

THE SEMANTICS OF HUMAN RESOURCE DEVELOPMENT

Abstract

The purpose of the research paper is to explore the definitions of HRD given by different authors with respect to inputs and outputs and to explore the difference between HRD as a process, activity, philosophy, practice, approach and system. The other objective is to explore the difference between skills, abilities, aptitudes, attitudes, personality, capabilities, talents and character of a person and to find out what is assessed in students during hiring and firing and to understand the tools used during selection and firing. Another objective is to find whether HRD is uniformly stated by different authors as a process, approach, philosophy, activity, system and practice and to find whether the selection tests used for hiring stated in different books are the same or not.

Design/Methodology/Approach: The research design is exploratory as no questionnaire is used and no primary data is collected. The sample size of the number of books varied between 3 and 4 during different stages of the literature review. The research type is exploratory and descriptive with respect to the different objective types and the content is described to enhance the understanding.

Findings: Process, learning, development and terms related to human capital are the elements of the majority of definitions of HRD. The definition of HRD was found to be output-oriented as greater number of terms stated were outputs than the number of terms stated as inputs. Achievement tests are used for assessing past educational accomplishments, ability tests for finding futuristic potential and personality for assessing feelings, thought processes etc. and

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all are a part of Psychological Assessment.

Originality/Value: The study concluded that there is no significant difference in the selection tests mentioned in different books and authors have uniformly stated HRD as a process, philosophy, approach, system, activity and practice. As firing is for non-performance and is caused by some underlying behavioral attributes like motivation, temperament etc. personality tests play an important role in firing also.

Keywords: Human Resource Development, Selection tests, Ability test, Achievement test, Personality test

I. INTRODUCTION

Human Development Index is an indicator that comprises indices named as Health Index, Income Index and Education Index. The HDI has also evolved over the years. First Inequalities (difference between genders, rich and poor etc.) were included in the three indices to include the losses in development due to inequalities so that a more realistic measurement of development can be done. Later on, the sustainability aspect was also included in the definition so that loss of natural resources and deterioration in the environment is also included because development resulting from overexploitation of natural resources is not long-lasting. Without the inclusion of these losses, Human Development was far away from a realistic picture.

The dimensions of Human Development flourish when it happens according to the Human Development Report 2011. These dimensions are indicators which showcase that development is happening. These indicators are visible in the society we are living in. According to the United Nations Development Program (UNDP) and the report (Mehrotra & Team, 2011) the various dimensions of Human Development are as follows-

1. The reduction in the number of people who are below the poverty line
2. Improvement in educational and health infrastructure in terms of the number of colleges and access,
3. Provision of clean, hygienic water to all
4. Reduction in the number of malnourished people
5. Rise in human safety in all fronts (freedom from fear, want, safety from threats like hunger and disease, holding the feelings back, harmful interruptions in the patterns of daily life)
6. Human rights compliance
7. Long-lasting harmless development
8. Freedom of culture
9. International teamwork
10. Enabling migration
11. Existence of healthy, congenial conditions of political freedom

The terminologies of Human Development are also variable. The components or constituents of Human Capital are skills, knowledge, abilities and attitudes and these terms appear synonymous in the day-to-day routine. Hence, it is important to explore the relationship between HRM, HRD and Human Capital as shown in Table 1 below.

1.1 Relationship between different functions of HRM, Scope of HRM and Focus of HRD

Table 1: Relationship between HRM, PM, HRD, Scope of HRM and Focus of HRD

| Book | Relationship between Personnel Management (PM) and Human Resource Management (HRM) | Relationship between HRD and HRM | Scope of HRM | In HRD focus is on the development of |
|-------------------------------|--|---|---|---|
| (Mehta & Upadhyay, 2014-2015) | PM or HRM function is same | Either HRD is a function of HRM or HRM is a function of HRD HRD and HRM are not synonymous. | Personnel Management, Recruiting, Selection, Development, Utilisation, Compensation, Motivation | Improving the listed capabilities of the human resources in the organization and helping to acquire new capabilities required for achieving organizational and individual goals. Skills, knowledge, energy and talents are developed. |
| (Balyan & Balyan, 2012) | PM or HRM function is same | HRD is a function of HRM | Manpower planning, recruitment and selection, training and development, job design, compensation of employees, industrial relations, discipline, promotion, transfer and separation. | Acquire, sharpen or mould capabilities/general capabilities, discovering and exploiting inner potential. Developing skills, knowledge, attitudes, aptitudes, capabilities and potential. Specific goals- Organizational culture with superior-subordinate relationships, teamwork, collaboration in sub-units, professional well being, motivation and pride in employees. Individual/Organizational development. |
| (Dessler & Varkkey, 2016a) | PM, HRM and Staffing are same. | HRD is a function of HRM for large employers and small employers. Large organizations have specialists for each function but in small organizations | Planning labour needs and recruiting, selecting job candidates, training, appraising performance, managing wages and salaries (compensations), labour relations, health, safety and fairness concerns, conducting job analysis, providing | People-development orientation of organization is the term coined for HRD by Professor Udai Pareek in India. Focus is on employee commitment, competency and motivation. Competence includes skills, attitudes & supports learning/development, facilitation of learning, values. Building and capitalizing human capital is another |

