

Digital Skills and Research Methods

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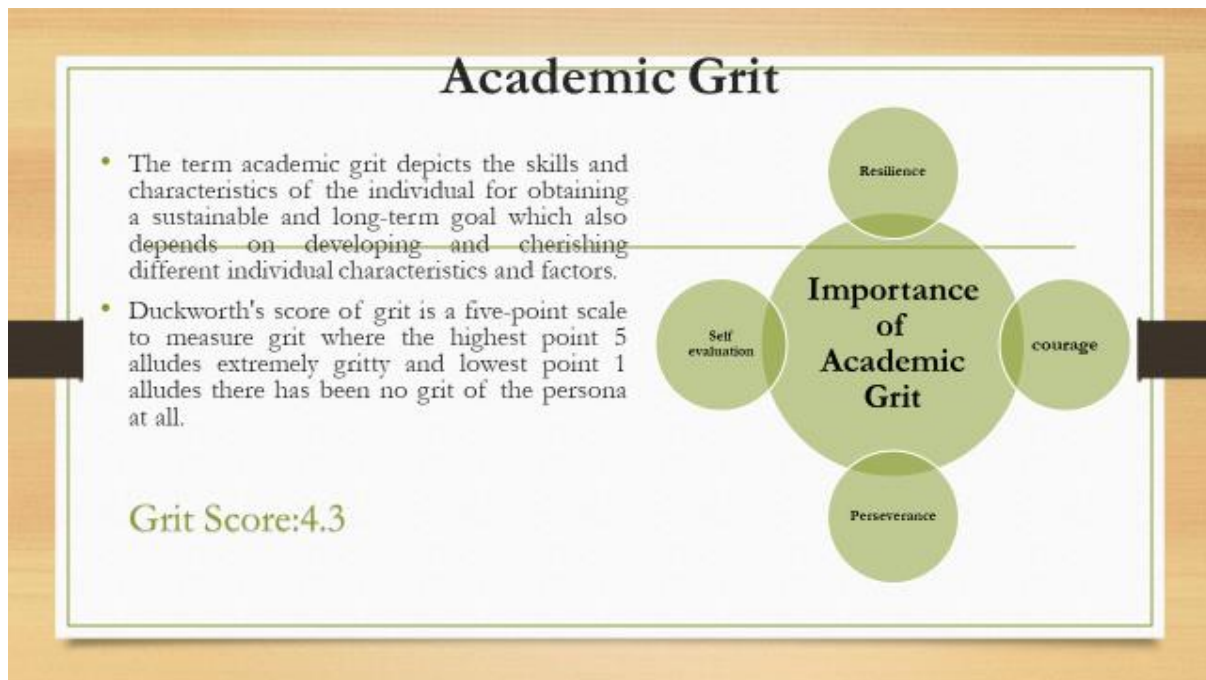
Atanaska Deleva (2007917)

Lecturer-Afzal Munna

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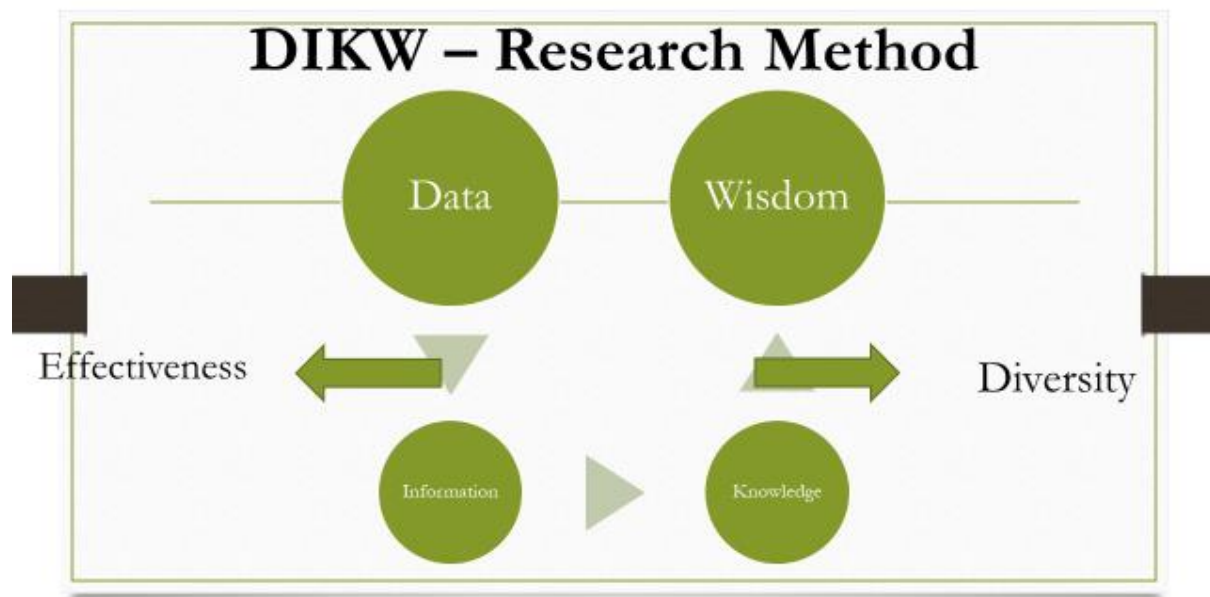
Introduction about Academic Grit



