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DIMENSIONS OF HUMAN RESOURCE DEVELOPMENT: CONCEPTS AND APPROACHES

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Abstract. The notion of human resource development dimensions is very complicated as it has interconnections with several approaches and has involvement of variables of multiple natures. Dimension refers to the constituent elements of human resources. Different population components play different roles in the process of enhancing human capital and with a view to analyse the relative importance of them human resource development dimensions can be divided into different groups on the basis of the spatial distribution, biological, social, cultural and economic approaches. Dimensions of human resource development can be termed as quantitative and qualitative. Other approaches are human resource formation, physical and mental, rural/urban residence, spatial or territorial and composite score value approach. Therefore, this paper aims at portraying the concepts and approaches relating to different human resource development dimension with a view to make an addition to the existing knowledge in the field of geography of human resource development.

Keywords: human resources, physical and mental energy, quantitative and qualitative dimensions, composite index

I. INTRODUCTION

The Concept of Human Resource Development (HRD) involves a complex web of several interconnected elements of population of an area at a given point of time. In the contemporary era of globalization human resource development is one of the vital issues and challenges for the twenty first century because the core concept of peace, prosperity and well-being of the people of a region lies in it. It plays a crucial role in agriculture, industry, mining, trade and commerce, construction, transport and communication, and in other social, cultural, economic and political activities. It is one of the necessary conditions and helps liberate people from poverty, ignorance, illiteracy, illness and other socio-economic bindings and made them able to lead fuller and richer lives less bound by tradition

and unlocks the door to modernization. It also helps in restoring, maintaining or conserving the quality of physical, human, social and cultural environment for the well-being of the people in society. Author considers human resource development as one of the processes of regional development as it brings the best from the nature and culture for the quality of life of the people and adds it as a special dimension to development studies. In lack of human resources of right type and of right quality in right time and space there is no meaning of natural and cultural resources. So, it is human resource that extract, collect, transform natural endowment into useable goods. Similarly cultural resources also derive its significance from human resource development.

II. CONCEPTS AND MEANING OF HUMAN RESOURCE DEVELOPMENT DIMENSIONS

The notion of human resource development dimensions is very complicated as it has interconnections with several approaches and has involvement of variables of multiple natures. In terms of building resources of an area the dimensions of human resource development are of primary importance. In fact, human resource development dimensions occupy the central position in geographical study of a region and become the basis upon which other kind of development for peace and prosperity of population of a region or country depend. Dimension refers to the constituent elements or characteristics of human resources. It stands for size or number, nature, extent, component, aspect or characteristics of human or population resource. Zelinsky, W. (1966, pp. 55 - 57) has used the word dimension for different population characteristics. According to him dimension means the components or attributes or characteristics of human population. Similarly, Newman J. L. and Matzke, G. E (1984, pp. 2 - 5) have shown twenty two dimensions of quantitative and qualitative nature of population and its problem. He has also used the word aspects in place of dimension in which different population characteristics are included. Singh, S.N. and Yadav, K. N. S (1982, pp. 393 - 410) have given emphasis on different quantitative and qualitative characteristics of population under the study of dimension of rural urban migration in India. Aperyán, V. (1976, p.11); Premi, M. K.; Ramanamma, A. and Bambawale, V. (1983, pp.10 - 11); Henk, R.; Ton Dietz and Leo, D.H. (1992, pp.50 - 53); Ghosh B. N. (1985, pp. 145-150); Akhtar, R. and Learmonth, A. T. A.(1985, pp. vii & 8) have included different population characteristics of quantitative nature in the dimension of population. Some of them have explained dimensions as aspects of population also. Human Development Report (1998, p. 20) has considered health, knowledge, participation and human security as the

dimensions of population and stressed that the assessment of all these is essential in the progress of human development or human resource development. Most of the management experts also consider components or sub-systems of HRD as the dimensions of human resource development; however, the angle of their study is different than that of a geographer. They generally include performance appraisal, potential appraisal, career planning, training, performance coaching, counselling, career advancement, organization development, employee welfare, rewards, qualities of work life, human resource information system, etc. in the dimensions of HRD. From these literatures it is clear that the dimensions of human resources are those aspects which are fundamentally involved (in terms of number and quality) in the process of human resources development.

