



Students' Cognitive Development in Colleges: A Comparative Study of Private and Public Sectors

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Abstract

Cognition denotes the process of thinking and memory and cognition development is said to be the long-term changes in these procedures. Cognitive development is a major aspect of students' personality. The aims of the study were (1) To compare the perception of male and female students about cognitive development in private and public sector colleges. (2) To investigate which sector is more efficient in doing the cognitive development of students at the intermediate level. The descriptive method was used in this study with survey design on the population of all public and private colleges of Punjab Province. 628 students out of 720 students participated in the research. To check the reliability of research tools, Pilot testing was also conducted. Instruments of students and administrators consisted of Five-point Likert showed the reliability ($\alpha = .87$), ($\alpha = .81$) accordingly. Results showed that there is no significant difference in the perception of both genders concerning cognitive development in both sectors. Results of the study also showed

Key Words: Personality development, Cognitive Development, Private Sector Public Sector

Introduction

Generally, we define education is a type of knowledge in which skills, habits, and knowledge of either individuals or people's groups are transfer to the upcoming generations virtually via teaching and research or exercise. Learning always nurtures under the umbrella of other, however, in some cases, it can also prove itself auto instructive under certain conditions. Mostly, experiences are considered educations of they have a significant effect on one's thinking, feeling, and acting formal education occurs through evolutionary states i.e. pre-school, primary, elementary, secondary, college and university.

According to Bhatia (2005), the time of college years is of substantial development and transformation for students as they deal with modern experiences and ideas which enhance their previously accumulated knowledge and beliefs. If the purpose of institutions is the development of the personality of their students, colleges should first set norms and exercises for the betterment in this regard.

The word "Personality" is originally from the Latin language "Persona" which means a mask that theatre actors put on while gambling a role within the play; it's also a mixture of someone's fundamental motivations, emotions, conducts, and ideas. A balanced personality consists of the ways wherein one shows interplay and reaction to positive things (Robbins, 2001).

Personality plays a key role in deciding to start a professional life. Personal characteristics are a combination of distinctions between a person and a person who is named a character person. An attractive man, a positive attitude, or a smile is not counted as personality, but describing the entire system in one person's mental growth and psychological development (Kinicki and Kreitner, 2003).

Yosada (2013) points out that development is a constant progression, from pregnancy to death. Even if corporeal changes may be more pronounced, we also have social, personal, cognitive, intellectual, and educational changes. Traditionally, the theme of human development is more in the interest of educational psychologists.

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Development of cognition is a scientific study, research, and neuropsychology, focusing on children's brain by different aspects and in the processing of information, resource concept, perception skills, learning of language (Sadler, 2004).

Recognition refers to the process of wondering and memory. Cognitive development mentions to longstanding versions in those procedures. Knowledge improvement means increasing the capacity to recognize summary concepts. Cognitive development mentions the ongoing growing in memory, the capacity to think, imagine, and supplementary cognitive capacities. These capabilities can help humans adapt to the environment, consisting of memory development.

Cognitive development states as the development of intellectual abilities such as remembrance, imaginings, creativeness, and thinking. This allows people to be better tuned. For example, improving memory and discrimination is directly related to personal compatibility. As time progresses, cognitive ability progresses and eventually the individual ensures the goal of mental maturity. Individuals can resolve their complications in the adult life cycle. By this approach, he arranges his day-to-day life expectancy (Siddiqui, 2017).

Maqbool (2011) stated that development is a continual process, which begins with an idea and ends with the death of an individual. Modifications bodily and these changes are the most notable, one also adjustments for my part socially intellectually, cognitively, and morally. Now a day's basic primary difficulty of educational psychologists is human development. Development denotes all those modifications which take area in the role and behavior of an individual. If this change concerns with cognition, it's far termed as "cognitive improvement or development".

After a brief introduction, we may able to conclude that the cognitive aspect of the development of one's personality is a key factor for personality distinction. This study has aimed to investigate the practices of development of cognition amongst collegiate students by colleges.

Literature Review

The system of education in Pakistan is commonly separated into 6 levels. Level one preschool, for age 3 to 5 years for playgroup nursery or kachi classes, the primary is for grades one to five, middle for six to eight, and high for ninth and tenth classes. While college begins from eleventh to fourteenth classes, and above-called post-graduation at the university level.