The term academic grit depicts the skills and characteristics of the individual for obtaining a sustainable and long-term goal which also depends on developing and cherishing different individual characteristics and factors including commitment, courage, passion, and perseverance for achieving the individual goal. An academic grid is a standard which helps to measure the possibility and ability of individual for achieving long term individual goal or not. It also helps to evaluate a person by reviewing their passion, perseverance, and dedication toward the work or personal goal (Richardson and Bissell, 2019).

Duckworth's score of grit is a five-point scale to measure grit where the highest point 5 alludes extremely gritty and lowest point 1 alludes there has been no grit of the persona at all. The personal grit score of the learner is 4.3 which is measure in the Duckworth grit scale which depicts the higher level of grit learners have to achieve an individual academic and personal goal. The score of the grit can be used to evaluate someone and helps to find out personal weaknesses and reform strategy to achieve a long-term personal goal. People or students can assess themselves by evaluating the personal grit score of the student and take action to improve their skills, dedication, and passion toward their personal and academic goals (Russo, 2011).

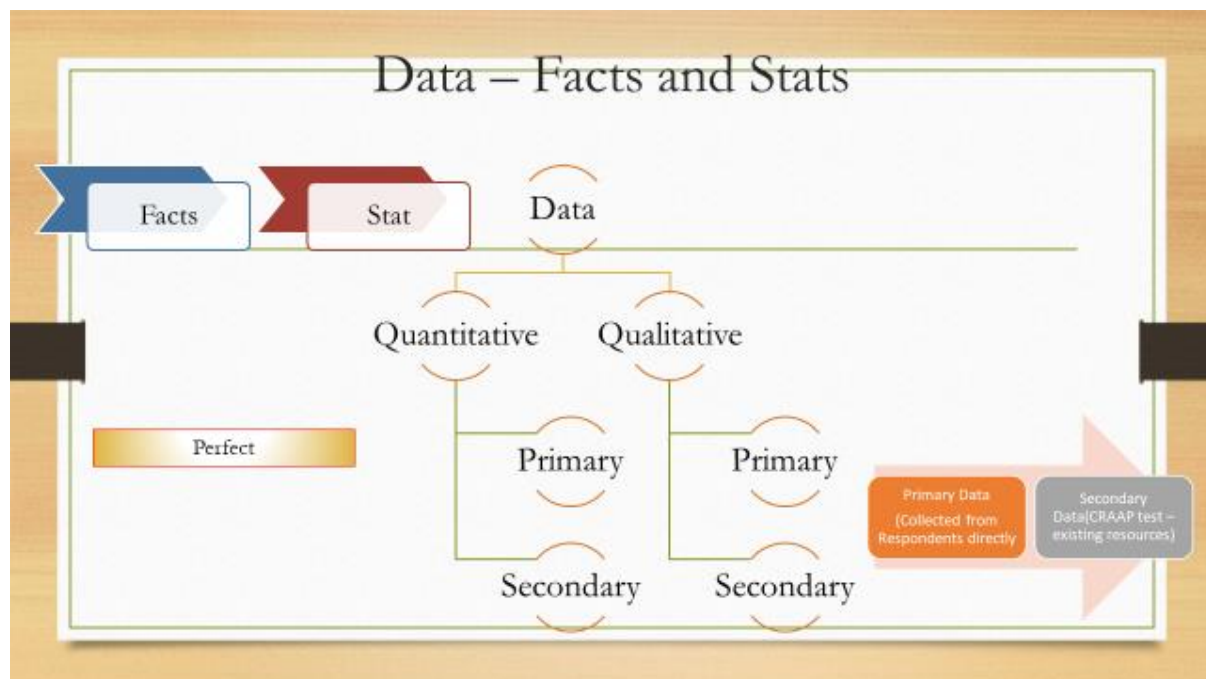
DIKW Research Method



The DIKW research method is a hierarchical research framework that represents the organized and hierarchical informatics process. DIKW has a meaning that is Data, Information, Knowledge, and Wisdom. The DIKW method pyramid coordinates the four elements of the model and explains the close relationship between those four elements. In the DIKW framework, data refers to the sign, characteristics, symbols, different group, and class which has distinct and identical characteristics. Information alludes to the hidden meaning of the