Knowledge, skills, talents, creative abilities or any other mental (intellectual) and physical (manual) energies or capacities inherent (in actual or potential form) in each and every person of an area are called as human resources and an increase, enhancement, expansion in as such human resource ingredients over certain period of time is termed as HRD. In other words, human resource development is the process or an strategy of increasing or enlarging or enhancing knowledge, skills, talents, creative abilities or any other intellectual and physical capacities or capabilities of each and every individual of an area or organization or a productive sector for use in socially, culturally, economically or politically productive spheres to serve the needs of the people in a society at large. In this sense, over a certain period of time human resource gets accumulated as a stock or continues to form as an addition to the accumulated stock in the mind and body of each person. Both the stock and additional value through ongoing process of human resource formation are the aggregate of education, learning, training and health-both the physical and mental. Both the stock and currently accumulating or forming human capital is the quality and found in the number of persons. In fact, human resource development involves both the number of persons and an enhancement or increase in their abilities or capabilities and as a result on the basis of nature of components or attributes human resource development dimension becomes quantitative and qualitative. Other dimensions of HRD are: human resource formation or human capital formation (on the basis of continuing or on going process), physical and mental (on the basis of change in the physical stamina and brain power), and positive (+) and negative (-) dimension based on physiological characteristics and functions. Therefore, this paper aims at portraying the concepts and approaches in studying the dimensions of human resource development with a view to make an addition to the existing knowledge in the field of human resource development.

II.1. Quantitative and qualitative dimensions

Quantitative and qualitative are the two terms qualifying for different meanings. The former stands for size, magnitudes, dimension, amount, sum etc. that can be measured directly in number and weight and lend to statistical treatment. Mehta (1976, p. 9) also includes composition and distribution of population and labour force, the number of hours worked, the output and earning per head as the quantitative aspects. The term qualitative on the other hand stands for nature, capacity, ability, knowledge, skill, mental or physical attribute, trait, aptitude, value, motivation and other characteristics of man that can not be measured in terms of number or weight and do not, therefore, lend themselves as easily to statistical treatment as quantitative characteristics.

In this way, quantity is measured directly in terms of number and quality is measured in terms of grade or level of the characteristics. In geographical sense, quantitative dimension of HRD deals with the distribution, density, growth, age-sex composition, marital status, workers, number of persons employed in different economic activities, non working persons, income categories etc., whereas, qualitative dimensions include literacy and education, skills, disease, health, physical conditions, quality of labour, life expectancy, technical training, etc. Qualitative dimension as suggested by Ghosh B. N. (1985, pp. 145-147) is judged by health and education—the two major component of human resource development. According to Valentei, D.; Kavasha, A. and Evanov, S. (1986, pp. 6 - 7) “population development is manifested in the occurrence of continuous change in the population both in terms of quality and quantity and reflected in its growing over all productive force, man gaining better knowledge of the natural and social processes and mastering them, the rising potential of science, tools and technology, a rise in the educational cultural and technical level of all members of society and development of the persons. The quality of population is the sum of its most important traits.

These important traits are closely tied to the development process. The quality of population resource is, therefore, a complicated notion. The most important qualitative traits are educational level, occupational structure, and type of relations between individuals. In this way, quality of population is the sum of social structures. Quality of population also includes population health in combination with illness, life expectancy, social stability, occupational skills, and mobility of labour and so on. Thus, the analysis of general quantitative characteristics of population such as distribution, density, growth, migration, working and non-working persons and their distribution at age, sex, social groups,

income and economic level, etc. as well as the analysis of qualitative traits of population such as education, skills, diseases, physical conditions and health status in space and time is fundamental to the comprehensive understanding of human resource development.

Importance of quantitative and qualitative dimensions

Human resources development largely depends on the quantitative and qualitative dimensions of population. Quantitative and qualitative dimensions are the broader category and include various components of human resources of an area. They are also called the aspects of populations and play a very vital role in the development of human resources in them and in turn a region. The scale of utilisation of human and other resources primarily depends on the constituent parts of these two aspects of population. These two dimensions also influence the reproductive behaviour of population (population dynamics), social, cultural, economic and political activities. Any kind of development plans and policies are related to the component parts of human resources. They also have its bearing on employment, population growth, mobility of persons, human resources development, prosperity, peace and comfort etc. Human or population resource particularly working persons of an area include both the quality and quantity and the rate of employment or the rate of utilisation of work force depends mainly on the characteristics of human resources and amenities available in the area.

