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COMPONENT 2 RESEARCH METHODS

HOW I CAN USE THE DIKW AND CRAAP FRAMEWORKS TO CONFIRM OR REFUTE THE WORK OF ANGELA DUCKWORTH

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INTRODUCTION

- Who I am
- Reasons for this presentation.
- What I want to achieve from this.



My name is Zartasha Zahied, I am currently studying health and social care at the university of Wales, Trinity Saint David.

At the end of this course my goal is to be able to work with children in a care setting or working with troubled youths.

I myself being a young adult understand how growing up and going through certain chapters of life can be difficult and I feel like I can help young adults and children to overcome the issues they are going through in their adolescent years.

The reason for this presentation is to gain some funding for a company called UKTI (UK TRADE AND INVESTMENTS). This funding will be used for research and experiments for developing GRIT in students.

The funding will help us to organize more surveys enable to test Angela Duckworths theory "the higher the level of grit the more successful they will be in life"

INTRODUCTION

- The objective for this assignment is to raise money for the UKTI, to help aid conducting research to help students advance their grit score.
- Within this assignment I will be going through what the grit score is, the importance of it academically and for employment. I will be talking about the founder of the grit score, Angela Duckworth. Who she is, how she created the grit score and what it means?
- I will also be talking about the DIKW pyramid, what it means and how it can help with our research.
- In addition, I will also be using the data we collected within class and comparing it with other secondary data.
- I will also be demonstrating how to assemble a chart that best shows the correlation between the grit score and academic level.



**ANGELA
DUCKWORTH**



In 1970, Duckworth was born and raised in New Jersey. Born to Chinese immigrants who fled the Cultural Revolution, she was the youngest of three children. The parents were extremely goal-oriented, which led to three children who have all excelled academically. Angela Duckworth is the founder and CEO of the character lab, a non-profit organisation that's aim is to help children thrive.

She is also a professor of psychology at the university of Pennsylvania. ("Roots and Shoots") Prior to her career in research, she was a public-school math and science teacher.

Her book Grit: the power of passion and perseverance is a no.1 New York times best seller. ("The Hosts - Freakonomics")

Angela's studies clarify that an individual's intellectual strengths have a part to play in their educational achievement under challenging circumstances. Duckworth's way of proving this is using the grit scale which measures the extent to which individuals can maintain interest and focus in obtaining long term goals.

Angela once said in one of her TED speeches "the grittier the kids are more likely to graduate." This simply suggests that being Intellectually smart does not impact your success it is the determination and will power to succeed that helps.

According to Duckworth anyone can reach success no matter how intelligent.

To implement the grit test Duckworth had to use Russel Ackoff' DIKW triangle.

We applied this craap test on Angela Duckworth to see if she will pass it.

CRAAP test consists of the following.

- Credible
- Relevant
- Authoritative
- Accurate
- Purpose

(Research Guides: Evaluating Sources: The CRAAP Test, 2021)



RUSSELL ACKOFF



Russell Ackoff (1919-1009)

"Russell Ackoff was an important proponent of the field of operations research and remained a tireless advocate for an expansive vision of what the field could be." ("Ackoff, Russell L. - INFORMS")

- Raised in Philadelphia during the great depression.
- Graduated with a bachelor's in architecture from the university of Pennsylvania.
- According to Ackoff as a systems theorist and professor of organizational change, he believed that the human mind can be divided into 5 categories.

1. Data: Symbols

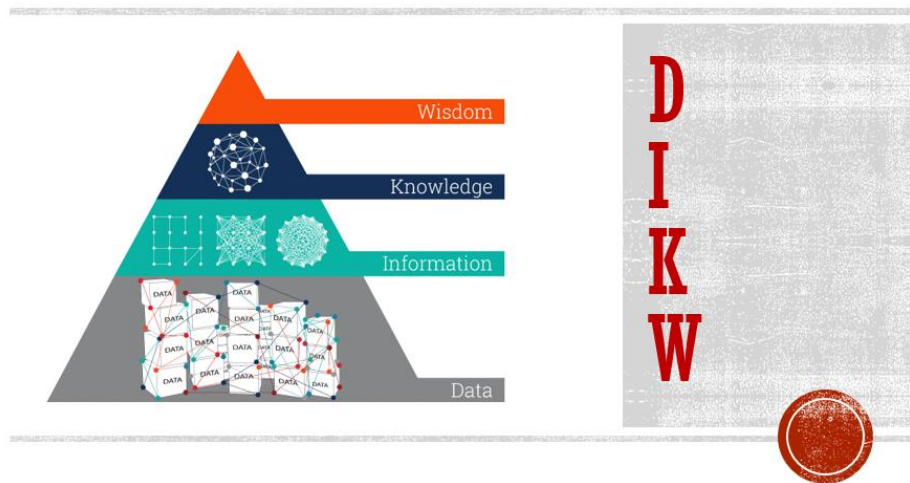
2. Information: Data that is processed to be useful. Providing the answers to "who", "what", "where", and "when".