collected research data. Knowledge depicts the implication of the information gathered for achieving a purpose or goal. Finally, wisdom depicts evaluating the achieved knowledge by comparing it with the selected standard (Richardson and Bissell, 2019). Furthermore, this model explains a pyramidal way to make a learner skillful which is agreed by different authors in this field.

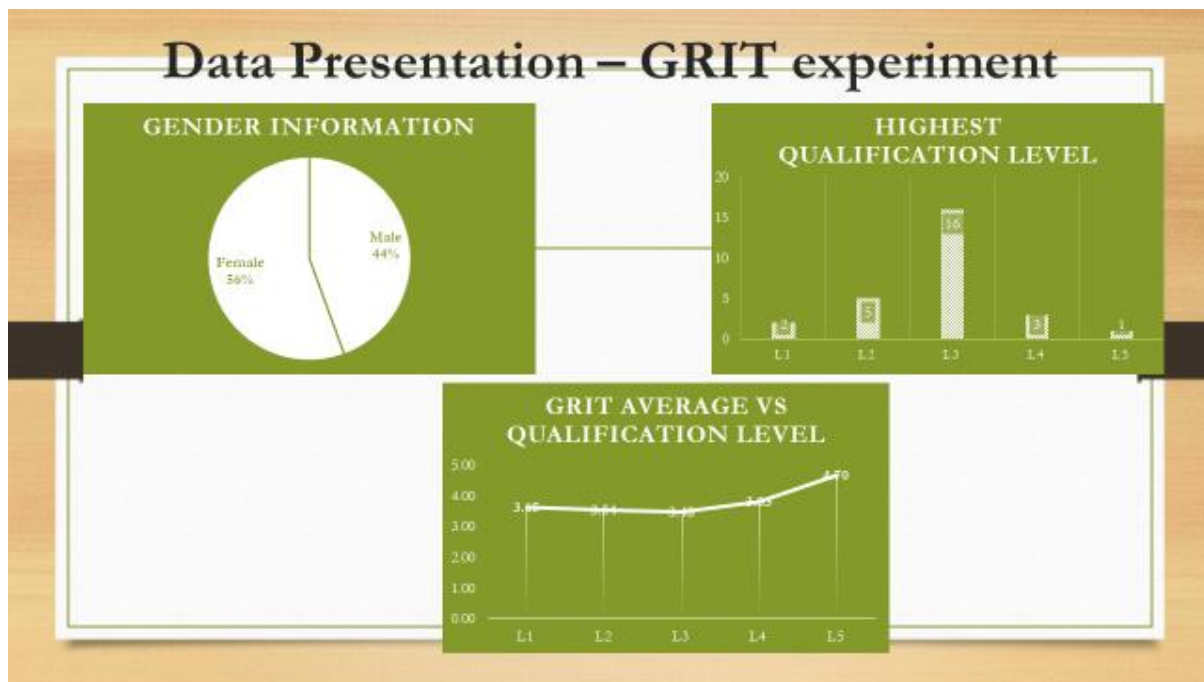
DIKW method of the research can be helpful and used for various research studies because this method assures an organized and structured procedure for conducting research. Researchers use this framework in the research project as the method helps to follow and find out the scientific way for understanding the research subject matter clearly (Maji and Laha, 2020). The method is effective to use for understanding the way of research by following systemic way where learner collects research data at the first phase, then try to find out the meaning of the data, then implement the information for understanding the subject matter of the research project and finally, justify and evaluate the knowledge which is gained from the further steps.

Data



In the DIKW framework, data refers to the sign, characteristics, symbols, different group, and class which has distinct and identical characteristics. The main classification of data is two types including qualitative and quantitative data. Qualitative data depicts the theoretical form of the data which supports exploratory research. For example informal research, the blood group of the respondents, and behavior toward a specific environment are the qualitative data. In contrast, quantitative data depicts the numerical format of data which is easily measurable in the numeric unit. For example, the academic grid score of the students can be an ideal example of quantitative data which represents the individual quality toward achieving a long-term goal (Göranzon, Hammaren and Ennals, 2006).