These education levels are provided by two major sectors, public and private. The public sector refers to the government administrative system, while other administrated by private bodies. Both sectors are under the policy of the government, but some private sector institutions and few self-governing colleges are generally renowned as being more prominent than the colleges of government. For intermediate or higher secondary education, term faculty of sciences or faculty of arts is still often used, in higher education institution's admission materials. There is some autonomy for selecting subjects and subject combinations are granted from Regional Boards.

A college education is an important education level in Pakistan which consists of 4 classes generally and now 6 classes due to a new system of honors degrees. It starts from the eleventh year of education until fourteen. There are different fields of study at the college level which are general education colleges commercial, commerce, engineering, arts medical, and teaching colleges.

In Pakistan, two sectors provide college education, private and public. Public sector finance and administered by the government while the private sector by private individuals or groups of professionals and by big chains of big guns like Punjab, unique, superior, Concordia, kips, etc.

Education supports the melodious development of the character. It upsurges the cognitive, social, and ethical amendment of the man or woman within the society. Education is an important requirement for a well-prepared and reasonable improvement manner. It is a standard detail that disadvantaged of the least training stage for the complete residents; a humanoid centered improvement system can't be continued. It delivers people greater alternatives and possibilities to boom their lives. Through the manner of education, it can be diagnosed that, human boom their lives. Though the manner of education can be diagnosed that, humans boom many skills, attitudes, and abilities to adjust the manners steady with ethical, social, cognitive, and civil requirements, that's a requirement for supporting the development of nations.

According to Moreno (2004), a general term human development used to talk about the variations that take place between beginnings till death. On the other hand, this word does not apply to all changes but only when performed in a definite direction and that continues for a long period.

Human development is a term to use to explain the developmental stages of development occurring during the duration of one’s conception till death. However, this term does not longer follow all modifications but simplest to the ones that seem in constructive sequences and that remain for the period of a soundly long time. Sometimes, we experience momentary in life, such as within the form of an illness, severity, and affection of weather, and sickness of humans, are not always said to be the part of human development (Allport G.W, 2003).

Modification of behavior is an education in a mode which we desired. The word education has been derived from the Greek word ‘Educare’ which means ‘to bring up’ or ‘to rise’. Bringing up and raising means shaping the behavior and habits following the needs of the society. Education is, therefore, the development of desirable habits, attitudes, and skills which behavior of an individual to adjust in the society. In this process of education, we try to modify the behavior and an individual. This modification of behavior helps his/her healthy adjustment in society (Sharma Nath & Sharma Kumar,2006).

Psychology, like other sciences, has both basic and applied components. Basic psychology is concerned with the seeking of knowledge for its own sake, whereas applied psychology is concerned with the application of basic theory and research to solve the problems of individuals. The following are some of the areas of basic and applied psychology (Pathak,2012).

Branches and Areas of Psychology

Basic Psychology		Applied Psychology	
Specialty	Activities	Specialty	Activities
Development Psychology	Learning and development, Cognitive development, Personal and social development	Clinical Psychology	Psychological testing, Diagnosis of psychological disorder, individuals and group therapy
Experimental Psychology	Application of scientific Research methods to study Motivation, learning Processes and cognitive Processes	School Psychology	Diagnosis of psychological and education problems, individual and group counseling
Social Psychology	Social motivation, Socialization, Communication and Behavior of groups	Educational Psychology	Research and application of principles of learning, design, and evaluation of curricula according to psychological principles
		Industrial Psychology	Evaluation of job training, improvement of the work environment and research on human relations in a work setting

Kluckhohn (2004) stated that the development of Personality may describe as the consistency, continuity, and stability in humans over the years and all the methods in which human beings alternate through the years. There are many styles of personality balance, and many types of persona trade.

Hamded& Aziz (2015) stated that special psychologists have one of kind factors to study about the meaning of personality. Many renowned psychologists agreed upon the origination of the word “personality” that this is from the Latin word ‘persona’, which stated a dramatic mask worn with the aid of roman actors in Greek dramas.

Cognitive development is the name of changes in these processes that are long term. While cognition is, from several multiple perspectives and in the views of different theories, the most widely known theory is the theory of Jean Piaget, a famous psychologist (Siddique, 2017).

Cognitive development means a step by step adds to the ability to a thing, in memory, thoughts, recognition other abilities of cognition. With the help of these abilities the individual gets accustomed to the environment, e.g memory development. The expansion and enhancement in mental capabilities like creativity, imagination, discrimination in abilities, and memory and thoughtfulness is cognitive development. Individuals having these abilities can attain better tuning for life. For example, improvements in memory are directly concerned with an individual’s adjustment. The development of cognitive abilities occurs with time and at last, an individual reaches

the goal of mental and intellectual maturation. With the time humans' brains have been matured and, in this way, individuals can arrange all the life affairs easily.