| | | | | |
|---------------------|---|--|---|---|
| | | there is one HR employee per 100 employees and work is distributed among them. | incentives and benefits, communicating (interviewing, counseling and disciplining), building employee commitment. | focus area which refers to knowledge, education, training, skills and expertise of a firm's workers. |
| (Aswathappa, 2017a) | HRM is different and a step ahead of PM. PM is a routine activity for hiring and maintaining personnel records but HRM is a part of strategic management. | HRD falls under HRM. | HRM consists of HRD, IRM and HCM. Industrial Relations Management is concerned with grievance handling, settlement and unionization. Human capital management consists of knowledge, skills and abilities of employees. | HRD focus is on training, learning, development, workplace learning, career development, lifelong learning. Employees are termed as capital providers. Capital consists of knowledge, skills and abilities. |

II. LITERATURE REVIEW

The literature was reviewed in four stages. In the first stage literature was reviewed to understand the components of HRM and these are described in the Introduction section. In the second stage, the definitions of HRD given in four books were reviewed. The number of definitions given in different books was different. The definitions given by different authors named as Aswathappa, Balyan, Ishwar Dayal, Khan, Rao, Khandelwal, Verma and Abraham, Nadler, T.V Rao, Daftur, C Leon Magginson, Udai Pareek, L.P Singh, Mc Lean and Mc Lean, Patricia Mc Lagan were reviewed, understood and analysed during the literature review. Thirteen definitions of HRD were reviewed during the literature review.

In the third stage the literature was reviewed to find the difference between knowledge, skills, abilities, capabilities, aptitudes, attitudes, potential, values, intelligence and talents as HRD focuses on the development of these and these are used interchangeably.

According to (World Bank Group, 2018) knowledge is the stepping stone for gaining skills as skills deal with the practical aspect and application of knowledge. Knowledge includes all theories/principles related to a topic. Capability is a synonym for ability as represents the power or ability to do something. (Hawker, 2014) also states that skill is also an ability to do something well and talent is a natural ability or skill.

According to (Hawker, 2014) values are standards of behaviour and according to (Ugemuge & Kudkilwar, 2013) and (Parashar) values are general beliefs, convictions, a framework of philosophy that help us decide what is right or wrong, good or bad, ethical or unethical and desirable or undesirable. According to (Ugemuge & Kudkilwar, 2013) attitude represents beliefs, feelings, actions/behavioural tendencies, learned predispositions, state of mind or mental state of readiness related to specific objects, groups, people, events, symbols, ideas, services, institutions or situations in one's environment. Both attitudes and values shape the behaviour of an individual as stated in (Parashar). (Parashar) highlights that

attitudes, opinions and beliefs are very close to each other. Opinions are affected by the pros and cons but beliefs remain the same. The attitude structure is the predisposition which influences the opinion. (Hawker, 2014) states that attitude is a way of thinking and aptitude is a natural ability. Values are instrumental or terminal but attitude can be positive/negative.

(Hawker, 2014) mentions that the qualities that distinguish a person from others collectively represent the character of the person, intelligence is the ability to gain and apply knowledge and skills, ability is a skill or talent or the power or capacity to do something and potential represents the qualities or abilities that may be developed and will lead to success in future. The other term for qualities that form the character of a person is personality.

In the fourth stage the literature was reviewed with respect to Psychological Assessment and Testing. This review brought clarity about what is tested in individuals when selections for different employment opportunities are conducted. Relevant content was reviewed in three books (Dessler & Varkkey, 2016b) (T.Morgan, A.King, R.Weisz, & Schopler, 2004) (Aswathappa, 2017b).

1. Achievement tests, Ability tests (Intelligence/Aptitude) and Personality tests are the 3 tests mentioned in (T.Morgan, A.King, R.Weisz, & Schopler, 2004) and these come under Psychological Assessment.
2. (Aswathappa, 2017b) identifies 6 types of selection tests which are Achievement/Ability, Aptitude, Interest, Health, and Tests to check the accuracy of candidate's information and Personality tests.
3. (Dessler & Varkkey, 2016b) states that tests are either related to Cognitive abilities, Motor and Physical abilities, Personality and interests and achievements. Different tests are used under each of these categories. Screening tools are also used which include background and reference checks and assessment center tests. Background and reference checks test the accuracy of the information submitted by the candidates and can also be called honesty tests. Table 2 shows different selection tests given in different books.