Furthermore, data can be classified based on sources of collecting data including primary and secondary data. Primary data are the first-hand data source which data is not used before and collect for specific research purpose. A primary data source can be survey research, field research, focus group discussion, experiment, investigation, etc. In contrast, secondary data are the published data in different secondary sources including journals, newspapers, websites, and different third-party institutes. For selecting a data source, the researcher has to ensure the reliability and validity of the data and purpose of the research. for ensuring the quality of the research data, the CRAAP test is mostly used test which stands for Currency, Relevance, Authority, Accuracy, and Purpose (Coy, 2013).



Data presentation – grit experiment

For experimenting with grit score, both primary and secondary data are collected and analyzed. Here, the primary source of data is analyzed and presented by using graphs, diagrams, and charts.

Gender information

For collecting primary data of the research, 27 respondents are selected and gender information of the research project that 44% of respondents are male and 56% of respondents are female. In the selected respondents, the number of female respondents is greater than male respondents which are shown in the pie chart.

Highest qualification level

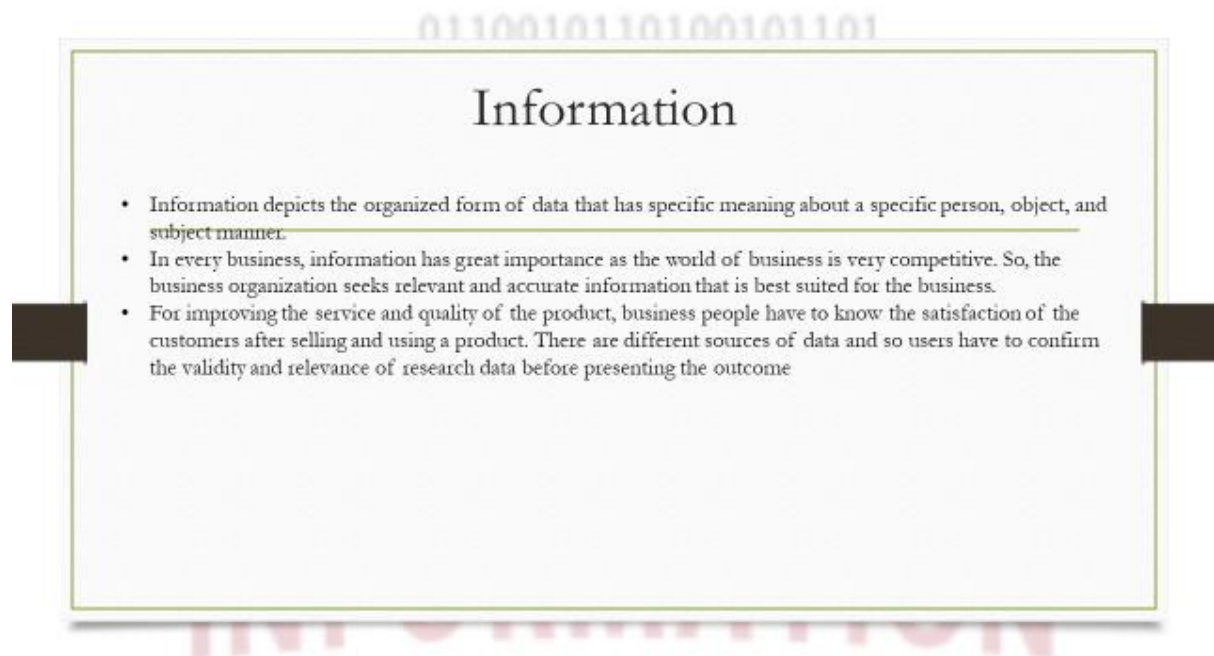
According to the empirical findings of the research report, it is found that the grit scale has 5 different levels of qualification were 1 state lower score and 5 states the highest score. Data are collected from 27 respondents in which most of the respondents achieve level 3 score in their academic grit, five respondents achieve level 2 score and others fall on the rest of the level.