Cognitive Development Theory

Another development method is to focus on the process of thought and memorization and constructing knowledge. According to the principle of cognitive development, the important is how individuals ruminate and think. Two different methods were developed. First is Piaget's theory that thinking process develops in a continuous paradigm, the same Kohlberg also explains this point of view as Piaget's theory. The second view is that people like computers and large amounts of information become more efficient in their lives. The information processing theory is an example of this theory. There are many standards regarding the cognitive development of the child. Three of them are the most effective. Lev Vygotsky, Jean Piaget, and the neo- Piaget are the theorists best-known for it (Yasoda, 2013).

Paget's Theory

The cognitive-developmental point of view throws light on how kids' constructional changes occur with time and they put up acquaintance, skills, learning, and knowledge. The most significant developmental psychologist of the 20th century Jean Piaget (1896-1980) presented the greatest renowned theory related to it. Piaget believes that kids try to make sense of their living world, naturally. Youngsters try to get knowledge of the working of social, physical throughout the stages of life including adolescence, childhood, and infancy.

On the efforts of children to recognize their world in their sense, Piaget argued that children much like scientists, make an effort to create theories about both these worlds physical and social. Children make an effort to connect all their knowledge about people and things around them into a complete theory and these theories are tried every day by practice because they guided by these theories to expect some definite things to occur, like the real scientific theories, a child's trust on his theory when the predicted events happened, then they become stronger and the child revises his theory when these expected events do not happen (Robbin, 2001).

Piaget also believes that on few crucial pints in development, children start constructing knowledge in new ways. When this happens in the same way, their theories are revised completely. These changes happen to be so fundamental that the revised theory becomes a brand-new theory in many respects. Piaget asserted that these changes occur in development thrice: once when the child's age is 2 years, a second time when he is 7 years old, and just before adolescence, a third time. Four distinct stages occur in the child's life, cognitive development is the result of these changes. A fundamental change is brought in each stage, that how children organize and understand their environment and more cultured types of reasoning is a major characteristic of every stage. For instance, the sensorimotor stage starts with birth and lasts until about the age of 2 years. Sensorimotor thinking refers to a child's building knowledge with the help of sensory and motor skills, as the name implies. Piaget's theory lays great stress on how developmental and practitioners thing about development (Robbin, 2001).

The equilibration process promotes an increasingly complex process of thought. Piaget shows that equilibrium is often shown in children's personalities: they can use existing solutions to easily interpret and respond to new events. However, as the age of children grows and their horizons expand, sometimes the current situation experience is due to a lack of knowledge and skills. This situation can lead to an imbalance of personality, which is a kind of mental disorder that makes them try to understand what they are seeing. Children are integrated with the change, reorganization, or better of specific programs (for example, through accommodation) and can be understood and resolved before confusing events. The process of moving from equilibrium to unbalanced mode and returning to equilibrium is called equilibration. Piaget believes that the assimilation and balance of children's desire to promote the development of complex ideas and knowledge levels (Brown & Lichter, 2006).

Cognitive Development Theory by Vygotsky

Given Piaget, the child controls his cognitive development to a large extent; such as, they begin to interact with objects in their environment and, based on what they observe, have made themselves. In divergence view, an early psychologist of Russia, Le Vygotsky believes that adults in any society interested in and systematically promote cognitive development of children. Since Vygotsky highlighted the significance of adult education and

led to cognitive development, it was generally due to the emphasis on the impact of social and cultural factors on the cognitive development of children (Robert, 2010).

Dissimilarities in Piaget's and Vygotsky's Theory

According to Maqbool (2011), Piaget and Vygotsky both have had a deep inspiration on the modern vision of education cognitive thinking and development. If we go beyond one another, one can perceive more or less conjoint themes from two points of view. First of all, both theorizers believe that the process of thinking children becomes more and more complex with age and experience.

Second, both believe that the significance of this challenge may be incorrectly new information (disequilibrium of Piaget's), or it may be in the form of tasks to be completed only with any of the aid (Development Area near Vygotsky). Appears Third, at every point in the development process, instead not for others, children are naturally prepared for more or fewer experiences. Piaget believes that children can only adapt to new things and events when children can absorb existing programs to a certain extent, that is, they must overlap "new" and "old" (Brown & Lichter, 2006).