Particularly qualitative dimension plays a very significant role in the development of an area. For instance, literacy, education and health are the most important characteristics of qualitative dimension of human resources. They are the qualities of persons and the qualities of any kind of production greatly depend on the qualities of people inhabiting the area. Literacy, health and education enhance knowledge, skills, energies, interest, attitudes, aptitudes and other inherent qualities (human resources) of people. In the words of Chandna, R. C. and Sidhu, M. S. (1980, p. 96) "Literacy is that qualitative attribute of population which is fairly reliable index of the socio-economic development of an area." Literacy and education play a vital role and give new vistas in eradicating poverty and mental isolation of the people in the society. It is essential for economic, social, cultural and political advancement. Apart from this, literacy affects other characteristics of human population like birth rate, death rate, economic pattern. Education is very essential because the "educational level of the labour force affects the volume of population" (Kothari, 1965, p. 24). Similarly, (Correa, 1963, p.183) pointed out that each level of capital intensity requires a labour force with a determined level of education. In brief, one can say that each human resource component or quantitative and qualitative traits are of vital importance and plays a very crucial

and dynamic role in all sided development of a region and contribute towards human welfare.

Synergetic relation between quantitative and qualitative dimensions

The quantitative and qualitative characteristics of a person do not work in isolation. One can not be separated from the other. The combination of both becomes a source of resources in human beings and plays an instrumental role in social, cultural, economic and political development. In fact, relation between the quantitative and qualitative dimensions provides clear ideas or understanding about the importance of these two dimensions. Quantitative and qualitative characteristics of a person may be by birth and by achievement. Trewartha, G.T. (1969, p. 92) stated that population characteristics are of ascribed or achieved nature. That is how; each human being possesses some sort of ascribed or achieved qualities and vary from person to person with the advancement in age and due to impacts of prevailing condition or environment of a society in which he/she lives. The impact of both the physical (natural) and human environment is important as these two moulds the quantitative and qualitative characteristics of human beings. In this sense, both the quantity and quality of a person are inalienably related to each other and the exclusion of any quality from the quantity or from the mind and body of a person is not at all justifiable and possible. Gosal, G. S. (1996, p. 2) rightly noted and explained that the quality of population is interrelated with its numbers. Becker, G. S. (1979, p. 16) also mentioned that a person can not be separated from his/her knowledge, skills, health or other qualities. The word quality here does not have meaning at all, if it is excluded from quantities. Quality signifies any thing whether it is in the material or in the abstract form and these become useful for satisfying human or social wants. For example, 'minerals' are material which have different types of qualities and these qualities become useful after extracting and processing and ultimately they satisfy human or social wants. In the same way, human resources (in the form of power, capacity, energy, knowledge, and different types of skills) are indirectly materialised and quantified in different forms or grade or level. Sinha, B. R.K (1987, pp. 13-14) also stressed that the direct measurement of human qualities is very difficult and they are always measured indirectly in unit or grade. It can not be measured directly by counting heads of the persons inhabiting an area as the qualities are inherited in the mind and body of individuals which are useful and required or to be required in the production of further social, cultural, economic resources for satisfying human or social wants. Therefore, in the light of the above concepts all people from all age groups and from all socio-economic categories are expected to have some abilities or qualities which they may exercise whenever they produce or may produce a use value of any description for satisfying social needs and in turn go towards human well-being.

II.2. Human Resource Formation Dimension

This deals with the mechanism of changing or enhancing qualitative value in the form of creativity or ability or functional capacity in human beings by means of schooling, job practice, self learning, food and nutrition, health facilities or by any other source of capability building. By this process human resource gets accumulated and relates two aspects - human resource 'on formation' and 'human resource off formation'. When human resources are continuing on the process of acquiring knowledge, skill, ability through formal and non-formal educational systems, on the job training or learning and enhancing by some other sources with an integration of health, food and nutrition etc. are called as '*on human resource formation*'. But those human values which are already achieved by the same process as feed-back are called as, '*off human resource formation*' and become as a stock of human resource. This stock may be both in terms of quantity and quality as the basic characteristics of human resources of an area. The number of persons or population of an area is treated as quantitative human resource and physical and intellectual energies or capacity for sustain work of the same persons or populations are the qualitative human resource. According to Harbison, F.H. and Myers, Charls A (1964, PP. 24-27) the stock of human capital indicates the levels of HRD already achieved which is measured by the levels of educational attainment and the 'net addition' (by human capital formation) to the stock of human resources. Net addition indicates the rate of accumulation of human capital over a certain period of time measured by the enrolment of students at various educational levels. Sinha, B. R. K. (2003, p.323) stated that HRD creates the resources in human beings and adds to the stock of human resources of an area. Thus, HRD deals with the ongoing human resource formation as well as the existing level and pattern of human resources already achieved as a stock.

