to effective communication were carried out in schools. For example, a study was conducted by Angela Diloyan (2017) on the topic, the importance of communication in the classroom: the impact of effective communication skills on student enthusiasm. The research was focused on the teacher-student communication in the classroom of a high school in America and its effects on the level of eagerness of the students. The research was aimed to differentiate that if the student-teacher communication put some impact on the passion of learning of the students. It was concluded by the study that teacher-student communication has great potential to grow and a large space to improve. It was concluded by the study that communication between a student and a teacher, show a good effect on the interest level of the students.

The second life skill undertaken in this study was critical thinking. The researcher has chosen this because it is thought as an imperative parameter in developing the life competencies among the students. Keeping its importance in view, it is required to develop it in the students, from grass root level. In this regard, schools can show their performance for the development and improvement of the life skill, critical thinking, in the students. Development of life skills, at school level becomes helpful to prepare the students, to face the challenges of globalization. Critical thinking assists the students to know new methods of learning and thinking in positive manner (Halpern, 1998). According to Meyers (1986), students could perform a valuable part for society by using their critical thinking skills.

Many researches have been conducted to focus the ways and strategies for the development of
critical thinking as a life skill in the students. A study was conducted by Turino et al., (2017) at Surakarta University, Indonesia on the topic of analysis of secondary school students’ critical thinking: skill in learning energy in living system. In that study, it was focused to inspect the skills of thinking in a critical way at learning potential in daily life. These days, the worldwide problem related to future life of the human beings is, energy. This result matches the conclusion of present study. This result matches by the conclusion of current study. It was shown by the study’s results that teachers delivered the concepts to the students with good preparation but not succeeded fully, to concentrate and instruct the students on critical thinking. Actually, the problem was that the teachers were not provided the learning guidelines that how can they help the students to think critically in the given situations. It was observed that time period was not enough according to the topic. So, it was concluded in the research that teachers should be fully trained and equipped to facilitates the students in developing the skills of critical thinking and some sufficient time should be allocated for all these practices.

The third life skill which was studied by the researcher was problem-solving skill. Problem solving skill must be developed and enhanced in the students of secondary school level because after their graduation of professional or vocational education, they start to do a job, and face many problems in practical life. In the real-world situation when students are required to solve the problems, they apply their knowledge and skills, developed previously (Smaldino et al., 2012). Activities of learning provide the chance for the students to learn the skills of solving problem and use their knowledge about the occurrence and solution of the problem (Merrill, 2002; Yeen-ju, et al., 2015).

One of the researches related to problem solving skill was conducted Nizwardi et al., (2019) in the article with topic of a comparison of the problem-solving skills of students in PjBL Versus CjBL Model: An experimental study. That subject was aimed to make comparison of students‘ skills related to solving problems while working with two learning models i.e. CPjBL and PjBL in the course of conversion of energy. PjBL means the project-based learning activities, by which the project tasks are implemented. On the other hand, CPjBL is a learning model which is the combination of cooperative and project-based learning both. To explore the skills of problem solving, assessment technique was used by the students. It was revealed that there was a significant difference of solving problems skills in the students of above mentioned two learning models. The results showed that the CPjBL learning model was more effective to enhance the skills of solving problems in the students. It was also noticed that, in CPjBL, students were more organized and linked with the assigned learning topic as compared to PjBL model of learning. Both the learning models were compared to find the best one. The research was basically focused on the progress of the skills related to solving the problems in the students in a better and more effective way.

Another research was made by Belgin Ballincebacak and Esen Ersoy (2016) at Ondokuz Mayis University, Turkey in the article with title of problem-solving skills of secondary school students. The study was aimed at determining the status of skills plus strategies of solving the problems in students of secondary school. To conduct the research 37 male and 35 female students were chosen from the two random provinces of Turkey, of Black sea region. The research was qualitative in nature and content analysis was applied in it. Five creative problems were developed and used as a tool for collecting data. The applied problems were assessed by different stages like knowing the actual problem, selecting the suitable strategy to find the solution, applying the selected strategy, and then make evaluation of the solution. When problem solving papers were examined it was noticed that the students solved the familiar and routine problems but found difficulties in the solution of unfamiliar and non-routine problems.

A research was also conducted by Follmer (2000) to find the procedures of linking to solve a non-routine problem. The study was carried out with the students of a school, providing basic learning. The outcomes of study explored, that students show much success when they know the methods of solving different problems in diverse situations. The latest researches reveal about the most important feature of the process of solving problem, is to distinguish the identified from the indefinite (DeBellis & Goldin, 1997; Goldin, 1988; 1998).

To fill up the gap between learning at school and the actual life, a study was carried out by Asman and Markowitz (2001). During the study, teachers and students not only solved the problems but they were also observed in many phases to solve different problems. The consequences of the research
revealed the fact that only routine problems present in the textbook were solved and impractical problems were left.

**Recommendations**

1. The results show that performance of both (girls and boys) schools is moderate; therefore, it is recommended that the government should develop a strategy for life base skill education. Furthermore, teachers and principals may be trained to increase their performance regarding life base skill education.

2. Male teachers are better in two skills which are communication skill and critical thinking while female teachers are better in developing problem-solving skill; therefore, it is recommended that combined training workshops of male and female teachers may be organized to share their experience.
References

Asman, D., & Markowitz, Z. (2001). The use of real word knowledge in solving mathematical problems. *Proceedings of the 25th Conference of the International Group for the Psychology of Mathematics Education (Vol. 2, pp. 65-72).* Netherlands: Utrecht University.