Grit average and Qualification level

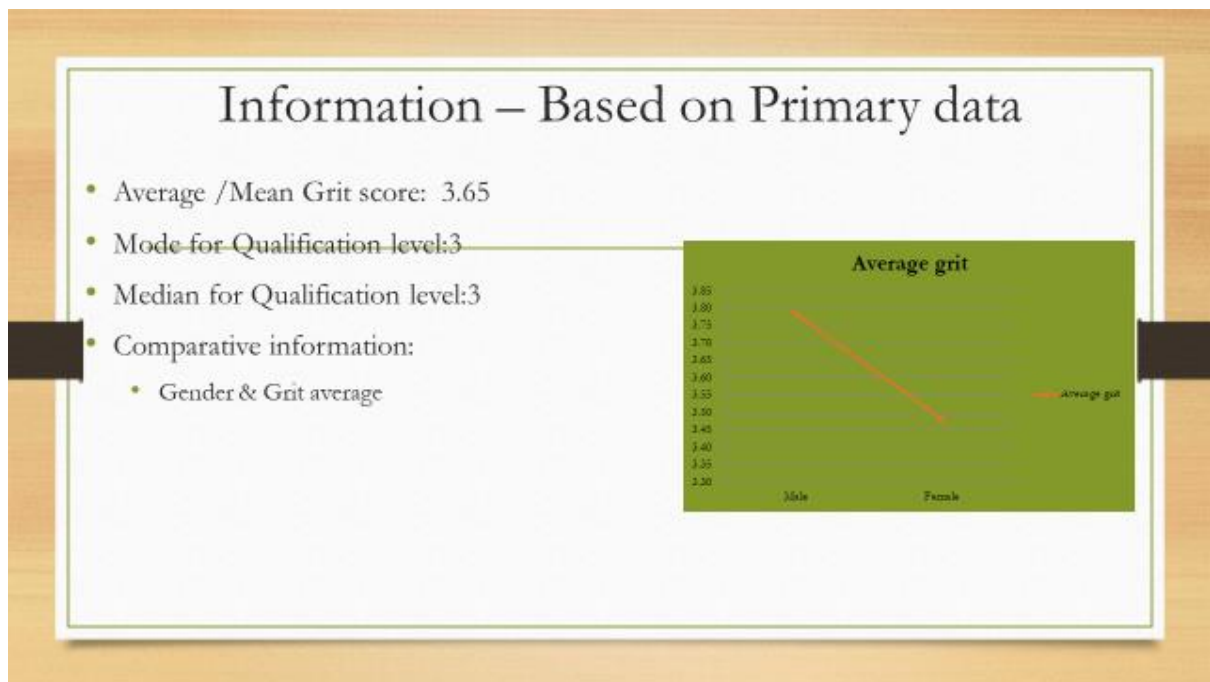
The above data chart represents the comparison between qualification level and average grit score of the students. An empirical analysis of data shows that level 5 has the highest grit score,

level 4 has a moderate score and level 3 has the lowest grit score. The stated diagram shows trends of grit scores at different points.

Information



Information depicts the organized form of data that has specific meaning about a specific person, object, and subject manner. Data has no meaning in research and so data are organized as information according to the data source, the requirement of the research demand, and further analysis data finding research outcome. In every business, information has great importance as the world of business is very competitive. So, the business organization seeks relevant and accurate information that is best suited for the business. for example, accurate market information is needed to collect and analyze to form the desired business. Furthermore, the entrepreneur has to collect in-depth market information to assess the ability of the target customers, demand of the target customers as well as buying power of the customers to introduce a new product in the market. For improving the service and quality of the product, business people have to know the satisfaction of the customers after selling and using a product. There are different sources of data and so users have to confirm the validity and relevance of research data before presenting the outcome (Hibino, Nakamura, Noritake and Watanabe, 2020). Used and presented has to be relevant to the research time, research purpose, and so on. Otherwise, the project outcome can mislead.



Primary data-based information

The following outcome is observed from the empirical analysis of primary data. The outcome is presented by using a graph.

Average grit score

The academic grit of the student is evaluated and measured on 5 point scale. The average academic grit score of 27 respondents is 3.65 which refers to the average score of the student is above the moderate level.

Qualification level mode

Mode of the data refers to the highest number of identical and specific data collected from the respondents. From the empirical data analysis, it is found that the mode of qualification level is 3 that means this level has the highest observed rate from the respondents (Maji and Laha, 2020).