3. Knowledge: applying data and information to answer the question "how"

4. Understanding: Appreciation of "why"

5. Wisdom: Evaluated understanding.

(2004 G, Bellinger)



In addition to being a key early proponent of operations research, Russell Ackoff was an ardent supporter of a broader vision of the field's potential. In the years following World War II Ackoff continued his philosophical studies with C. West Churchman. (Ackoff, Russell L., 2021).

In 1951, he and a group of colleagues were asked to attend Case Institute of Technology (presently know as Case Western Reserve University). Cleveland, Ohio is home to Case Western Reserve University, the school of engineering where Ackoff earned the title of "Father of Operations Research" at MIT, where he was instrumental in establishing one of the first departments of operations research in the world. (About Russell Ackoff, 2021).

Wisdom was at the top of Ackoff pyramid, followed by understanding, knowledge and data. The DIKW pyramid represents the relationship between data, information, knowledge, and wisdom.

Each building block is a step up towards a higher level.

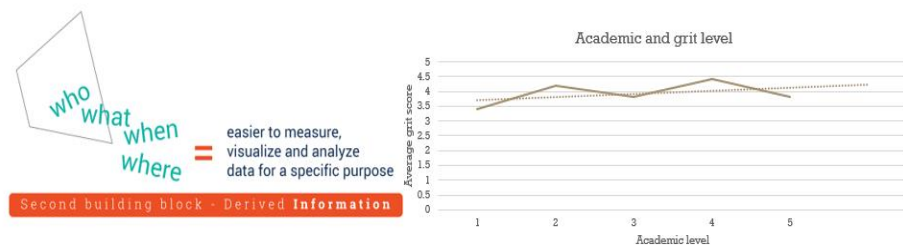
Ackoff said that "data makes up 40% of the human brain, 30% is made of information, 20% knowledge and 10% understanding, and almost no awareness on wisdom"(Ackoff, 1989)

The triangle is known as the DIKW triangle. (Frické, 2019)

- DATA
- INFORMATION
- KNOWLEDGE
- WISDOM

The DIKW pyramid allows us to look at numerous ways of extracting insights and value from all sorts of data.

With the DIKW research there are many books that are being published by many authors, naming one of them The Wisdom Pyramid: Feeding Your Soul in a Post-Truth World. By Brett McCracken (McCracken, 2021).



The
step in the DIKW triangle is information.

second

This is where we try to transform the data into useful information. ("Smart Spare Part Inventory Management System with Sensor Data Updating ...") With meaningful, relevant, and purposeful data.

Once all the data has been collected it can be sorted into a more organised way and then we can retrieve our answers for

Who?

What?

Where?

When?

How?

Some anomalies can arise due to inaccurate data, and lack of information.

Information is the analysis of the raw data to determine the organisation's needs. Asking questions such as who, what, where and when to measure the relevance of the data to your chosen topic.

Viewing evidence in the way it is organized and used, such as data, text, spreadsheets, images, voice, and audio, may be beneficial. Data is a collection of discretely defined fields. Charts and graphs are real numbers (rows and columns) of information. Images are made up of coordinates or information images.

Here you can see a graph that has been created using the data we collected in class in January 2020. with more funding we could carry out more extensive research on Angela Duckworths studies.



Wisdom is the last step of the DIKW triangle.

At this stage, the knowledge gained in the previous step is applied and implemented.

Wisdom is the highest level in the DIKW hierarchy and gives answers to the Why question.

Wisdom is described as the ability to be able to use your knowledge

This value is created through dynamic planning, problem solving, and strategic planning.

Wisdom is the result of data, information, and knowledge.

Angela Duckworth said the chart should have a straight line. Angela did this survey of children aged 14/ 15 years old. So that means they were the same age. Then if she is right, why did we not get a straight line? When we did the survey, we had 14 adults aged in between 20+ to 50. But our survey did not show a straight line, it had a dip in it.

There is something wrong with doing these surveys. Is it we are using different age groups while doing the surveys or are we doing surveys with less people getting involved? What do we need to do? In one of Angela's experiments, it was said we conclude Grit as it benefits from success seeking because it focuses on long-term targets and perseverance in the face of setbacks. However, further research is required to figure out the connection among grit and some other qualities. For long-term targets, we suggest using the grit-s as a cost-effective indicator of perseverance and ambition (Duckworth and Quinn, 2009).

Data we collected: My experiment needs more work on it to conclude or to get to the answer.

To do this I need more people to do the survey.

to conduct enhanced research into this I will require some funding in order to cater for a bigger, wider spread and more accurate way of data collection.

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