Table 2: Selection Tests Stated in Different Books

| Book Author | Achievement | Intelligence | Aptitude | Personality | Health | Honesty | Interest | Motor Ability | Physical Ability tests |
|---|--------------------|---------------------|-----------------|--------------------|---------------|----------------|-----------------|----------------------|-------------------------------|
| (T.Morgan, A.King, R.Weisz, & Schopler, 2004) | Stated | Stated | Stated | Stated | Not Stated | Not Stated | Not Stated | Not Stated | Not Stated |
| (Aswathappa, 2017b) | Stated | Not Stated | Stated | Stated | Stated | Stated | Stated | Not Stated | Not Stated |
| (Dessler & Varkkey, 2016b) | Stated | Stated | Stated | Stated | Not Stated | Stated | Stated | Stated | Stated |

III. OBJECTIVES OF RESEARCH

The objectives of the research are

1. To explore the definitions of HRD given by different authors with respect to inputs and outputs.
2. To explore the difference between HRD as a process, activity, philosophy, practice, approach and system.
3. To explore the difference between skills, abilities, aptitudes, attitudes, personality, capabilities, talents and character of a person.
4. To find out what is assessed in students during hiring and firing and to understand the tools used during selection and firing.
5. To find whether HRD is uniformly stated as a process, approach, philosophy, activity, system and practice in different definitions of HRD.
6. To find out whether the selection tests used for hiring stated in different books are the same or there is a difference.

IV. RESEARCH METHODOLOGY

The research design is exploratory in nature as functions and terms used in HRM, different definitions of HRD, different selection tests and definitions of terms used in human capital were explored in different books. The book selection was done using a non-random convenience type of sampling as these books were available with the author. The type of research is exploratory and descriptive in nature.

Sample size varied stage-wise during the literature review and is shown below.



Figure 1: Stage Wise Sample Size of Number of Books

The Data type used is secondary.

V. HYPOTHESES

The formulated hypotheses during this study are shown in Table 3.

Table 3: Formulated Hypotheses

| S.No | Hypothesis | Statistical Test |
|------|--|----------------------------|
| 1 | H ₀₁ –It is believed that there is uniformity in the opinion of different authors about HRD which means that HRD is equally/uniformly stated by them as a philosophy, system, process, approach, activity and practice. | Chi-Square Goodness of fit |

| | | |
|---|--|----------------------------------|
| | H _{01a} –It is believed that there is no uniformity in the opinion of different authors about HRD which means that HRD is not equally/uniformly stated by them as a philosophy, system, process, approach, activity and practice. | |
| 2 | H ₀₂ – It is believed that there is no significant difference in the tests used for selection stated in different books. H _{02a} – It is believed that in at least one of the books the stated tests used for selection were different. | Friedman Repeated Measures Anova |

VI. DATA ANALYSIS AND FINDINGS

- The authors have stated HRD as a process, a set of processes, an activity or a collection of activities, a philosophy, a system or an approach. The majority of the authors, 8 authors have stated that HRD is a process which means that it has inputs that are converted into outputs using some method. Figure 2 shows the scope of different HRD definitions given by different authors.

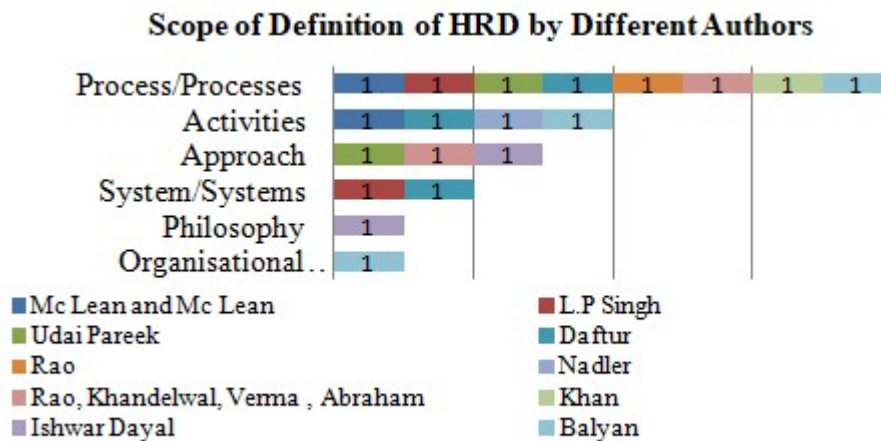


Figure 2: Scope of different HRD Definitions

Philosophy is a system of beliefs, a system is a collection of processes and a process is a collection of activities. A system is governed by a way of doing things which is an approach. For eg: Quality Management System and Environmental Management System is driven by a Process Approach based on PDCA and Risk-based thinking. In risk-based thinking uncertainties in the processes are taken into account. In other words, planning is done so that in an uncertain situation measures are available to deal with it. This phenomenon is also called risk preparedness.