On the other hand, Piaget and Vygotsky's theories are somewhat different. Piaget believes that the cognitive development of children is largely the result of informal experiments that they are trying to create in physical objects. When faced with complex events, they try to maintain balance. Vygotsky, on the other hand, places great emphasis on the adult's role and other forward-thinking personalities who can bring innovative experiences and make available support in thought-provoking actions. The difference is that one presents himself as discovery and exploration of self (Piaget) while other guide exploration and supervision (Vygotsky).

Another main dissimilarity is the potential impact of children's culture on their growth. Piaget realized that differences in culture have a major impact on children, but he did not scientifically consider these differences in a child's process of thinking. However, in Vygotsky's theory, culture is very important in shaping the special thinking skills that children ignore. Contemporary scholars have concluded: the cultural environment of a child has a great impact on children's learning and development.

As a final point, the two theorists introduced different views on how to enter the image of language. On behalf of Piaget, it undoubtedly enhances the development of cognitive skills: providing many labels (symbols) to help children show their world in words, which is the most important means for children to acquire knowledge from different perspectives on different situations and issues. On the other hand, Vygotsky's point is, language is essential for the development of cognitive skills. The child's thinking process is an internal version of social interaction, mostly oral and natural. Additionally, in an adult's conversations, children learn the importance of their culture for a particular event and gradually begin to interpret the world in a particular cultural way. Furthermore, from side to side two types of language-based, self-talking, and inner-speaking phenomena, children direct their actions in ways that others have guided them already.

Given these benefits, numerous modern theorists perceive Piaget and Vygotsky's view that in cognitive development, language access may be the most important factor. We can get better cognitive progress at what time when we know something about the development of language (Child, 2007).

Objectives of the Study

The objectives of the study were.

1. To compare the perception of male and female students about cognitive development in public and private sector colleges.
2. To investigate which sector is more efficient in doing the cognitive development of students at the intermediate level.

Research Methodology

The study was descriptive in its nature and survey design was used for data collection.

The population of the Study

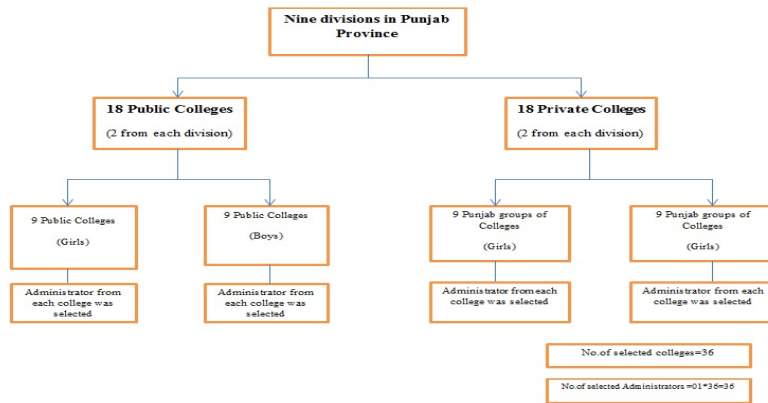
All Private (350 Punjab Group of Colleges) and Public (577 male and female Colleges) colleges in Punjab Province were the populations of the study (Retrieved from EMIS & pgc.pk.com).

Sample of the Study

One Public male College and one Public female College was selected randomly from each division of Punjab Province. There are a total of nine divisions in Punjab Province. Eighteen Private colleges (One Private male College and one Private female College were selected randomly from each division) were selected from Punjab Group of Colleges. A total of 36 public and private colleges were selected from nine divisional headquarters of Punjab Province.

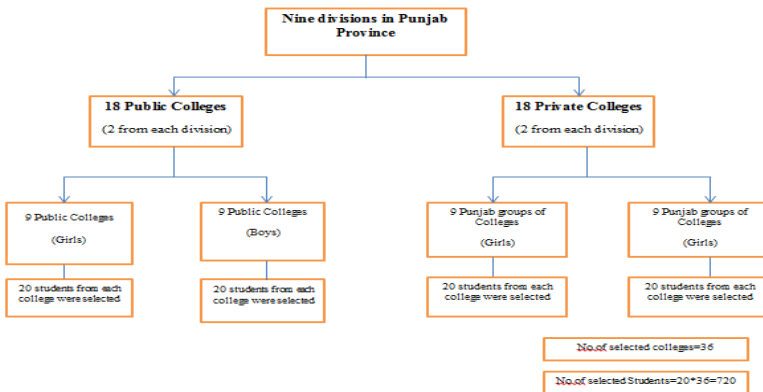
Randomly selected eighteen public sector colleges and eighteen private sector colleges from nine divisions of Punjab Province are the sample of the study, stratified sampling technique was used. An administrator and twenty students were selected from each college as a sample. Students were selected randomly. Out of seven hundred and twenty students, six hundred and twenty-eight students responded in the research, and thirty-two administrators out of thirty-six participated in the research.

