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**ENHANCING HUMAN CAPITAL DEVELOPMENT IN PAKISTAN: A MULTI-STAKEHOLDER APPROACH**

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**Abstract**

*Human capital, which refers to the skills, knowledge, and experience of a country's workforce, is essential for long-term social and economic development. A nation's prosperity depends on the talent, abilities, and capabilities of its people. Investing in the development of human capital through education, training, healthcare, and creating an environment that fosters innovation and productivity will yield significant benefits for the country as a whole. With increasing globalization, the importance of institutionalized human capital development has become increasingly evident. In Pakistan, efforts have been made to enhance human capital, but there is a need to establish a formal mechanism for assessing students' aptitudes and providing career counselling during their basic education. This study aims to identify and analyze the current state of human capital development in Pakistani educational institutions during basic education and propose measures for improvement, advancement, and better management of human capital for the future. Primary data was collected for analysis, with secondary data used when necessary to supplement the findings. The study's target population consisted of parents and teachers. Convenience sampling was employed for data collection. The study concludes that providing appropriate guidance to students based on their aptitudes during basic education would significantly contribute to human capital development.*

**Keywords:** Human capital, Education, Aptitude assessment, Career counselling, Guidance, Parents, Teachers, Dropouts, Vocational training

**Introduction**

Human capital plays an important role in an outfit to maintain its existence. In the contemporary competitive era, if an organisation is to grow or to implement changes, then its human resource must have had better skills and abilities than the competitors. In order to attain such skills, requisite training is to be imparted which needs finances. Therefore, Schultz (1961) classifies that the money spent on development of human capital is an investment rather than expenditure. Human resource could only be an asset if it is assessed, guided and trained well. Education is the foremost element in development of human capital. Memon (2007) identified disappointing relationship between prospects of future jobs and education system of Pakistan. Unfortunately, in Pakistan, the current system of education is not orientated towards yielding educated youth possessing occupational skills. Even the graduates of vocational education in Pakistan possess some basic technical skills but do not have those skills that are required in contemporary job markets for employments. The parents who are not well educated or acquainted with future requirements of job markets are only interested to send their children to schools for general education and what would their children attain is mostly left to either the teachers or students.



Human capital is a key component in engendering future progression and prosperity of a country. Therefore, it is imperative to focus on development of human capital right from the basic education of a child. In Pakistan, though requisite emphasis is laid on development of human capital, yet certain loopholes are required to be bridged. In the present day global environment, wherein the economy is getting progressively complex, Pakistan with current approach is likely to continuously loose competitive ground to foreign nations unless it switches to a strategy of better educated and highly skilled populace with global orientation. In this study, grey areas have been identified in development of human capital in education institutions during basic education of students with a view to suggest a way forward.

There is need to channelized/ managed human capital of Pakistan right from the outset (basic education level onwards) for development of the country. In this study, an endeavour has been made to find out how education, aptitude assessment, guidance and career counselling would help in development and subsequently management of human asset in Pakistan. This study has purpose to analyse education system and its role in development of human capital and need for aptitude assessment, career counselling of students role of teachers, parents and student and management of dropouts through vocational training for development of human capital. The institutionalised mechanism is almost non-existent to identify/ guide the youth during basic education levels about which profession they have an aptitude for, especially in rural areas housing major part of the country's population. It is either left to the students itself or decided by the parents, which subject a student to choose/ or profession to adopt without any guidance or aptitude assessment. Resultantly, the rate of dropouts increases. At one end, expenditure incurred by the government on education of these dropouts go waste and on the other hand, the youth capital available is not being utilised optimally. Owing to lack of proper assessment, guidance and counselling to the students, theses dropouts primarily left in the contemporary environment which is plagued with various conflicts, thus, an asset become a liability for the country.