Process approach means a system is a collection of processes and inputs and outputs for each process are defined. Output for one process can be the input for the other process. In a process, raw materials are converted into finished goods.

2. The authors Balyan, “Rao , Khandelwal , Verma , Abraham”, Nadler, Rao and Daftur have stated that HRD is a planned ,systematic and organized activity .An organized activity is generally planned and having a defined sequence if termed systematic .
3. Four authors have mentioned that HRD is a continuous process in their definition.
4. Various HRD definitions given by different authors list various inputs and outputs compiled in Table 4

Table 4: Inputs and Outputs of HRD listed after Brainstorming

| S.No. | Inputs of HRD | Outputs of HRD |
|-------|--|---|
| 1 | Education | Development (Overall, Organizational, Career, Individual) |
| 2 | Training | Learning (Organizational , Lifelong, Workplace) |
| 3 | Providing right environment | Performance (behavioral change)/Perform Current and Future Job roles well |
| 4 | Time | Growth(Organizational /Individual) |
| 5 | Provision of Facilities | Effectiveness (Individual/group/organizational) |
| 6 | Provision of Opportunities | Group/Team gain/Personal gain |
| 7 | Awareness about needs of a sector | Goals(Organizational /Individual) |
| 8 | Focus on social realities | Improvement in Capacity/Capabilities/Sharpen capabilities/Improvement in Capabilities |
| 9 | Focus on job roles | Necessary skills development/Develop competencies/desired level of competence |
| 10 | Focus on dyadic unit (person and supervisor) | Increasing Knowledge/Organizational Knowledge/Human knowledge/Work based knowledge |
| 11 | Focus on teams , inter team process | Cost reduction |
| 12 | Focus on the total organization | Discover and Exploit Potential/Fullest Potential |
| 13 | Organization and Career Development | Value/Human values |
| | | Total Person |
| | | Commitment |
| | | Maturity |
| | | Self awareness |
| | | Self reliance |
| | | Developing sense of pride |
| | | Adjustment to environment |
| | | Adjustment to confidence |
| | | Professional Well being |
| | | Motivation |
| | | Superior-subordinate relationship |
| | | Teamwork |

| | |
|--|-------------------------------------|
| | Collaboration among sub-units |
| | Humanization of organizational life |
| | Expertise |
| | Productivity |
| | Satisfaction |
| | Develop Organization Culture |
| | Climate Creation |
| | Training (eg: Certifications) |
| | Education (eg: Degree) |

5. Performance Improvement or behavioural change is defined as an output by Nadler and Daftur. Balyan, Rao and Daftur have stated that HRD helps in performing current job roles well and fulfilling the performance expectations in future job roles in a better way. Figure 3 shows the usage of the "performance/perform" words in different definitions of HRD.

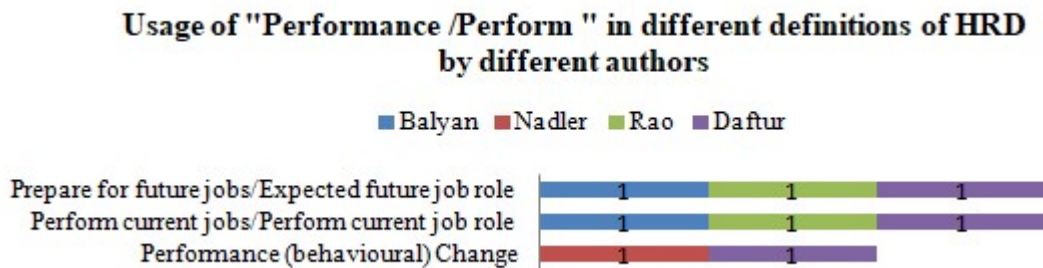


Figure 3: Usage of Performance word in HRD Definitions

6. Learning is defined as an output and Aswathappa has stated the scope of learning as either Organizational Learning or Workplace Learning and some have mentioned Lifelong Learning which is mentioned with respect to time. Figure 4 shows the usage of learning in different definitions of HRD.