II.3. Physical and Mental Dimensions

These two are the essential components of human resource development and play instrumental role in every kind of physical and intellectual growth of a person. Both involve the quantitative and qualitative growth with reference to physical and mental aspects of population of an area over a given period of time. In other words, both address about how the human resource ingredients relating to the physical and mental aspects of individuals change or stay the same over time. The overall performance of human resource development is the result of both the physical and mental health which is found varying during different stages (normally estimated at certain age level) of life span of an individual. Papalia,

Diane E. and Olds Sally W. (1992, pp. 3-8); and Dacey, Jhon S. and Travers, John F. (2004, p. 8) have given a detailed description of the physical and intellectual development of an individual that took place during eight stages of his/her life span. These eight stages, according to them, are the prenatal stage (conception to birth), infancy and toddlerhood (birth to age 3), early childhood (3 to 6 years), middle childhood (6 to 12 years), adolescence (12 to 20 years), young adulthood (20 to 40 years), middle age (40 to 65 years) and the late adulthood (65 years and above). The nature and degree of human resources development vary from first to eighth stage.

Physical dimension refers to the state of the body, its compositions, development, functions, maintenance, etc. In fact, physical dimension of HRD is meant for the growth, improvement, and enhancement and for an increase in the status of physical faculty of an individual. This dimension stands for sound physical stamina, muscular capacity, sensory capacity, race characteristics etc. According to Park, J. E. and Park, K. (1991, pp.12-13) physical dimension of health implies the notion of perfect functioning of each and every cell or organs of the body of a person. Suryakantha, A. H. (2009, p. 6) also referred physical dimension to physical health and mentioned that a person is said to be physically healthy, when all the organs and systems in the body function perfectly at their optimum capacity.

Mental dimension refers to right, fit and healthy creative abilities of mind. This dimension also stands for a state of balance between the individuals and the surrounding world, a state of harmony between oneself and others, a coexistence between the realities of the self and that of the other people and that of the environment (Park and Park, 1991). In fact, this dimension is an essential component of health and meant for enhancing, upgrading, improving and increasing the status of mental or intellectual capability such as learning, memory, reasoning, thinking, competence and other intellectual capacity of an individual. More or less the same factors as stated in the context of physical dimension are equally important for mental faculty or mental health also. However, education, training and other learning systems of various types and at various levels are exclusively important for raising or developing knowledge, skills, talents, attitude, aptitude, awareness and other creativity and ability of individual persons.

Here, it can be stated that the development of both the physical and mental health stands for the development of human resources. Chalam and Francis (1997) considered health as an important indicator of human resources development because an improvement in health promotes learning, reduces absenteeism, improves stamina, and increases energy output. Therefore, health measures in

addition to food and nutrition, better shelter and congenial environment are needed for the development of human resources.

II.4. Positive and negative dimensions

Human resource development is the composite form of the combination of both the positive and negative aspects of quantitative and qualitative nature. The dimensions of human resource development can be explained on the basis of positive or negative performance of physical and mental faculty. In other words, human resource development has positive and negative dimensions referring to the positive and negative functions of different organs of the body and mind of the concerned persons. These are considered very significant in the concept of human resources and their development. Here, positive dimension of HRD (result of total positive health) stands for positive growth (development), expansion, improvement, enhancement or upward growth in both the physical and mental (intellectual) capability of an individual. Such expansion or positive growth boosts up the well being of the people. Contrary to this, negative dimension stands for loss, deterioration, depreciation in both the physical and mental health status of the people of a region at a particular point of time. Dreze, Jean and Sen, Amartya (1999, pp. 10-13) rightly pointed out that human capability can be seen as the central feature of the process of development and human capability can be enhanced by economic growth, education and health (social variables). According to Park and park (1991, p.14) the state of the positive health (functional ability or capacity to work) implies as the notion of perfect functioning of the body and mind. It is also a reality that positive health always remains a mirage because everything in our life is subject to change in the surrounding environment of natural, social, cultural, economic and political types and that is why nobody is considered perfectly healthy. It is because of the fact that somehow or other every one stands with some sort of deviation from the normal state of health and that is how the range of positive and negative dimensions of human resource development varies from person to person. Positive development of health (human resource) depends on congenial environment, well educational system, income, food and nutrition, proper food and drinking habits, proper lifestyle, health care, self care, health delivery, capital investment, proper housing condition, absence of illness or disease and other physical, social, economic, cultural and political factors operating positively in the society of a region. Similarly, negative dimension of human resource development is the result of diseases or illness, poverty, illiteracy, bad habits or bad life style of a person in taking food, drink, smoking; lack of proper and adequate food and nutrition, lack of medical and educational facilities, lack of curative and preventive systems, environmental pollution and other natural, social,

