INDIVIDUAL E-PORTFOLIO

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Individual e-Portfolio

The first unit introduced the components of the scientific process and discussed the ethics of doing scientific research. Issues of ethics in research and professional conduct were also presented. Throughout this module, I came to see research as the application of scientific methodologies to the examination of an issue in order to provide useful insights and applicable answers. It was enlightening to hear that the two main types of research methodology are inductive and deductive. The inductive approach to study focuses on how observable events have changed through time, whereas the deductive approach verifies existing evidence (Miessler, 2018). Essential virtual aspects including responsibility, trust, fairness, and mutual respect were identified via the unit's integration with ethical issues throughout study (Dittrich, Kenneally, and Bailey, 2013). Coordination and collaboration at a high level are essential for research involving several groups and disciplines.

Subsequently, in Unit 2, we looked at how to develop study ideas and questions. Also discussed were several approaches to doing and presenting a literature review. From this lesson, I've learnt that carefully choosing a research subject is crucial since it will serve as the study's backbone (Phillips and Pugh, 2010). It directs one's data collection efforts so that useful inferences and suggestions may be drawn from the resulting information. The unit also demonstrated that the relevant research question is a natural extension of the concept introduced in the study's theme.

In the third unit, we looked at the numerous research methodologies that have been utilized, and how most of them need a study design. Investigative studies and deterministic studies are the two most common types of study. In the first case, there is no well-defined issue to solve, but in the later, enough information is provided to validate hypotheses and choose a strategy. Quantitative research focuses on numerical facts, whereas qualitative research emphasizes intangible concepts like subjective experiences and feelings (Atkinson et al., 2021). In addition, I discovered that a combination of the two is often used in research since it yields richer and more actionable results.

In the fourth lesson, we covered a variety of quantitative and qualitative data gathering techniques. I learned what all that meant. First, case studies were defined as comprehensive analyses of certain populations or people. Selected individuals are invited to share their thoughts on a study subject in what is known as a "focus group." Characteristics and numerical values may be seen by qualitative and quantitative observations, respectively (Cherry, 2021). I gained a better understanding of the pros and drawbacks of various data gathering techniques and the considerations to think about when selecting the most appropriate one for a certain research project.

The fifth unit focused on research techniques including questionnaires and interviews. One of the most in-depth approaches to qualitative research is via in-depth interviews, which comprise a free-flowing discourse. On the other hand, surveys are used to generalize about a group by researching trends and attitudes among a subset of that community (George, 2022). Structured, unstructured, and semi-structured interviews all exist. This section also included a listing of the benefits and drawbacks of each research technique, giving readers something to go off of when making decisions about which approach to take.

In the sixth lesson, we covered in depth how to gather data via the use of questionnaires. Many people confuse surveys with questionnaires, but I was able to tell the difference between the two. The course also taught me what makes a good and bad survey. Constructing Survey Questions Representing a Research Context was also discussed (Jenn, 2006). I picked some techniques for spotting ineffective poll inquiries, such as analyzing response rates. Bad survey question characteristics were discussed in this section.

Research validity, inferential statistics, and qualitative data analysis were discussed in Units 7, 8, and 9. I realized the significance of checking the reliability of qualitative data to guarantee reliable outcomes. This emphasizes the need of proper measurements on the part of the researcher (Bevans, 2019). Using population data, inferential statistics allow for the drawing of reliable conclusions (Neo, 2020). After gathering data, it's important to condense it in a manner that makes it easier to draw conclusions (Heale and Twycross, 2015). Finally, it was found that qualitative analysis may be used as a follow-up to any of the other four categories of data analysis (descriptive, diagnostic, predictive, and prescriptive).

The next steps were authoring research papers, continuing education, and leading projects. Research writing classes helped students at all academic levels craft superior theses and capstone projects (Scribbr, n.d.). The section included detailed instructions on how to create a dissertation outline, including sections for an introduction to the subject, a review of relevant literature, a description of the research methodology, a report of the study's results, an analysis of those results, and (Vulpen, 2018). I couldn't have written my dissertation without this plan. Reflection on one's learning loop's subcomponents has been cited as a means of fostering professional growth. Unit 12 wrapped things up with a plethora of details and explanations pertaining to project management. This requires attention to the project's activities and the handling of the inevitable shifts that crop up throughout their execution (Cote, 2019). This was really useful in teaching me how to manage a project from beginning to conclusion, including dealing with unexpected twists and turns.

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