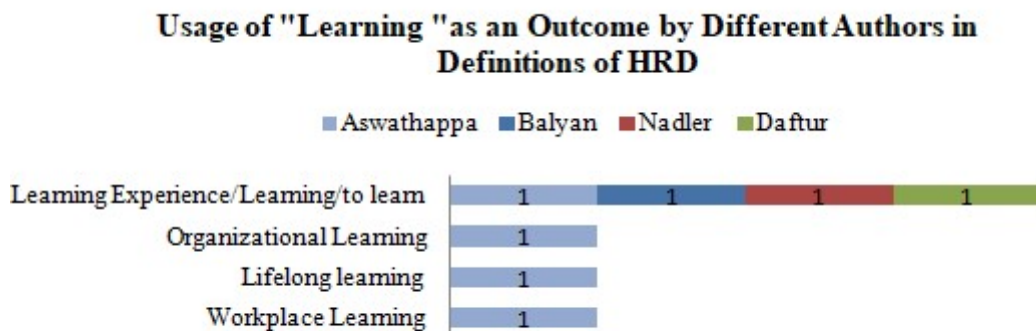


Figure 4: Usage of Learning in Different Definitions of HRD by Different Authors

7. Development is defined as an output and some authors have taken the scope of development as either overall development and some have restricted the scope to career, individual or organizational development. At the individual level improvement in individual hygiene, education and skill level, increase in income, status, freedom of movement from one place to another, freedom from inhibitions, ability to support others through employment or attainment of a larger level of need in Maslow’s Hierarchy of need will represent the individual dimension of human development. Figure 5 shows the usage of word development in different definitions of HRD.

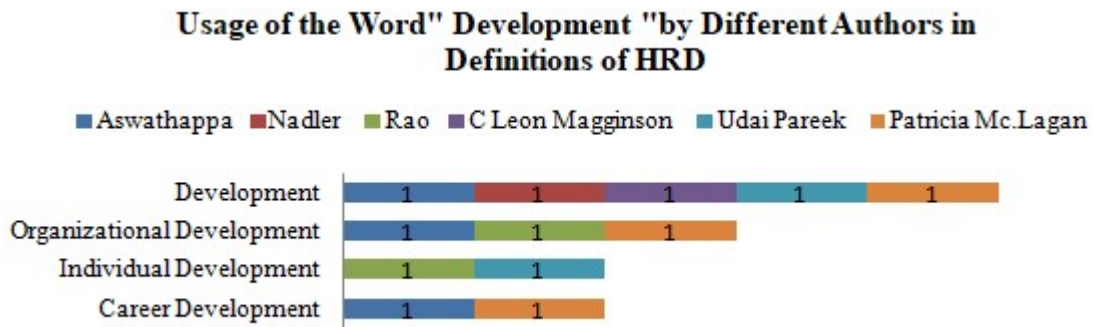


Figure 5: Usage of the Word "Development" in HRD Definitions by Different Authors

8. Patricia Mc. Lagan has mentioned that HRD brings effectiveness at all levels whether individual, group, or organizational.
9. Skills, talents and abilities are interchangeable according to (Hawker, 2014). Expertise is having great knowledge or skill in a particular field as stated in (Hawker, 2014) but knowledge is not necessarily having skills according to (The World Bank staff, 2018).
10. Two authors have specified that HRD activities are to be conducted within a time frame.
11. Discovering and Exploiting potential/fullest potential is stated as an outcome and that is also achieved when self-actualization is achieved according to Maslow’s Hierarchy of needs.
12. In (Aswathappa, 2017a) the focus is not only on development but also on inputs like training and outputs like learning (lifelong, workplace). In (Aswathappa, 2017a) Human Capital is the term used for knowledge, skills and abilities and the focus is on the development of these but in (Balyan & Balyan, 2012) the focus is on developing skills, knowledge, aptitude, attitudes, capabilities and potential. In (Mehta & Upadhyay, 2014-2015) skills, knowledge, energy and talents are the focus of development along with acquiring new capabilities and developing new capabilities.
13. It is important to differentiate between knowledge, skills, abilities, capabilities, aptitudes, attitudes, potential, intelligence and talents as HRD focuses on the development of these and these are used interchangeably. Also, Psychological Assessment and testing are done to test achievements, abilities (intelligence, aptitude) and personality.

14. According to (Dessler & Varkkey, 2016a), (Aswathappa, 2017a) Human Capital is a part of HRD which consists of skills, knowledge, abilities, values, training, education, expertise and experience that an individual brings to an organization. The various aspects of Human Capital that are touched on by various authors in different definitions of HRD are given in Figure 6 below. Increase in knowledge, competency development are the terms stated by maximum 5 authors followed by skill development and capacity improvement stated by 4 authors and human value development by 3 authors.