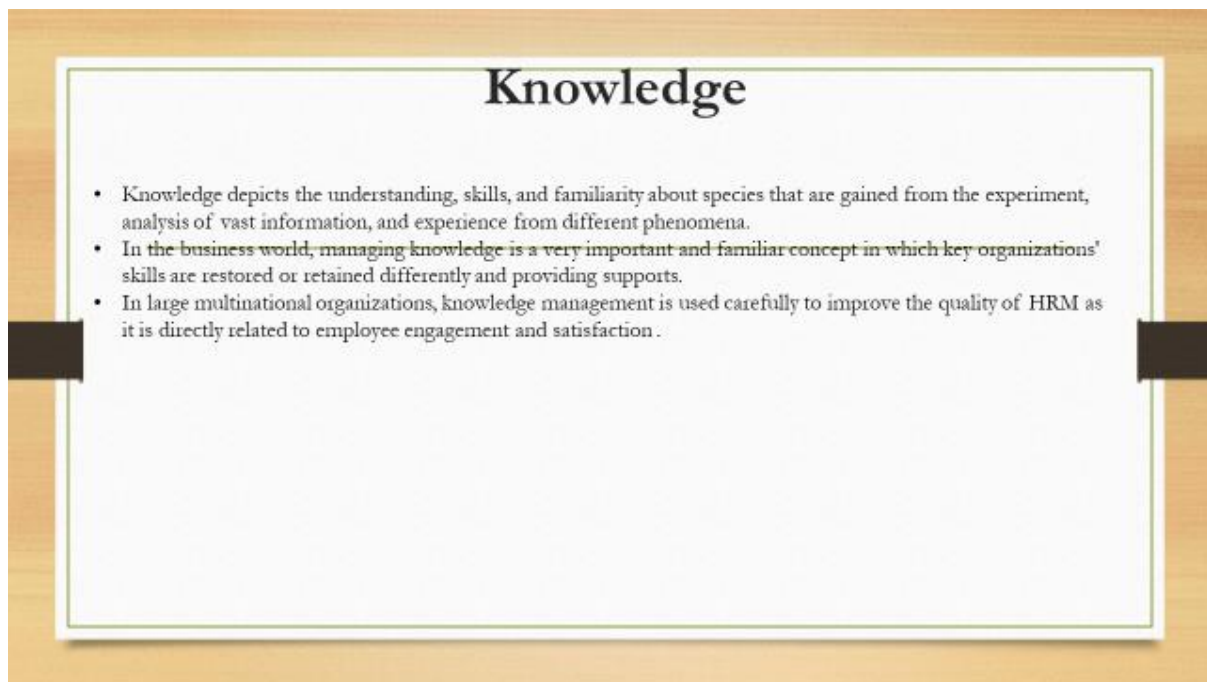
Median of qualification level

Median refers to the exact middle number of the collected data or observation if data are arranged through systematic order. In this research report, the median of the observation is 3 which means the middle number of the observation is 3 in any chronological order.

Gender and Average grit

For collecting primary data of the research, 27 respondents are selected and gender information of the research project that 44% of respondents are male and 56% of respondents are female. Empirical analysis shows that the average grit score of the male is 3.78 and the average grit score of the female is 3.48.