cultural, economic and political situations operating negatively in the society of a region.

III. APPROACHES TO HUMAN RESOURCE DEVELOPMENT

The natural or physical elements in different spatial units and demographic elements relating to biological, social, cultural (formal and non formal education, on the job practice, food and nutrition, others), and economic groups greatly influence the process of enhancing human capital or human resources. Such physical and non-physical (human created) systems are sometimes considered as the independent dimensions and can be called as spatial, temporal, social, cultural, economic and political dimensions of human resource development too. But with a view to analyse the relative importance and role of them in human resource development and in studying its dimensions these aspects are used as the means or approaches and can be considered as spatial or territorial, temporal, social, cultural, economic, political approaches, and in methodological sense, as composite index approach. There is scarcity of literature on the approaches to study human resource development and its dimensions. Very few scholars have carried out some works on the above approaches. The author, here, has made his own attempt to make the following approaches applicable and more meaningful in studying the dimensions of human resources development.

III.1. Spatial and Temporal Approach

Spatial locations and structure of population also play a great part in the typology of human resource development. Space or the area of any country is divided into different regions on the basis of human activities carried out and the nature of physical landscape. Spatial arrangement is generally explained at local level, regional level, and national level. In other words, spatial arrangement can also be made on the basis of territorial status defined by political line or boundary and the spatial units can be delineated at village level, community development block level, district level, state level, country level or world (global) level. Depending on such spatial or territorial arrangement human resource development can be organized and can be called as village level HRD, block level HRD, district level HRD, state level HRD, national level HRD and international level HRD. *Spatial approach* examines the spatial pattern or variation in that (so called areal differentiation) in the levels of human resource development. Since human resource is embodied in human beings, the human resource development dimensions can also be studied at individual level, at household level and at

community or social group level. This approach of study seems to be more appropriate as it deals with the individual person or group of people and population at any spatial or territorial scale. *Temporal approach* on the other hand explains the changes in the levels of human resources development that takes place between two points of time. The growth (increase or decrease) and distribution of each component of human resources are measured along with the span of time. Spatial and temporal approach is collectively called as spatio-temporal approach in dealing with the dimensions of human resources development.

The space or areas of any country can also be divided into *rural and urban areas* depending on the residence or settlement in which the people live and economic activities are carried out by them. Since the economic activities in rural and urban areas need human resources of varied types and nature, the levels of quantitative and qualitative human resource varies. Therefore, depending on the population living in rural and urban areas, human resource development can also be classified as rural HRD and urban HRD. This approach of classification is of great importance as human resource development in urban areas is better than that of rural areas. This is because of better human resource development infrastructure in urban area than that of rural areas. Such situation creates a gap between rural and urban areas and this rural/urban human resource development differential is of great concern to the scholars at global level. Therefore, with a view to shorten the gap between rural and urban areas the study of rural/urban human resource development differential is essential. Thus such approach of classification is very vital in pin pointing the variation in the dimensions of human resources development.