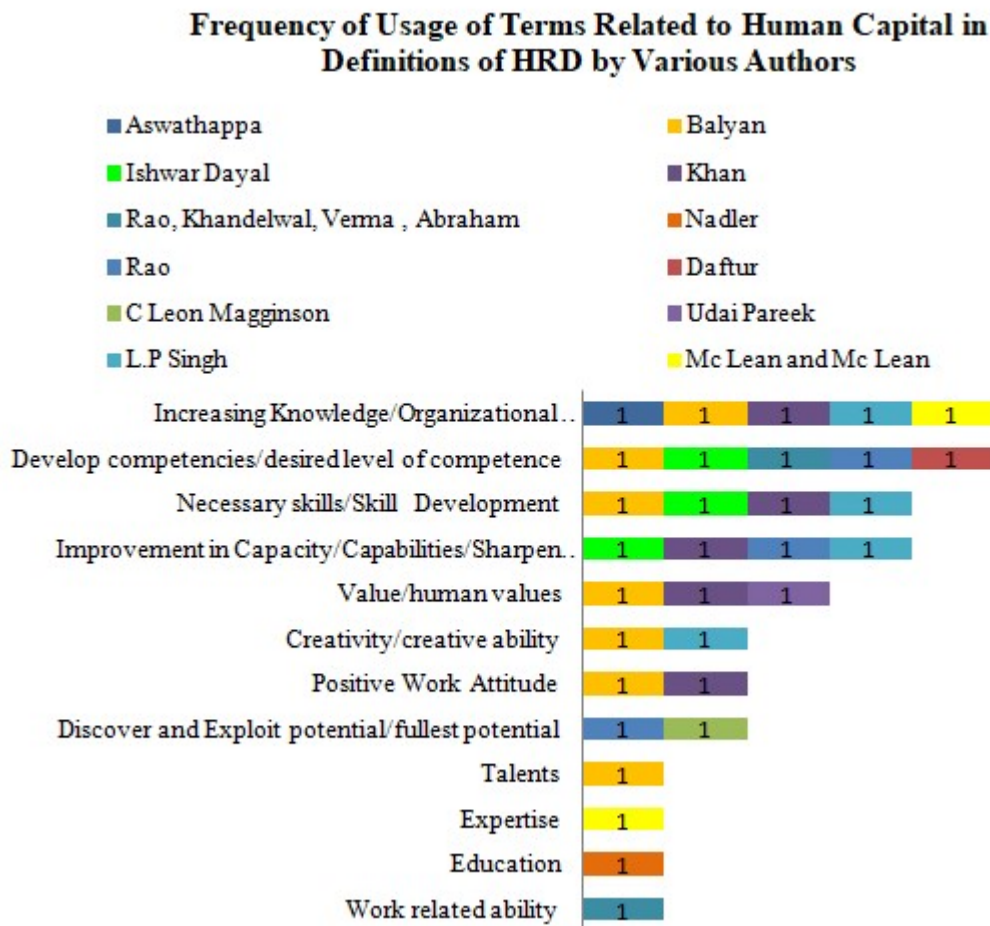


Figure 6: Frequency of Usage of words related to Human Capital used by authors in different definitions of HRD

15. Achievement tests are stated in all 3 books. Achievement and ability tests are the same according to (Aswathappa, 2017b) and different in (T.Morgan, A.King, R.Weisz, & Schopler, 2004) (Dessler & Varkkey, 2016b). Tests used in school by educationists are mostly achievement tests and they measure what someone has learned according to (Dessler & Varkkey, 2016b), (T.Morgan, A.King, R.Weisz, & Schopler, 2004). Achievement tests measure job knowledge in various areas according to (Dessler & Varkkey, 2016b) and how well a person can do tasks related to a job according to (Aswathappa, 2017b). The focus is more on educational attainments. Psychologists also use these to get a well-rounded picture of people and during psychotherapy to help people overcome problems as stated in (T.Morgan, A.King, R.Weisz, & Schopler, 2004).

16. Ability tests mentioned in (T.Morgan, A.King, R.Weisz, & Schopler, 2004) focus on measuring potential/capacity rather than actual performance and are segregated as familiar and unfamiliar tests. Familiar tests are related to skills people are familiar with or had an opportunity to learn in past and help in distinguishing people having high abilities from those having lower abilities. Unfamiliar tests help in distinguishing learners on the basis of their ability to learn first time. Ability tests are of two types intelligence and aptitude according to (T.Morgan, A.King, R.Weisz, & Schopler, 2004). Intelligence is made up of many abilities and is defined as the overall capacity of learning and problem solving and aptitude measures the ability to learn a particular skill in a specific situation. Intelligence test is used to find the general ability to learn in schools in children and to find the general ability to cope with problems in adults and aptitude tests are used to find the ability to learn specific skills like machine drawing, flying an aeroplane etc. (Dessler & Varkkey, 2016b) defines intelligence and aptitude tests under tests to measure cognitive abilities. Intelligence tests measure general intellectual abilities and measure memory, vocabulary, verbal fluency and numerical ability but aptitude tests measure specific mental abilities like inductive, deductive reasoning, verbal comprehension, memory and numerical abilities.
17. A Psychological test is a structured technique to generate a carefully selected sample of behaviour and in psychological assessment inferences about the underlying thought processes/attributes that result in a behaviour are drawn. The attributes can be self-esteem, intelligence etc. Personality tests measure the characteristic way of thinking, behaving and feeling of a person and his/her attitude as stated in (T.Morgan, A.King, R.Weisz, & Schopler, 2004). These also help in disclosing emotional states or behaviour patterns that are abnormal and may reflect psychological disorders. According to (Dessler & Varkkey, 2016b) Personality tests measure some personal characteristics as non-performance is sometimes the result of characteristics like motivation, temperament and attitude. Personality tests measure emotional stability, moodiness, friendliness, criticalness, hypochondria, paranoia, sociability, conscientiousness, trust, sensitivity, deliberateness, directional ability, stability, extraversion, openness to experience, agreeableness etc.
18. Interest tests are irreplaceable in career planning according to (Dessler & Varkkey, 2016b) as Interest tests measure an individual's activity preferences according to (Aswathappa, 2017b). These are used as a selection tool when based on the premise that people having the same interests might have similar performance levels.
19. Health tests are different from physical ability tests. Medical servicing(genetic tendency to suffer from medical problems), Genetic Screening(physical resilience upon exposure to hazardous chemicals) and drug tests are stated in (Aswathappa, 2017b) under health tests and static strength such as lifting weights, dynamic strength (pull-ups), body coordination(jumping ropes), stamina tests come under physical ability tests. Finger and manual dexterity are the tests covered under motor abilities.