Bharath, S. and Kishor, K. (2010). Empowering adolescents with life skills education in schools – School mental health program: Does it work? *Indian Journal of Psychiatry.* Oct-Dec 2010; 52(4): 344–349.

Bush, T. (2011). *Theories of Educational Leadership and Management (4th ed.).* London: Sage Publications Inc.

Costa, A. & Kallick. B. (2014). *Dispositions: Reframing teaching and learning.* Thousand Oaks, CA: Corwin Press.

Dewey, J. (1910). *How we think.* Boston, MA: D. C. Heath & Co. Retrieved from http://tinyurl.com/l6q46mq

Follmer, R. (2000). Reading, mathematics and problem solving: The effects of direct instruction in the development of fourth grade students’ strategic reading and problem-solving approaches to text based, non-routine mathematics problems (unpublished Ph.D. thesis). * Widener University, Chester, Pennsylvania.

Fullan, M. (2017). *Indelible Leadership. Always Leave Them Learning.* Thousand Oaks, CA: Corwin.

Galinsky, E. (2010). *Mind in the making: The seven essential life skills every child needs.* New York, NY: Harper Collins Publishing.

Goldin, G. A. (1998). Representational systems, learning, and problem solving in mathematics. *Journal of Mathematical Behavior, 17*(2), 137-165.

Govt. of Pakistan. (2009). *National Education Policy 2009.* Islamabad: Ministry of Education.

Govt. of Pakistan. (2017). *National Education Policy 2017.* Islamabad: Federal Ministry of Education and professional Training.

Halpern, D. (1998). Teaching Critical Thinking for Transfer across Domains: Dispositions, Skills, Structure Training, and Metacognitive Monitoring. *American Psychologist, 53*, 449-455.

Harlak, H., Gemalmaz, A., Gurel, F. S., Dereboy, C., & Ertekin, K. (2008). Communication skills training: Effects on attitudes toward communication skills and empathic tendency. *Education for Health: Change in Learning and Practice, 21*(2).

Harris, A. (2014). *Distributed Leadership Matters: Perspectives, Practicalities, and Potential.* Thousand Oaks, CA: SAGE.

Harris, A., & Jones, M. (2016). *Leading Futures: Global Perspectives on Educational Leadership.* Thousand Oaks, CA: SAGE.

Hove, G. (2011). Developing critical thinking skills in the high school English classroom. (Unpublished master’s thesis). * Widener University, Chester, Pennsylvania.

Hussain, I (2005). *Education, Employment and Economic Development in Pakistan.* In Hathaway, R (Ed.) Education Reforms in Pakistan: Building for the Future (pp. 33-46).

Ihmeideh, F. M., Ahmad, A., & Al-Dababneh, K. A. (2010). Attitude toward communication skills among students' teachers' in Jordanian Public Universities. *Australian Journal of Teacher Education, 35*, 1-11.

Meyer, C. (1986). *Teaching students think critically.* London: Jossey-Bass Publishers.

Olkun, S. and Toluk, Z. (2004) *İlköğretimde Etkinlik Temelli Matematik Öğretimi.* Ankara: Anı Yayıncılık.

Paul, R., & Elder, L. (2008). Critical thinking: The nuts and bolts of education. *Optometric Education, 33*(3), 88-91. Retrieved from http://www.opted.org/i4a/pages/index.cfm

Paul, R., & Elder, L. (2014a). *The Miniature Guide to Critical Thinking: Concepts and Tools.* Tomales, CA: Foundation for Critical Thinking. Retrieved from https://tinyurl.com/y7p5xz84

Paul, R., & Elder, L. (2014b). *Critical thinking: Tools for taking charge of your professional and personal life.* Upper Saddle River, NJ: Pearson Education.

Paul, R., Elder, L., & Bartell, T. (1997). *California teacher preparation for instruction in critical thinking: Research findings and policy recommendations.* State of California, California, Commission on teacher credentialing, Sacramento, CA.
Rehman H. and Khan N., (2011). “The flaws in Pakistan’s Education System” Abasyn Journal of Social Sciences, 4(1).

Reimers, F. M., & Chung, C. K. (2016). Teaching and Learning for the Twenty-First Century. Educational goals, policies and curricula from six nations. USA: Harvard Education Press.

Smaldino, S., E., et al. (2012). Teknologi Pembelajaran dan Media Untuk Pembelajaran. Translate to Indonesian language by Arif Rahmat. Jakarta: Kencana.

UNICEF (2005). Save the Children: Disciplining the Child Practices and Impacts, NWFP: School & Literacy Department.

Wyndhamn, J.&Saljö, R. (1997) Word problems and mathematical reasoning. A study of children’s mastery of reference and meaning in textual realities. Learning and Instruction, 7(4), 361 382.

Yeen-Ju, H., T., Mai, N. & Selvaretnam, B. (2015). Enhancing problem-solving skills in an authentic blended learning environment: A Malaysian Context. International Journal of Information and Educational Technology, 5(11), 841- 846. doi: 10.7763/IJIET.2015.V5.623

Zaki W. M. (1989). Evaluation of Education Plans and Projects. Islamabad: National Book Foundation.