

- **Data:** A collection of measurements gathered during the research process. (page.30)
 - This term was used within the artifact to describe the scientific method. It helped to describe one step of the process in which data needs to be collected in order to find information in order to support or reject/modify the hypothesis.
- **Dependent variable:** The variable that gets measured in a research study (pg.47)
 - This term is used to describe a specific type of variable that should be included when designing a study. It is found under the category of designing a study.
- **Experiment:** A research method that tests causal hypotheses by manipulating and measuring variables (pg.47)
 - This is what the whole topic of the infographic is about and applying the scientific method. We are then connecting our own hypothetical experiment to the scientific method and breaking it down.
- **Hypothesis:** A specific, testable prediction, narrower than the theory it is based on. (pg.31)
 - We are conducting our own hypothetical experiment where we created our own hypothesis. It is one of the middle steps of the scientific method.
- **Independent variable:** The variable that gets manipulated in a research study. (pg.47)
 - This term is used to describe a specific type of variable that should be included when designing a study. It is found under the category of designing a study.
- **Replication:** Repetition of a research study to confirm or contradict the results. (pg.35)
 - This term is used at the end of the scientific method where if we are to publish our results we are to make sure the experiment we conducted is able to be replicated.

- **Research:** A scientific process that involves the careful collection, analysis, and interpretation of data (pg.30)
 - This term is used within the artifact in order to describe a part of the scientific method when conducting an experiment. It is a part of the beginning process of our experiment where we need to consider a research question that we want to conduct our experiment for.

- **Scientific method:** A systematic and dynamic procedure of observing and measuring phenomena, used to achieve the goals of description, prediction, control, and explanation; it involves an interaction between research, theories, and hypotheses (pg.30)
 - This term is what the whole artifact is based on and it is broken down into the different parts of how experiments are conducted.

- **Theory:** A model of interconnected ideas or concepts that explains what is observed and makes predictions about future events. Theories are based on empirical evidence.(pg.31)
 - It is used to describe what a hypothesis is when conducting the scientific method.

- **Variable:** Something in the world that can vary and that a researcher can manipulate (change), measure (evaluate), or both. (pg.39)
 - This term is used to describe how to design an experiment. It is also used in our hypothetical experiment to describe the things we want to conduct our research about.

Articles

In this article (Squire 1987) it is used within the text it is used to describe how case studies work and the benefits as well as the negatives of using case studies. It explains the data that was discovered in this specific case with how it is able to help further discoveries in science but goes on to mention how this type of research is very hard to replicate because it uses unique circumstances that have occurred to people. I thought the book used this data very well in outlining what a case study is and how it is beneficial to the scientific community but also not at the same time because they cannot exactly be replicated because of ethical issues. I can use this information in the future when I want to learn more about a topic because if I learn that the data I want to know comes from a case study I know it cannot always be reliant because they cannot always replicate the experiment.

In this article (Olson, R., Hogan, L., & Santos, L. 2006) it is used within the text to help describe what reactivity is when conducting an experiment. The text describes what reactivity is and then it goes into further detail explaining how this concept has been seen in many studies that focus on the workplace conditions and their productivity. Furthermore it goes on to describe the Hawthorne effect which is the change in behavior when a person knows they are being observed. After reading the research that was conducted I believe that the textbook was able to use it in a very informative way as well as being able to properly provide an example that clearly conveys what reactivity is in research. This research can help me in the future for both my soccer career as well as my work career. This can help in the workplace because as a manager at a pool I have to conduct observations of my lifeguards about their performances in the workplace. When conducting these analyses I have to make sure that I am being very discrete about it and

making sure the person has no clue because if they are to learn I am observing them, then I will never know how they actually perform when I am not around. This is especially dangerous because if they are not a good worker then it is the difference of life or death when it comes to a real life situation of saving someone's life. I can also use this data when playing soccer because if I believe that there is always someone special that I want to perform well for then it will help me to improve my performance and play the best soccer that I can.

Works cited

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