III.2. Age composition approach

Age being one of the components of biological group is considered as an index of human resource development because human resource development depends on the age composition of population of an area. In fact, age is considered as one of the vital factors in influencing the level of human resource development. In other words, age is an index of a person's capability and is a significant measure of regions vitality. Socio-economic activities of a region are governed by the age composition of its population. Papalia, Dyane E. and Olds, Sally, W. (1992. pp. 5-8) focused on age of individual and his/her development from the point of view of human development (the scientific study of how people change and how they stay the same over time). Both the quantitative and qualitative change such as height and weight, intelligence or capability depends on age of the persons. Papalia and Olds have categorized age period and major human developments into eight categories as shown in their table 1.1. These are prenatal, infancy and toddlerhood

(birth to 3 years), early childhood (3-6 years), middle childhood (6-12 years), adolescence (12-20 years), young adulthood (20- 40 years), middle age (40-65 years) and late adulthood (65 years and above). At the lower and younger level human development or human resource development remains faster, in young adulthood both the physical and intellectual development peaks up, in the middle age both the physical and intellectual development starts declining and at the old age level both the physical abilities and intellectual capabilities start declining fast. Therefore, the stages of life span measured in terms of age can be considered as one of the biological approaches in studying human resource development dimensions.

Sinha (1999) made age groups on the basis of the quality and characteristics of human resource. These are: 0-4 years (it includes infants or children up to 4 years of age. They are considered as future potential human resource and remain in the indoor learning process under the guidance of their parents). 5-14 years (this includes under working age group children. They are also known as school going children and are expected to attend schools for the development of their basic knowledge and skills. They are also considered as potential human resource). 15-34 years (this age group includes younger working age group persons and most of them are meant for developing their knowledge, skills, talents, energies and other functional capabilities through formal and non-formal learning process at school, college and university levels to be used in various productive economic activities. They are considered as more active, more mobile and more energetic human resource of an area). 35-59 years (this is known as older working age group and includes the persons from 35 to 59 years. From human resource development point of view they are meant for experiencing their functional capabilities on their job practice and training. However, they are relatively less active, less mobile, and less energetic owing to a gradual decline in their physical and intellectual capabilities. Yet, they have greater sense of responsibility to their jobs, family members and society). 60 years and above (this age group is known as over working age group and include the persons of 60 years and above are included in this category. From human resource development point of view they are meant for maintaining, restoring or conserving their human resources such as knowledge, skills, energies, talents, and other functional capabilities through various types and levels of health facilities and healthcare services. They are known as less energetic and less utilizable human resources because of faster deterioration in their physical and mental functional capability). However, the above classification of age of the persons and their characteristics are not a final yardstick in the field of human resource development as several others factors are also involved in the process of human resource development.

The above classification may conveniently be rearranged on the basis of stages and general characteristics of human resource development. Such rearrangement or reclassification of age may also be read as: age for infant and child human resource development. This age spans from 0 to 4 years and 5 to 14 years. Young age person's human resource development age spans from 15 to 34 years. Middle age person's human resource development age ranges from 35 to 59 years, and old age person's human resource development from 60 years and above. This classification can conveniently be used while dealing with the detailed study of the dimensions of human resource development.

III.3. Gender approach

The word 'gender' refers to the socially determined ideas and practices of what it is to be female or male. This is different from 'sex' that refers to the demographically biological characteristics and identifies someone as either female or male. Gender training is a tool, a strategy, a transformative process, a space for reflection, a site of debate and possibly for struggle (Reeves, Hazel and Baden, Sally, 2000, pp. 20 and 30). Similarly, UNESCO (April, 2003 on www.venet.eu.com/assets) pointed out that Men and women both perform different roles. This leads to women and men having different experience, knowledge, talents and needs. Gender analysis explores these differences so policies, programmes and projects can identify and meet the different needs of men and women. Gender analysis also facilitates the strategic use of distinct knowledge and skills possessed by women and men. Kumar (1996, p, 887-895) pointed out that states like Haryana and Punjab despite being relatively high income states were facing the problems of serious gender inequality in basic capabilities. There were 13 countries in the world that had a lower value of GDI than that of the states like Bihar, Uttar-Pradesh which pointed to be the seriousness of the problem of development at global level. Nayak (2009, pp. 71-72) analyzed the trend and status of human development and deprivation in Meghalaya and found a considerable degree of unevenness between rural and urban areas, across different districts and also between genders in the state.

These statements address and indicate the difference in human resource such as experience, knowledge, talents, etc. achieved and developed through education, training and practices. Therefore, gender can be considered as one of the important bases or approaches in studying human resources development. It is because of the fact that human resource development involves both male and female population of an area and the role of gender particularly in the developing regions is quite different than those of the developed regions. This approach

provides idea wider gap between the levels of human resource development at gender level. It is found that in most of the developing regions the level of development of male human resource is higher than that of the females. So this approach would be a step forward in examining the male-female variation and in formulating plans and policies for abridging the gap between the male and female human resource development.