### **Literature Review**

Education is an instrument for growth and development of every society (Almendarez, 2010). In 21<sup>st</sup> century, a paradigm shift has been noted where enhancement of the knowledge is accorded priority. If a country intends to cause a significant impact for both market growth as well economic growth in present day global environment, it is required to impart high quality education to its human resource (Bazilyuk & Khomenko, 2022). In order to remain relevant, most of the countries of the world are connecting their higher education systems to the numerous economic development strategies. With the passage of time the education has become an economic good which could not be obtained easily therefore, it needs to be apportioned. It is an established fact that education enriches people and assists to uplift the general living standards in the society. The developing countries have invested heavily in education sector owing to their increased faith that education serves as an agent of change in the societies. Jermolajeva and Znotiņa (2014) and Jagódka and Snarska (2021) asserted that the education enhances the productivity of labour force through various ways and ultimately contribute to the economic growth and development of a country. The logic behind investment in education for development of the human capital is three fold that is; 1) the knowledge which was acquired and accumulated by the previous generations, the appropriate part of it be imparted to new generation; 2) the new generation be educated to develop new products, initiate new processes, introduce new production methods and other services by using already acquired knowledge and; 3) the new generation must be encouraged to use creative approaches so as to come up with entirely new ideas, products, processes and methods.

To ensure graceful survival in this competitive world, guidance to the next generation right from the childhood must be rendered. It involves the personal help extended by someone to assist a person to decide what and when he wants to do, where he intends to excel and how best one can achieve his goals. To achieve this, the good quality education plays an instrumental role. It assists the uplifting of productivity, efficiency,



socio-economic development of the country. Better quality education also brings a change in the individuals which ultimately leads to promote greater productivity, cultivate values and beliefs about work, modern attitude and quality to life. OECD, (2004) defined guidance with reference to career as “services and activities that are envisaged to help individuals to decide on educational, training and occupational choices with a view to manage their career paths at any point during their lives”. It is believed that if requisite guidance is not rendered to individuals then it leads to bad feeling about thoughts, behaviour and about wrong decisions and consequently maladjustment in the society thus, impacting the development of human capital. Assessment and guidance represent a kind of a process which would be encouraging for individuals to recognise him or herself, plan for future, overcome the problems being confronted and develop most suitable conditions for decision. As cited by Nayak (2007), Hamrin and Erickson define guidance as “the aspects of educational programme concerned with assisting the students to adjust to contemporary situations and to plan their future in line with their interests, abilities and social needs”.

According to Nayak, (2004) “guidance is the wholesome programme (includes all the activities and services engaged in) by an educational institution primarily aimed at assisting an individual to prepare and execute adequate plans to achieve satisfactory adjustment in all aspects of his daily life”. The students’ aptitude is vital and should be given significant consideration in assessing the sort of their accomplishments. The evaluation of the abilities and aptitude of students in consultation with their parents and teachers prove useful in enabling them to realize their potentials which ultimately leads to their better achievements. The focus should be on assessment for learning, not assessment of learning. Moreover, aptitude assessment and rendering counselling accordingly is important for development of skills. The national assessment mechanism should be coupled with career guidance system. It assists the students in choosing appropriate pathways. Moreover, provision of up-to-date information about current and future requirements of labour market and self-assessment tools to identify aptitudes and interests will cause deliver for better skills in acquisition management. Regular conduct of extra-curricular activities in the schools also assists teachers to know about the aptitude of students and subsequently they can guide them in most appropriate manner for future.

Career counselling can be defined as “a process by which a counsellor (a qualified professional or an experienced person), assists students to learn about and select a programme of studies to prepare for a career.” Bilal and Malik (2014) defined career counselling as a “process of verbal relationship between a counsellor (a senior person who is qualified on the subject) and a counselee (a student) in which a counsellor after having assessed and measured the aptitudes, abilities, interests and skills of the counselee provides directions in the form of information about opportunities and career options that is optimal for the counselee”. It is an established fact that education prepares the individuals for a kind portfolio of various paths of the career provided they are given appropriate practices of guidance and counselling from early stages of the education according to their aptitude and interests. Then they would be able to contribute efficiently in the society as useful members. Unfortunately this is a missing link in our education system especially in public sector education institutions and in rural areas.

Brown, (2002) indicated that there are numerous choices of subjects and professions in present day. Therefore, it has become crucial to make a choice that best suits the individual. Avery, Fairbanks and Zeckhauser, (2009) highlighted that career counselling is a continuous process during the life span of an individual, therefore, deciding about the correct and right career options and choices are to choose what one wants to do in the life. Basinger and Smallwood, (2004) said, that career counselling has always played a significant role in deciding the right career choice. Kumar, (2009) highlighted that; the current practices of the career counselling are meeting the requirements of all types of students as well as professionals in the developed countries. Nevo (1987) highlighted that, provision of kind of information about the sort of relevance about education to the practices of the world to an individual or student is the basic role of a career



counsellor. Schmidt, (2003) indicated how the personal goals and career choices are aligned is very critical for a student. Knowing and aligning it with current requirements in the job markets would assist in development of human capital. Whiston and Sexton, (1998) indicated; that students who select a profession for which they have passion are likely to be more productive, motivated and there would be higher retention rate in that profession.