Knowledge

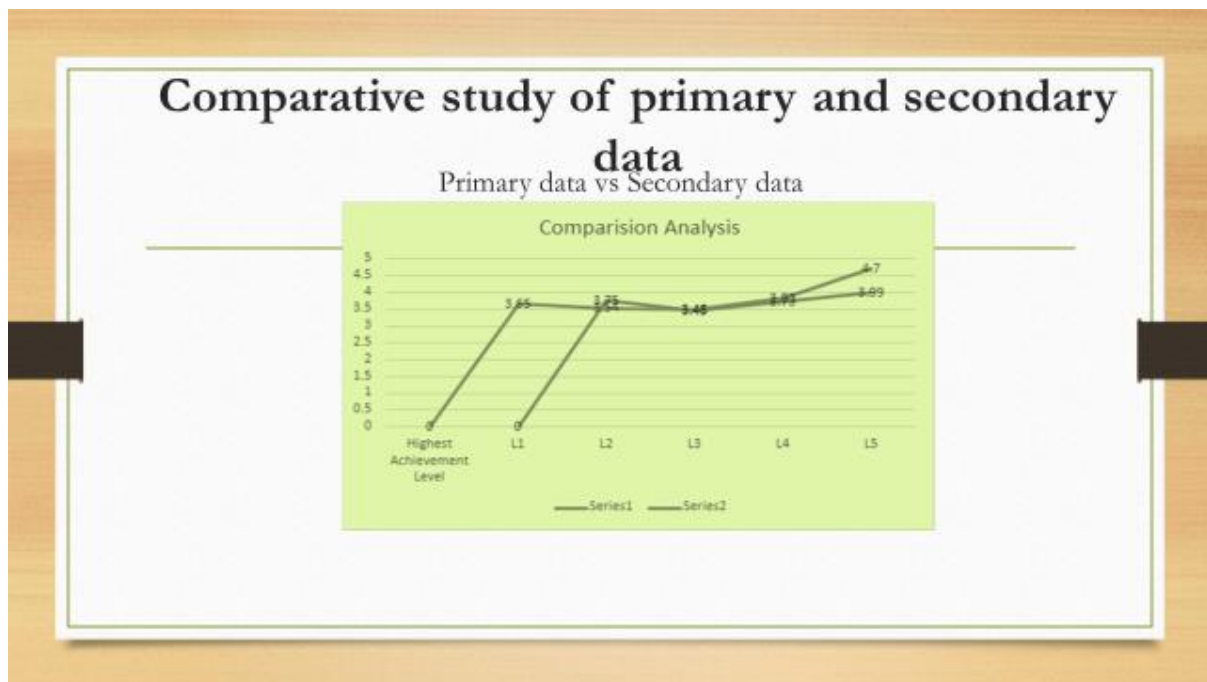


Knowledge depicts the understanding, skills, and familiarity about species that are gained from the experiment, analysis of vast information, and experience from different phenomena. In other words, knowledge is mainly the implication of the findings from information and data (MATSUURA and TAKADA, 2019). In the business world, managing knowledge is a very important and familiar concept in which key organizations' skills are restored or retained differently and providing supports. Managing knowledge depicts a continuous process that starts from gaining knowledge, organizing resources, sharing human resources, and managing knowledge. In large multinational organizations, knowledge management is used carefully to improve the quality of HRM as it is directly related to employee engagement and satisfaction (Russo, 2011).

Secondary data can be used for gaining knowledge about certain phenomena. Secondary data are the published data in different secondary sources including journals, newspapers, websites, and different third-party institutes. Secondary data of the research helps the researcher to learn and understand different critical topics that are experienced previously by other researchers.

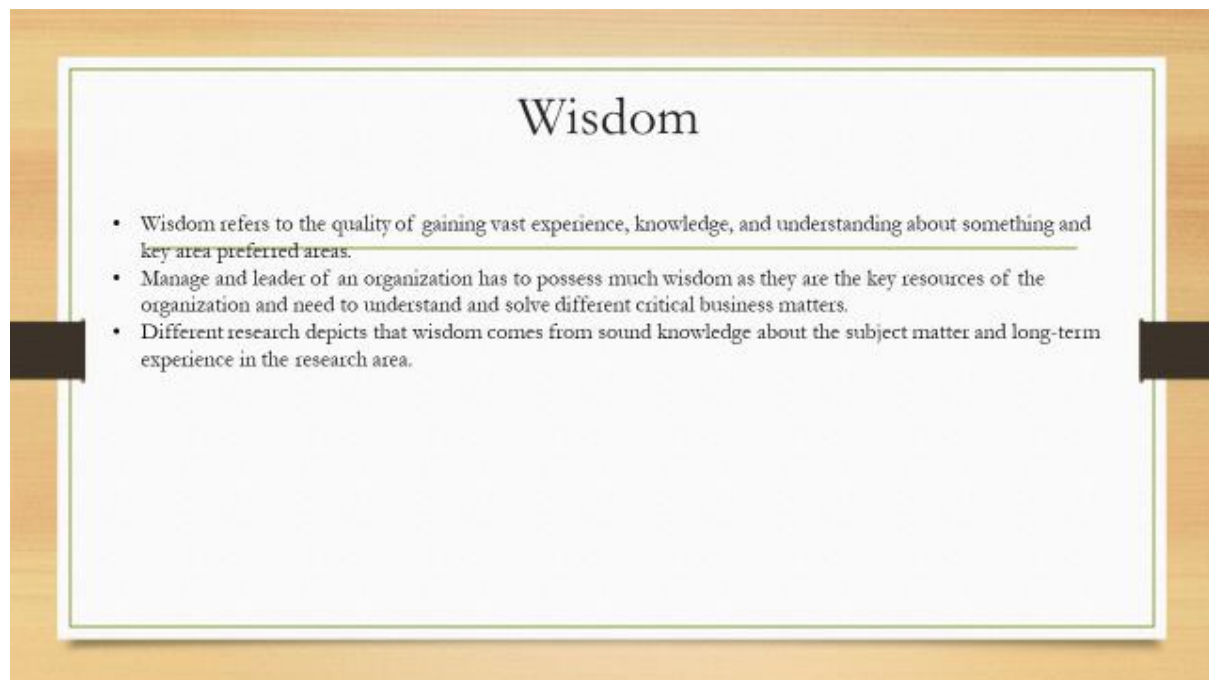
By using secondary data, the researcher can also know about the whole process of the research. To conduct sound research, both secondary and primary data can be helpful as the combination of both data depicts the whole scenario of the subject matter (Russo, 2011).