III.4. Social Group Approach

Human resource development can also be viewed on the basis of social categories as social structure plays a significant role in the process of human resource development. In Indian context the level of human resource development varies from one social group to other. The detailed study of human resource development can easily be made by dividing the people (on the basis of their overall socio-economic conditions) into general castes, other backward castes, scheduled castes and scheduled tribes. This classification is more or less in the line of national classification made by the government of India. Therefore, with a view to analyze the development of human resources and its dimensions of an area these social groups may be taken into consideration as one of the important approaches of human resource development.

III.5. Educational Approach

Literacy and education are the powerful means to develop human resources because they are viewed as a strategic tool and play a vital role in human resource development. Education and learning are in one form or other helping to increase knowledge and skills of the persons of various ages, sex, religion, social groups and occupation. Harbison and Myers (1964, pp.2-3) rightly emphasized the role of education in human resource development. According to him “education plays a dominant role as an effective instrument for large scale achievement and revolution in all spheres. Purposeful education enables the individual to understand and study the real life situation and to develop an opportunity for creating confidence in the minds of younger generation and provide a strong base for national and value oriented and nation building progress. Rena, R (2006, p. 67) noted that technical and vocational courses in higher education play a significant role in developing human resources. Education is, in fact, considered as an instrument in enhancing knowledge, skills, and other functional capabilities in human beings. Taking into consideration the role of education from primary to secondary and higher levels of education human resource development can be categorized into undeveloped, under-developed, developing, developed and highly developed human resource.

These categories vary across race, gender, age and social and economic class and become as a constructive tool in analyzing the dimensions of human resources development of an area.

III.6. Occupational approach

Occupation and human resource development are one of the concerned areas in the field of development studies. Generally, this area remains neglected. It has not received much attention from the scholars of social sciences. Human resources are found actively engaged in various occupations in both the rural and the urban areas. The level of human resource development varies across economic activities and the quality of human resources depends considerably on the types and nature economic activities. For instance, level of human resource development in terms of qualitative achievement is generally low in agricultural sector and it is generally better and higher in non-agricultural sector.

Occupations or economic activities are generally divided into agricultural and non-agricultural groups on the basis of nature of occupation or activity. This is also known as agricultural or non-agricultural sectors of economy. Similarly, depending on the nature of production and services required, economic activities are also classified into primary, secondary and tertiary. In all such type of activities human resources of varied types and quality are found engaged, therefore, human resource development can also be studied by dividing the people on the basis of their occupations or economic activities in which human resources are utilized.

Depending on working and non-working activities of persons human resource can also be examined by categorizing the people into working and non-working groups. In other words, it may be called as HRD of utilized and HRD of unutilized human resources. Human resource development can further be explained on the basis under-utilization, full-utilization and over-utilized. Depending on the sectors of economy human resource development can also be classified as primary sector HRD, secondary sector HRD and tertiary sector HRD. Similarly, on the basis of occupancy of persons in the nature of occupation, human resource development can be classified as agricultural HRD and non-agricultural HRD, and depending on detailed economic activities human resource development can also be divided as HRD in agriculture, HRD in forestry, fishing and lumbering activities, HRD in industrial and processing activities, HRD in construction, HRD in trade and commerce, HRD in transport and communication and HRD in other occupational activities.

III.7. Composite score approach

Composite score is the summation of weight or scores of several variables of positive and negative nature relating to both the physical and mental dimensions. Some variables have positive, some negative and some both the + and - characteristics depending on its positive or negative function. Composite score approach provides the best overall picture of the theme under study. Depending on the composite score the composite index can be calculated and the persons or populations of an area can be grouped into certain classes as per variation in composite index of human resource development scores. This approach can be applicable in any spatial unit at a given point of time. In fact, on the basis of this approach human resource development can be studied by classifying the persons as high level HRD, medium level HRD and low level HRD. Similarly, human resource development can also be examined dividing the persons into very high level HRD, high level HRD, medium level HRD, low level HRD and very low level HRD categories. This classificatory scheme may be conveniently applied to deal with individual, group of persons or people of a region at a given point of time.

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