Henderson and Berla (1994) reported that education of children is a shared social responsibility in which teachers and parents play a critical role. Empirical evidence indicates that if parents take interest in the progress of their children, develop relationship with their teachers and participate in the activities arranged by the schools, the children are likely to perform well in their primary school years. So it is evident that if this triangle (parents-teacher-student) functions well, it accrues benefits for all. Eldridge (2001) that while giving education to kids the parents should be active as it will deliver for children, parents and teachers which ultimately lead to better development of human capital. According to Hoover-Dempsey et al. (2005), the demeanour and actions of the parents greatly influence the motivational, social, behavioural and cognitive attributes of the children. Schussler, (2003) viewed that nurturing of the relationship amongst parents and teachers helps to transform the schools as learning communities. Students are benefited like; develop positive attitude towards school, improve self-discipline, higher achievements, enhance motivation to learn, improvement in self-confidence and above all reduce dropouts. Levine (2006) indicates that parental engagement with schools in respect to the education of children foster positive attitude, yet excessive pressure by the parents may have detrimental impact on the students' education or wellbeing (Bazilyuk, & Khomenko, 2022). Therefore, a balance is to be maintained in the engagement of parents with the schools in respect to the education of their children.

According to Levine (2006), a parenting style, which requires children to get high level of excellence in academic but emotionally distant from the children, will lead to low level of self-esteem in them. Contrarily, Shucksmith (1995) explained that the parenting style that support and encourage exchange of conversation between parents and children is more conducive to the emotional stability and during schooling years in education institutions. Sylva et al. (2004) opined that the strategies for the engagement of families with young children are likely to focus on the education of parents, social and emotional development of children and their intellectual skills. Parents get advantage such as; enhance knowledge how to help children in learning, develop closer relationship with children and learn to provide better environment to children at home. Redding et al. (2004) viewed that schools provide opportunities to parents to speak to school officials about their role in the education of children through; home visits, family nights, parent teacher meetings and school information nights. Teachers are also benefitted as; more responsive students develop closer relationship with students and parents, less discipline issues and gain better experience in teaching. The parent-teachers relationship is not merely restricted to sharing of child performance or his behaviour in the school rather it is a partnership which should provide two way communications. Teachers should share about the achievements of child in school and parents about activities in the home environment. This mechanism calls for active participation at both ends and serves as a link between school and at home learning activities.

Becker, (1964) and Hartog and Oosterbeek, (2007) highlighted that owing to development in the technology, the human capital is likely to depreciate in knowledge, skills and competencies unless training is not imparted on these aspects continuously. In an article titled, Benefits of Vocational Education and Training in Europe for People, Organisations and Countries by European Center for Development of Vocational Training, Feinstein et al. (2009) endorsed that capitals like human, social, cultural and identity are affected by education and training.

Students who are not good to memorise the lessons, large size of classes, boredom in school environment and unsupportive behaviour of teachers are the major problems of dropouts. Another factor as



stated by Coladarci (1983) is the inappropriate curriculum in the schools which lead to the dropout. Bearden et.al (1989) opined that inappropriate examination procedures where emphasis is more on memorising and reproducing from textbooks is also one of the major causes of the dropout. Causes of dropouts includes lack of interest of parents in child studies (Smith, 1998), depression of students owing to their poor performance in the academics (Lanham, 1999) and other type of socio factors. The same has been evidenced (Bazilyuk & Khomenko, 2022; Mamun et al., 2009; Ogunode & Emmanuel, 2023). Students from poor family background, uneducated parents and insufficient income to fulfil education expenses coupled with poor health due to improper diet and lack of awareness and availability of required teaching staff in the educational institutions and inequalities in the education system contribute towards dropouts. Colclough et al., (2000) found that poor quality education in educational institutions, inadequate school infrastructure, poor behaviour and quality teachers are common causes of dropouts. Severe punishments to the students by the teachers also contribute to high dropout ratio in Pakistan. Whereas, open atmosphere in the educational institutions encourage students to learn and lower dropout ratio. Non-availability of adequate facilities in educational institutions and boring environment also lead to dropout as indicated by Sherman and Sherman (1991). They further suggested that adequate size of students in a class, appropriate ratio of teachers to students and supportive environment of schools to students assist to prevent dropout.