Comparative study of primary and secondary data



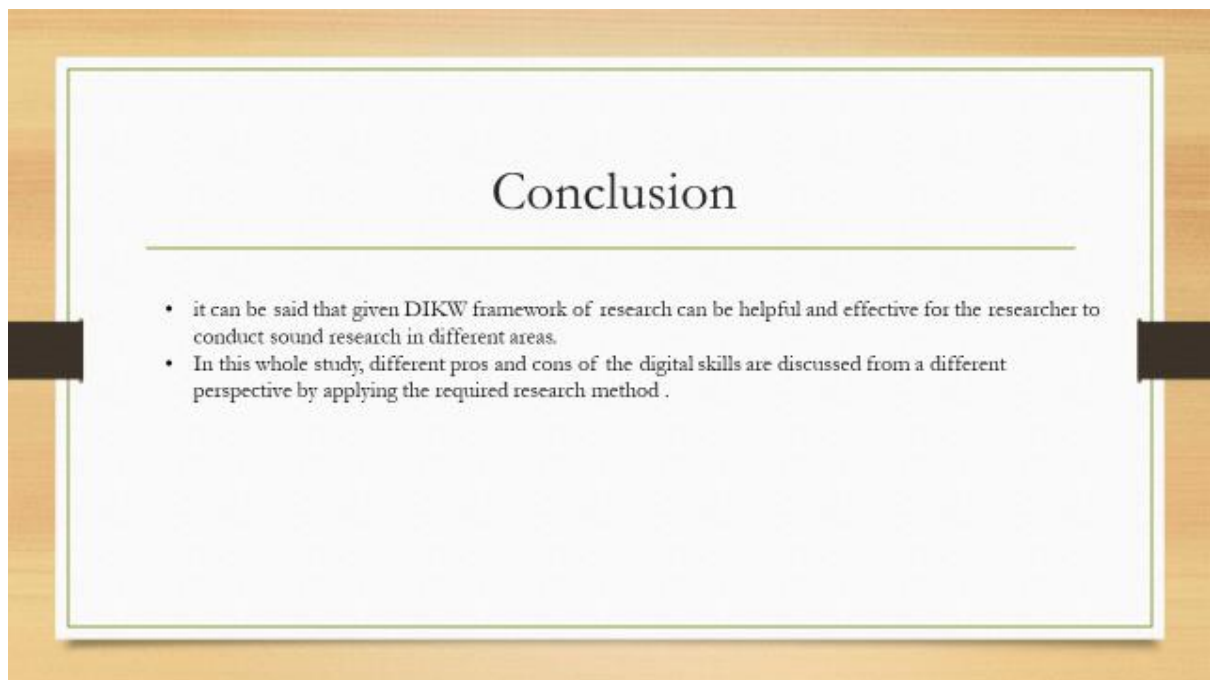
In this study, both primary and secondary data are used to getting effective research results. A line diagram was issued for comparing the outcome of primary and secondary data about the academic grit of the student. The blue line speaks to the essential information of the examination and the yellow line of the line chart shows the auxiliary information of the investigation. Also, the vertical hub of the line graph speaks to the normal coarseness score in both essential and auxiliary information, and the even pivot speaks to the most elevated accomplishment level in both the information sources (Richardson and Bissell, 2019). Here, level 1 in auxiliary information has more noteworthy normal coarseness than the essential information. Then again, level 2 in essential information has bigger normal than optional information yet level 3 has similar normal in the two classifications, and level 4 is nearly the equivalent. Also, in level 5, the essential information has a lot more noteworthy normal than optional information.

Wisdom



Wisdom refers to the quality of gaining vast experience, knowledge, and understanding about something and key area preferred areas. In other words, wisdom depicts evaluating the achieved knowledge by comparing with selected standards and helps individuals to understand the different subject matter clearly and solving related problems by evaluating and comparing related subject matter. Manage and leader of an organization has to possess much wisdom as they are the key resources of the organization and need to understand and solve different critical business matters. In business, wisdom about the industry market helps the manager to make an effective decision about launching and marketing a new product, selecting the target market, justify key competitors, and selecting a strategy (MATSUURA and TAKADA, 2019). Different research depicts that wisdom comes from sound knowledge about the subject matter and long-term experience in the research area. Some researchers agreed that wisdom is an inherent thing that grows inherently in the human brain.

Conclusion



In this whole study, different pros and cons of the digital skills are discussed from a different perspective by applying the required research method as a learner can gain sound knowledge about both digital skills and research methods. At last, it can be said that given DIKW framework of research can be helpful and effective for the researcher to conduct sound research in different areas.

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