Flow chart of sampling for Administrators



The scale of the Study

Flow chart of sampling for Students



Two scales were used for data collection, one for students and others for administrators on a five-point (Likert) scale. Pilot testing of the scale was also conducted. The overall reliability of instruments of (a = .87) and administrators (a = .81) was accordingly. Boxplot, summary statistics, normality tests, and Parametric statistics were applied to check the assumptions. To compare private and public sector colleges at intermediate level Mann-Whitney U test was used.

Table 1. Perceptual Comparison between Female and Male Students Regarding Cognitive Development in Private Sector Colleges

Scales	Female		Male		Mann-Whitney U	
	SD	M	SD	M	Z	P
Private	.37	4.32	.35	4.35	-.81	.413

Table 1.1 reveals that the Mann-Whitney U test indicates that there is no significant difference ($p > .05$) between the perception of female students ($SD = .37, M = 4.32$) and male students ($SD = .35, M = 4.35$) of the private sector. The results of the study reveal that there is no significant difference between the perception of female students and male students regarding cognitive development in private sector colleges.

Table 2. Perceptual Comparison between Female and Male Public Sector Colleges Regarding Cognitive Development

Scales	Male		Female		Mann-Whitney U	
	SD	M	SD	M	Z	P
Public	.27	2.69	.31	2.68	-.56	.575

Table 1.2 reveals that there is no significant difference ($p > .05$) between the perception of female students ($SD = .31, M = 2.68$) and male students ($SD = .27, M = 2.69$) of public sector colleges about cognitive development. The results of the study reveal that there is no significant difference in the perception of female students and male students regarding cognitive development in public sector colleges. There is no significant difference in the perception of both the genders regarding cognitive development in public sector colleges.

Table 3. Comparison between Private and Public Sector Colleges Regarding Cognitive Development over the Perception of Students and Administrators

Scales	Public		Private		Mann-Whitney U	
	SD	M	SD	M	Z	P
Students	.30	2.69	.36	4.3	-21	<.001
Administrators	.31	3.77	.22	4.51	-4.5	.000

Table 1.3 shows that cognitive development among private sector's students ($M = 4.3, SD = .36$) is more than the public sector ($M = 2.69, SD = .30$) according to the perception of administrators the cognitive development of students in the private sector ($M = 4.51, SD = .22$) is more than the public sector ($M = 3.77, SD = .31$). To compare perceptions of students and administrators of private and public sector colleges over cognitive development Mann-Whitney U was conducted. There is a statistically significant difference ($p < .05$) between the perceptions of administrators and students of private and public sector colleges over the cognitive development of students at the intermediate level. The results of the study show that private-sector colleges are better than public sector colleges on the cognitive development of students at the intermediate level. The results of the study reveal that practices for cognitive development in private sector colleges are better than public sector colleges.

Conclusion

- The perceptual comparison shows that there is no significant difference between female students and male students regarding cognitive development in private sector colleges as well as public sector colleges.

This perception is only dominant in their respective sector colleges. We can conclude that both the genders have same perception regarding cognitive development in their respective sectors.

- Private-sector colleges are better than public sector colleges in doing practices for the cognitive development of students at the intermediate level. In the light of the survey, the perception of both male and female students as well as administrators in private sector colleges supports that cognitive development is laid stress on in their colleges.

Discussion

- Shaista (2007) said that students in colleges must be provided with equal possibilities that could improve the personality of the students. The present study also famous that the form of faculties affected male college students as well as female college students.
- The present study aimed toward inspecting the status of cognitive development of intermediate students in public and private sector colleges and to reveal the distinction amongst in-exercises and norms of public and private sector colleges. The findings of the present study and literature reviewed, with some exceptions. The mean rating of cognitive improvement shows private colleges play a chief function in the cognitive improvement of intermediate level students. Perry (1968) mentioned that the college years are fertile ground for the rapid growth of cognitional processes and development in adults and that the private colleges are the locations of intellectual and ethical development

Recommendations

Following Recommendations are Presented the light of the above Discussion and Conclusion

- Regular activities may be arranged in public sector colleges which can help in the cognitive development of students.
- Similar researches should be conducted in Public and Private Schools of Punjab respectively.

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