Schultz (1981) stated that, innate and acquired skills are important and be further invested to expand for development of human capital. Bontis et al. (2001) highlighted that human factor in an organisation is collective intelligence, skills and expertise which gives a distinct character to that organisation. The capable, skilled, learnt and innovative human capital in an organisation if motivated adequately will ensure its survival in long run. Davenport (1999) indicated that human beings possess innate capabilities, energy, behaviours which make up human capital and they bring along to their work. According to Armstrong (2006) the human capital is basically a knowledge and skill which individuals acquire, use and maintain. He further indicated that the evolving theories on economic growth characterise human capital as some whole of persons' inherited and acquired knowledge, skills and experience over a period of time. The human capital could correspond to any stock of skill and knowledge the workers possess which contribute to productivity. As per Organisation for Economic Cooperation and Development human capital is knowledge, abilities and skills that is relevant to economic activity. Human capital is regarded as the most valuable asset for any organisation and the country. Human capital is considered as an important variable which determine the competitive success and profitability of an organisation in globalised world, thus is a core capability. Martin, McNally and Kay (2013) highlighted that any organisation would require number of things to be a profit earning entity but the human capital is a core factor which offers potential competitive advantage in the globalised markets if it is developed and managed well.

### **Conceptual Framework**

Education plays significant role in improving, promoting the economic, social, political and cultural life of the nations. Need based high quality education acts as an engine for economic growth of a country. It transforms the citizens and improve their living standards in the community of nations. In the light of this discussion, it is safely concluded to reinforce the perception that expenditures on the education is a form of investment. In order to catch up the competitive world, Pakistan has to analyse the population growth and accordingly execute education reforms as a whole. The diverse education systems in Pakistan need to be harmonised through structural reforms in a way which should produce educated, skilled and cultured output leading to development of human capital.

Absence of guidance for future after having assessed the aptitude of the individuals leads to inadequate thought process and behaviour, wrong decisions and maladjustment in the society. The process of assessment and guidance helps individuals to recognise themselves, plan for future, overcome the problems being confronted and develop most suitable conditions for decision. The assessment and



evaluation of the abilities and aptitude of children by the parents and teachers and extending guidance accordingly will enable them to realise their potentials which lead to better attainment. The counselling for future career path to students after having assessed their aptitude and abilities would contribute positively as they would be transformed into useful members in the society resulting in the development of human capital.

Imparting education to children is a shared social responsibility of parents and teachers. The parents' interest in the education of their children, developing good relations with teachers and participation in the schools activities would certainly enhance their performance in studies. Furthermore, the teachers-parents relationship develop positive attitude towards school, improve self-discipline, higher achievements, enhance motivation to learn, improvement in self-confidence and reduce dropouts, hence assisting in development of human capital.

Present-day education system in Pakistan places more emphasis on academic excellence than acquisition of technical and vocational skills. There are no facilities available in the educational institutions for acquisition of vocational skills which could be imparted parallel to basic education. Resultantly, the students who could not do well in academics are left with no choice but to be dropouts thereby wasting the resources. If a mechanism within our education system exists whereby, students who could not do well in academics or have an aptitude for technical skills could be put through that stream after basic education thus developing and managing the human resource in a cost effective manner.

Due to lack of interest, environment, socio-economic compulsions, students may not be able to continue their studies and leave schools/ colleges. If there is no alternate choice available to these dropouts, the human resource goes waste ultimately put additional burden on the country's economy. Therefore, there is need to address this issue for better development and management of human resource. Some of the causes of dropouts as highlighted in literature review are; the students from poor family background, uneducated parents and insufficient income to fulfil education expenses, poor health conditions, long distances between homes and educational institutions in mountainous area, lack of teaching staff and awareness amongst students and parents.