The hypothesis testing results are shown in Table 5 below.

Table 5: Hypothesis Testing Results

| S.No | Hypothesis | Test | Statistic Value, p value, degree of freedom(dof), | Chi-Square critical at 5% level of significance | Null Hypothesis (Accepted/ Rejected) | Inference |
|------|-----------------|----------------------------------|---|---|--------------------------------------|---|
| 1 | H ₀₁ | Chi-Square Goodness of Fit Test | Chi Square = 11, p=0.0514, dof=5 | 11.0705 | Accepted | There is a uniformity in the opinion of authors about HRD that is HRD is uniformly stated by them as a philosophy, system, activity, approach, process, practice. |
| 2 | H ₀₂ | Friedman Repeated Measures Anova | Chi Square=9.39, p=0.3104, dof=8 | 15.51 | Accepted | There is no significant difference in the tests used for selections stated in different books. |

VII. CONCLUSIONS

1. The term Personnel Management and HRM is considered as same in three books and can be used interchangeably. However, in (Aswathappa, 2017a) HRM is a strategic function and a step ahead of Personnel Management.
2. The key performance indicators related to HRD can be segregated as inputs and outputs at individual and organizational levels. All these indicators are shown in Table 6 below.

Table 6: HRD Indicators Segregated as Individual and Organizational Inputs and Outputs

| | Inputs | Outputs |
|------------|--|---|
| Individual | Education Training Time Effort Awareness about needs of a sector Focus on social realities Focus on job roles Focus on person Career Development | Education (eg: Degree) Training (eg: Certifications) Satisfaction Productivity Expertise Motivation Professional Well being Adjustment to confidence Adjustment to environment Developing sense of pride Self reliance Self awareness Maturity Commitment Total person Cost reduction Discovering fullest potential Increasing Human knowledge Skill/Capacity/Capability |

| | | |
|-------------------------------|---|---|
| | | development Gain/Benefit/Growth Goals Effectiveness Performance |
| Group/Team/ Organizational | Providing right environment Time Effort Provision of Facilities Provision of Opportunities Awareness about needs of a sector Focus on social realities Focus on job roles Focus on dyadic unit (person and supervisor) Focus on teams , inter team process Organization Development | Climate Creation Develop Organization Culture Satisfaction Productivity Expertise Humanization of organizational life Collaboration among sub-units Teamwork Superior-subordinate relationship Motivation Adjustment to environment Developing sense of pride Self reliance Self awareness Maturity Commitment Exploiting fullest potential Increasing Organizational Knowledge Skill/Capacity/Capability development Gain/Benefit/Growth Goals Effectiveness Performance |

3. HRD is defined as a system of beliefs or system of processes. A system that is a collection of processes is auditable under various ISO standards developed by the technical committee ISO/TC 260 which are stated in (ISO, 2023). It will be interesting to understand the standard way of Human Capital Reporting given in ISO 30414:2018 and compare it with the existing ways used in different organizations. Similarly, other standards related to the impact of hire metric, quality of hire metric, workforce productivity, cost per hire, leadership-recruitment and skills and capability, learning and development, succession planning, diversity and inclusion metrics are all worth exploring and tempting. Beliefs are established over the years when one experiences the happening of some phenomenon many times but processes take place continuously to achieve some goals. When some processes take place repeatedly many times again some new beliefs are established related to these processes.
4. Mr.Stephen R. Covey has mentioned that sharpening the saw is one of the habits of highly effective people which means enhancing the greatest asset that one owns which is nothing but enhancing himself or herself as stated in (Covey). This enhancement or

increase can be achieved by developing oneself in physical, social, mental and spiritual spheres. Hence, Sharpening the Saw also represents individual development. No linkage was observed in the habit highlighted by Mr. Stephen R. Covey and the HRD definitions found in the four books.