Pakistani community had required quality, commitment and will to succeed. The human resource is playing significant role in transforming Pakistan from underdeveloped to a prosperous nation. Required guidance and essential assistance if rendered would enhance the capabilities and increase the output. Albeit, the literature review indicates the issue in development of human capital both at macro and micro level, yet a short falls was observed in identifying the governance concerns. For example, at micro level, proper registration of a child when born, actions at government level when a child attains the age of school going, assessment of the aptitude of a child at school, till what age a child to be imparted general education depending upon on his aptitude, availability of specialist for aptitude assessment of students in schools etc are few grey areas which need to be addressed. More so, how to manage the dropout from school especially after middle and secondary certificate levels of education has not been given due attention. It is in the 2<sup>nd</sup> strand where wastage starts in formation and development of human capital while 1<sup>st</sup> strand remain at gross root level i.e. birth of a child and thereafter.

Due to lack of employment opportunities, switching over to other profession after having been acquired education in a particular profession needs a careful analysis/ review to save on government exchequer. People after having been attained the required qualification, move out of the country, which we term as "brain drain" but no worthwhile efforts has been undertaken to address this grey area. Though efforts were made to ensure return of those students sent on government scholarships abroad but it is a reactive approach. There is a need to devise a proactive approach to avoid recurrence.

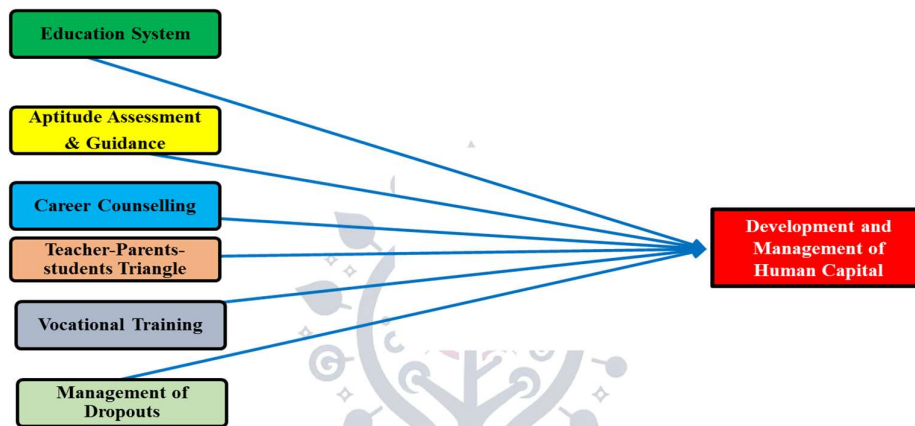


**Hypotheses**

- H1. Education system has positive significant impact on development of human capital.
- H2. Aptitude assessment and guidance has positive significant impact on development of human capital.
- H3. Career counselling has positive significant impact on development of human capital.
- H4. Teachers-Parents-Students triangle has positive significant impact development of human capital.
- H5. Management of dropouts will mediate the relationship between vocational training and development of human capital.

**Figure 1**

*Theoretical Framework*



**Methodology**

It was a mixed method research. Through interaction with general populace of different segment of society, in-depth interviews, briefings and literature review, researcher identified that there is a need for assessment of aptitude of students during basic education to render guidance and counselling for future career paths. Since teachers and parents play a significant role during early age of children for subsequent development and management of human capital, therefore, teachers and parents were selected as the target population for this study. It is generally observed that if someone tries to get data for any purpose especially from government departments, either it is denied or correct picture is not presented. Researcher, being native of the area, had repute with local education department, so concerned persons were cooperative in providing basic information required to proceed further in the research. Moreover, the respondents felt more confident with the researcher and provided true picture and their insight which was intended to obtain. That was the reason to select District Sudhnuti, Azad Kashmir for collection of data. Eight (5 male and 3 female) education institutions of District Sudhnuti, Azad Kashmir, were selected for collection of data. The selection of these schools was based on the reason that in these villages, every child who attains school going age, irrespective of education or financial status of parents, is registered/ enrolled in the school for education. It added to the curiosity of the researcher to investigate how teachers and parents contribute towards development and management of human capital subsequently. Therefore, it was felt that undertaking research in these areas may benefit the locality in future.

The total population of the study was quite large and spread over vast mountainous area where few localities were not even accessible by roads. Therefore, eight education institutions (5 male and 3 female) were selected for collection of data. The teachers of these education institutions and parents who are



educated and could give candid and intelligent response were selected as respondents. Apart from accessibility, it was assessed that collection of data will be done within given time line, fairly accurate intended information would be obtained and above all the registration rate of students in the school was almost hundred percent. Convenience sampling technique was used to collect data. Although findings based on convenience sampling may not be generalise on whole population for the sake of rigor, researcher tried to approach variety of population so that the sample may represent all the segments of population.

Education Department of District Sudhnuti, Azad Kashmir was contacted to obtained first-hand knowledge. Permission was sought to visit and interact with different education institutions and teachers in rural areas. Selected parents of these areas were also interacted. As it was felt that insight could not be achieved without explaining the purpose, therefore, the context of the research was explained to them before collection of data. It was difficult to get all parents gathered at one place. Therefore, advantage of special occasions in different villages like marriage ceremonies, Friday congregations was utilised. Prior intimation was given to parents through personal liaison, contact persons, mosque imams, village notables and teachers of the same area. Purpose of research was explained to parents; questionnaire was distributed and explained how to fill it up. Contact person was nominated of respective areas and later filled questionnaire were collected through contact person.

Based on the information obtained from District education department about number of teachers and students of education institutions, 400 sets of questionnaire were distributed among the respondents. 361 sets of response from respondents were received. However, after scrutiny, it was found that 318 set of responses from respondents were complete which could be analysed. Therefore, response of 318 respondents was further analysed and processed. Questionnaires were adapted from different studies including education system from Shefi (2015), aptitude assessment and guidance from Carmen et.al (2014), career counselling from Ramona et al. (2010), teachers-parents-students triangle from Cristina (2015), vocational training from Behroozi (2014), and dropouts from Hunt et al. (2010).

**Results**

Reliability of the scales was checked with the help of Cornbach’s Alpha technique, it was found that the values Cornbach’s Alpha co-efficient for all the seven variables are well above than 0.70. This suggests that all the variables are reliable for further data analysis to test the hypotheses (Asif et al., 2019; Asghar et al., 2011; Ishfaq et al., 2022; Pasha et al., 2019).

**Table 1**

*Reliability Statistics*

<b>Variable Name</b>	<b>No of Items</b>	<b>Reliability</b>
Education System	11	.961
Aptitude Assessment	9	.927
Career Counselling	8	.844
Teachers-Parents-Students Triangle	9	.955
Vocational Training	5	.833
Dropouts	8	.985
Development and Management of Human Capital	5	.840

**Correlation Analysis**

The method of Pearson Correlation was used to check the correlation between the hypothesised variables. In Table 2, the correlation matrix shows that the career counselling (0.462), Teacher parent student triangle (0.409) and managing dropout (0.418) have strong positive correlation with human capital development, whereas aptitude assessment and guidance (0.313) and Education System has positive





relationship with human capital development while Vocational Training (0.182) have weak positive relationship with human capital development. All these relationship are significant with the chance of error of 0.01.

Table 2
Correlation Analysis

Table with 8 columns: VT, ATG, CC, TPST, MD, Edu Sys, DHC. It shows correlation coefficients between these variables, with diagonal elements all equal to 1.

\*\* Correlation is significant at the 0.01 level (2-tailed).

VT: Vocational Training, ATG: Aptitude Assessment and Guidance, CC: Career Counselling, TPST: Teacher Parents Students Triangle, MD: Managing Dropouts, Edu Sys: Education System & DHC: Development of Human Capital

Table below shows the value of R^2 (the proportion of variation in the dependant variable explained by the regression model) and adjusted R square (goodness of the fit of the model in the population). The value of R^2 (.093) indicates that the model is 9.3% fits the population or in other words the model is able to explain 9.3% variation in the total population.

The t statistics help to determine the relative importance of each variable in the model. As the t-value (5.685) of the Education System is significant (0.000) so it may be predicted that the proposed hypothesis (i.e. Education System has positive significant impact on human resource development) is accepted.

Table 3
Liner Regression Models

Table with 6 columns: Edu Sys, ATG, CC, TPST, VT, MD. It lists regression coefficients, p-values in parentheses, and t-statistics in brackets for each variable.

The value of R^2 (.098) indicates that the model has 9.5% ability to fit in the whole population. The F statistics (34.306) is significant at p<.000 (i.e. smaller than 0.05) indicates that the model is good for prediction about relationship between dependent and independent variable.

As the t-value (5.857) of the Aptitude assessment and guidance is significant (0.000) so it may be predicted that the proposed hypothesis (i.e. Aptitude assessment and guidance has positive significant



impact on human resource development) is acceptable. The value of regression coefficient (Beta=.313) indicates that there occurs .313 units change in development in human capital due to a unit change in aptitude assessment and guidance.