5. Skill, ability, capability, talent, and aptitude are synonyms according to the definitions given in (Hawker, 2014) with a slight difference. Skill is a proficiency in a capability and talent and aptitude represent natural ability.
6. Ability and Achievement are the tests mentioned in all 3 books. The definition of Personality tests suggests that these are also helpful in firing candidates in addition to hiring. Achievement tests are based on past educational attainments and ability tests are helpful in finding futuristic potential.
7. It is concluded from the Chi-Square goodness of fit test that HRD is uniformly stated as a process, philosophy, practice, activity, system and an approach by the authors defining HRD.
8. There is no significant difference in the tests used for selection stated in different books as concluded from Friedman repeated measures ANOVA.

VIII. SCOPE OF FUTURE RESEARCH

1. The human development index used at the global level can be defined at the individual, locality, ward, district and state level and it should correlate with the country-level Human Development Index. The relationship between individual, locality, ward, district, state level and country level indices should be explored to find out real regions of concerns and strengths.
2. The development at the individual level leads to fulfilment of needs so, it is important to find out the correlation between the level reached in Maslow's hierarchy of needs and human development.
3. It will be interesting to find out how target attainment is correlated with the skills possessed by employees yearly at industries during performance appraisal and how personality of employees is assessed yearly. What are the repercussions if targets are not attained but the employee is scoring high in personality tests where his/her underlying attributes like temperament, and motivation are very good will be interesting to find out.

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REFERENCES

- [1] Aswathappa, K. (2017a). Understanding the Nature and Scope of HRM. In K. Aswathappa, Human Resource Management: Text and Cases (8 ed., p. 40). Mc Graw Hill Education (India) Private Limited.
- [2] Aswathappa, K. (2017b). Selecting Right Talent. In Human Resource Management Text and Cases (p. 218). Tata Mc Graw Hill.
- [3] Balyan, R. K., & Balyan, S. (2012). HRD Environment. In S. B. Ram Kumar Balyan, Human Resource Development-Text and Cases (p. 5). Himalaya Publishing House.
- [4] Covey, F. (n.d.). Courses>The 7 Habits of Highly Effective People>Habit 7:Sharpen the saw. Retrieved from www.franklincovey.com: <https://www.franklincovey.com/habit-7/>
- [5] Dessler, G., & Varkkey, B. (2016a). Introduction to Human Resource Management. In B. V. Gary Dessler, Human Resource Management (pp. 4-8). Pearson India Education Service Private Limited.
- [6] Dessler, G., & Varkkey, B. (2016b). Employee Testing and Selection. In Human Resource Management (pp. 202-228). Pearson Education.
- [7] Hawker, S. (Ed.). (2014). Little Oxford English Dictionary. Oxford University Press. Retrieved 2015
- [8] ISO, T. (2023). Home/Taking Part/Who develops standards/Technical Committees/ISO/TC 260. Retrieved from <https://www.iso.org/committee/628737/x/catalogue/>
- [9] Mehrotra, S., & Team. (2011). Human Development Index. In India Human Development Report 2011-Towards Social Inclusion. Retrieved from <https://www.im4change.org/docs/240India-Human-Development-Report.pdf>
- [10] Mehta, A., & Upadhyay, P. (2014-2015). An Introduction to Human Resource Development>HRD V/S Personnel or HRM Function. In P. U. Anil Mehta, Human Resource Development (pp. 1.7-1.8). Jaipur, New Delhi: R.B.D Publishing House.
- [11] Nayak, J. u. (2022, Feb). NPTEL>Marketing Research and Analysis-II>Week 6>Non-Parametric Test - IV. Retrieved from <https://onlinecourses.nptel.ac.in/>: https://onlinecourses.nptel.ac.in/noc22_mg22/unit?unit=56&lesson=59
- [12] Parashar, V. (n.d.). Organizational Behaviour. In D. Parashar, Upkar's UGC NET/JRF/SET Management(Paper 2) (pp. 90-98). Upkar Prakashan.
- [13] T.Morgan, C., A.King, R., R.Weisz, J., & Schopler, J. (2004). Psychological Assessment and Testing. In C. T.Morgan, R. A.King, J. R.Weisz, & J. Schopler, Introduction to Psychology (pp. 513-560). Delhi, New Delhi, India: Tata Mc Graw-Hill Publication Publishing Company Limited.
- [14] The World Bank staff. (2018). Learning to realize educations promise-World Development Report. The World Bank. doi:10.1596/978-1-4648-1096-1
- [15] Ugemuge, N. S., & Kudkilwar, M. N. (2013). Organizational Behaviour. In Human Resource Management, Industrial Relation, Labour Welfare for UGC-NET/SET (pp. 300-302). Himalaya Publishing House Pvt.Ltd., Mumbai.
- [16] World Bank Group. (2018). Learning to Realize Educations Promise -Spotlight 3-The Multidimensionality of skills., (pp. 102-104).