The value of R<sup>2</sup> (.214) indicates that the model is able to explain 21% variation in the total population. The F statistics (85.975) is significant at p<.000 (i.e. smaller than 0.05) indicates that the model is good for prediction about relationship between dependent and independent variable. As the t-value (9.272) of the career counselling is significant (0.000) so it may be predicted that the proposed hypothesis (i.e. career counselling has positive significant impact on human resource development) is acceptable. The value of regression coefficient (Beta=.462) indicates that there occurs .462 units change in development in human capital due to a unit change in career counselling.

The value of R<sup>2</sup> (.167) indicates that the model is 16% variation in the total population. The F statistics (63.310) is significant at p<.000 (i.e. smaller than 0.05) indicates that the model is good for prediction about relationship between dependent and independent variable. As the t-value (7.957) of the Teachers-Parents-Students Triangle is significant (0.000) so it may be predicted that the proposed hypothesis (i.e. Teachers-parents-student triangle has positive significant impact on development of human capital) is acceptable. The value of regression coefficient (Beta=0.409) indicates that there occurs 0.409 units change in development in human capital due to a unit change in Teachers-Parents-Students Triangle.

The value of R<sup>2</sup> (.033) indicates that the model is 3.3% variation in the total population. The F statistics (10.774) is significant at p<.000 (i.e. smaller than 0.05) indicates that the model is good for prediction about relationship between vocational training and development of human capital. As the t-value (3.282) of the vocational training is significant (0.001) so it may be predicted that the proposed hypothesis (i.e. vocational training has positive significant impact on development of human capital) is acceptable. The value of regression coefficient (Beta=0.182) indicates that there occurs 0.182 units change in development in human capital due to a unit change in vocational training.

The value of R<sup>2</sup> (.175) indicates that the model is 17.5% variation in the total population. The F statistics (67.072) is significant at p<.000 (i.e. smaller than 0.05) which indicate that the model is good for prediction about relationship between managing dropouts and development of human capital. As the t-value (8.190) of the managing dropouts is significant (0.000) so it may be predicted that proposed hypothesis (i.e. managing dropouts has positive significant impact on development of human capital) is acceptable. The value of regression coefficient (Beta = 0.418) indicates that there occurs 0.418 units change in development in human capital due to a unit change in managing dropouts.

Table 4 shows the results for multiple regression analysis of all study variables so as to find the composite effects of these factors (IV) on development of human capital. All the variables remained significant except TPST who got insignificant. This implies that other variables had the ability to explain the effect of TPST. In other words TPST was stand irrelevant in presence of other independent variables of the study.

Table 4
Multiple Regression Model

Table with 8 columns: Edu Sys, ATG, CC, TPST, VT, MD, R^2, F Statistics. It contains numerical values and p-values for each variable.



Mediation analysis was performed using step wise regression analysis following the guidelines of Baron and Kenny (1986). Table 4.8 indicates that vocational training has significant relation with development of human capital (t=3.282, p=0.001) and managing dropouts (t=8.910, p=0.000) fulfilling the first and second conditions for mediation analysis. Following to this managing dropouts has significant relation with development of human capital (t=7.593, p=0.000). These results allows to check for mediation of managing dropouts in the relationship between vocation training and development of human capital. Results indicate that when controlled for managing dropouts, the value of R<sup>2</sup> was changed from 0.033 to 0.183. Moreover, the impact of vocational training got insignificant (t=3=1.698, p=0.091). This implies that vocational training does not have any direct impact on development of human capital but through managing dropouts. Hence, managing dropouts fully mediates the relationship between vocational training and development of human capital.

Table 5

Mediated Regression Analysis of Vocational Training, Managing Dropouts and Development of Human Capital.

	Development of Human Capital				Managing Dropouts			
	R <sup>2</sup>	B	t-value	P-value	R <sup>2</sup>	B	t-value	P-value
<b>Direct effect</b>								
Vocational Training	0.033	0.182	3.282	.001	.175	.418	8.190	0.000
<b>Indirect effect</b>								
Managing Dropouts	.183	.398	7.593	0.000				
Vocational Training		.089	1.698	.091				

Discussion

Education plays an important role in development of human capital. Previous studies also supplement that education system has positive significant impact on development of human capital. As indicated by Almendarez (2010) that the education is an engine for growth and a key to development in every society, based on its quality and quantity. Memon (2007) also highlighted that education plays the role of leadership in the society. Rapid changes in technologies also necessitate acquisition of knowledge to remain relevant in contemporary environment as indicated by Gulati (2008) and Mumtaz et al. (2023). During collection of data, it was observed that quality of education in rural areas is poor. The students could not compete with their counterparts of urban areas. Thus, the human resource in such areas go waste due to poor quality education.

Aptitude assessment of students during basic education helps in identifying the interest of a students. If correct and timely guidance is provided to the students during basic education, it will have positive and significant impact on development of human capital. Tolbert (cited by Nayak, 2004), highlighted that the guidance is a whole some programme or cover the entire range of activities and services engaged in by educational institutions that are primarily aimed at assisting an individual to prepare and execute adequate plans to achieve satisfactory adjustment in all aspects of his life. It was observed that there is no institutionalised mechanism for aptitude assessment of the students during their basic education in education institutions. Teachers are also not educated and trained to assess and guide the students for future career path. Thus, segregation of students based on their interest/ capabilities is not done. Resultantly, it affects the development of human capital.

Parents and teachers play vital role in education and grooming of students. Henderson and Berla (1994) also indicated that education of children is a shared social responsibility in which teachers and parents play a critical role. Therefore, it is established that teachers-parents-student triangle has positive



significant impact on development of human capital. However, it was observed that lack of required interaction of this triangle badly effects the development of human capital.

Due to rapidly changing influx of technologies, technical vocational education gained importance. Owing to any reasons, (may be lack of interest, environment, social-economic compulsions), students may not continue their studies and leave schools/ colleges. Under such circumstances, if no alternative choice is available, then this youth is wasted and the asset may become liability. Therefore, it is concluded that management of dropouts will mediate the relationship between vocational training and development of human capital. However, during research it was noticed that there is no mechanism or alternative career path available for those who dropout at different levels of education. Resultantly, resources incurred on them go wasted and seriously affect the development of human capital. Moreover, vocational training facilities are scarcely available. Those who could not do well are unable to join such institutions either due to non-availability or available at distant locations, where students with poor background could not afford.

### **Conclusion**

Human capital is the most important resource for growth and development of any country. Countries which timely invest in development of human capital could compete others in global arena. Education system of a country equips the people with knowledge and skills. Imparting education keeping in view individuals' aptitude would enable the nations to develop human capital that is capable to deliver in overall economic growth of the country.

This study is a value addition in overall literature for development of human capital during basic education level. It encompasses the role of education system to empower the human capital that ultimately leads to its development. Timely and accurate aptitude assessment of students and career counselling rendered by the teachers or subject specialist to students to choose their career path based on aptitude would enable development of human capital in a befitting manner. The role of teachers-parents in development of human capital had been amply highlighted. One of the major challenges confronted by the youth that restrict better development of human capital is management of dropouts. The analysis of data revealed that if adequate vocational education/ training is imparted to these dropouts, it would assist in development and management of human capital.

Stemming on the findings of the study educationists and policy makers should ensure implementation of existing policies on education system in true letter and spirit and arrange training workshops for the teachers on aptitude assessment of the students. Regular mutual sharing of students' performance both tangible and intangible would be a guidance enabler for teachers and parents. A mechanism should also be established where future trends in job markets be studied and analysed. It should be regularly shared by the teachers with students especially at secondary level of education and above. It would equip the students with knowledge and they would enable them to decide about their future career.

Existing evaluation system of schools may include the output in not only academics but also handling of dropouts and jobs obtained based on guidance and aptitude assessment of students' especially secondary level of education onwards. Education institutions then be ranked accordingly. Introduce necessary incentives for the teaching staff. It will create a competitive environment. Policy makers can Institute technical vocational education in second shift in existing schools for skill development of those students who are dropouts or else not good in academics. Posts of career counsellors may be created at district level who would regularly visit education institutions to render career counselling to the students and scholarships may be offered to teachers for training on aptitude assessment and career counselling.

This research was primarily focused in mountainous rural area and government schools. In future researchers can Cover more geographical areas and in other parts of the country. Private sector had played an important role in providing better education opportunities and enhanced the education standards. Further



research can focus on their output and comparison especially development of human capital can also be carried out.

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