

<https://habdulhak81.github.io/eportfolio/>

This module (Research Methods and Professional Practice) is the last module before the final project in my master's study career. This module included fundamental concepts such as computing ethics, research methodology, and data analysis. Key topics addressed were the code of ethics, ethics in scientific research, information accuracy, formulating research questions and proposals, quantitative and qualitative procedures, secondary data collection, inferential statistics, and qualitative data analysis.

This module has been a valuable learning opportunity for me. I have learned a lot about the ethical obligations of computer professionals. I have also gained a better understanding of the research process and the significance of ethical issues, particularly when human subjects are involved. I learned the significance of adhering to ethical principles when carrying out research, as well as the necessity of being transparent and honest about research methods and outcomes.

The collaborative discussion subjects challenged me to think more critically about ethics in different contexts. Since I came from a different environment where there are no laws, regulations, or awareness about principles like the ethics of computing or data protection, I found myself challenging assumptions and exploring fresh perspectives.

The case studies demonstrated ethical dilemmas in complicated, sophisticated ways that pushed my thinking. Researchers have an obligation to ensure the confidentiality of their participants and to avoid bias in their research outcomes. which is supported by Kapp (2006), researchers should gain participants' informed consent by explaining the objectives of the study, the potential risks and benefits, and maintaining confidentiality (Kapp, 2006). Every researcher's objective should be to reduce bias and ensure the transparency of potential sources (Bero, 2017).

One of the requirements was to conduct a literature review of a topic chosen from a predetermined list. I initially chose a research subject that was broad, which will make it extremely difficult to conduct deep research, especially with 2500 words limitation. However, I got formative feedback from the tutor highlighted that the topic should be very focused and not broad, due to the limits of the required words, and the research should be deep and not superficial. I was able to refine research subject and choose a more focused topic.

Throughout this process, I learned how important it is to refine the research question. Without doing so, I would have encountered significant challenges in addressing a broad topic and would have wasted time attempting to comprehend the complexities of the problem. Asking a small and focused research question leads to a comprehensive understanding and extensive study that leads to valuable results, while a large or broad question will seem easy, but the answer to it is very complicated (Jensen, 2013). Jensen (2013) emphasizes the importance of maintaining focus when formulating research questions. By narrowing my research question, I was able to make better use of my time and effort, allowing me to go further into the topic and deliver a more detailed answer.

This experience has highlighted the significance of refining research questions for the best results. Mayo et al. (2013) emphasizes that poorly formulated research questions can lead to suboptimal study design, analysis, and findings, emphasizing the importance of specific and focused research questions.

In future research projects for instance the capstone project, I will implement this valuable insight by evaluating the scope of topic and seeking assistance when required. This approach will optimize the efficiency of my research methodology, boost output, and accomplish more significant results.

Through the acquisition of knowledge and skills in this module, I now have a better understanding of how to make ethical decisions in computing field. My comprehension has been deepened regarding the ethical implications of research, and the significance of abiding

by ethical guidelines while conducting research. As such, I intend to apply the knowledge and skills I have gained in this module to my future career as a cybersecurity professional, with the aim of utilizing my skills for the greater good, while being aware of the ethical duties that come with such work.

The course's second project demanded the presentation of a research proposal accompanied with an audio presentation. I refined the study topic for a more focused approach, which was well received during the formative evaluation of the research proposal outline, indicating that I was on the right track. Regardless, the finished study proposal was lengthier than expected, raising worries about the presenting time. Despite effectively condensing the proposal, speaking slower than normal during the audio presentation resulted in a 35% increase in time, which have a negative impact on the ultimate result.

Working on this project triggered a variety of feelings. Realizing the research proposal was longer than expected, made me feel apprehensive, angry, and even despairing, especially given the short amount of time left. The severity of the problem, on the other hand, spurred my resolve to find solutions. My steadfast commitment was evident as I spent a sleepless night coming up with innovative solutions.

These emotions had an impact, both positively and negatively. Although the initial negative feelings hampered my progress, it also served as a motivator for finding solutions. The drive and focus that resulted from these emotions allowed me to effectively shorten the proposal. According to Schwarz & Skurnik (2003), both positive and negative affective states can either enhance or hinder problem-solving abilities, contingent upon the attributes of the task.

According to Hong et al. (2023) the ability to monitor one's Metacognitive improves learning and problem-solving. However, excessive monitoring can be detrimental by using cognitive resources to control negative emotions rather than addressing issues effectively (Hong et al., 2023). Therefore, the worry and pressure I felt during the audio presentation hampered my pace, causing me to exceed the time restriction.

The challenges encountered during the research proposal presentation provided great lessons and chances for development. The realization that the proposal was too long and the consequent necessity to shorten it underscored the importance of time management. The slower pace of the audio presentation emphasized the importance of conforming to designated time boundaries.

In the future, I will implement these acquired insights to future tasks to ensure a smoother and more successful presentation. In particular, I shall accord precedence to the time management and adaptability. Furthermore, research into the domain of successful presentation approaches will be done with the aim of improving my proficiency in conforming to prescribed time limits.

References

- Bero, L. (2017) Addressing bias and conflict of interest among biomedical researchers. *JAMA* 317(17): 1723. DOI: <https://doi.org/10.1001/jama.2017.3854>.
- Hong, S., Bae, J., Son, L. K., & Kim, K. (2023) Negative emotion can be “more negative” for those with high metacognitive abilities when problem-solving. *Frontiers in Psychology* 14: 1110211. DOI: <https://doi.org/10.3389/fpsyg.2023.1110211>.
- Jensen, P. H. (2013) Choosing your phd topic (And why it is important): Choosing your phd topic(And why it is important). *Australian Economic Review* 46(4): 499–507. DOI: <https://doi.org/10.1111/1467-8462.12038>.
- Kapp, M. B. (2006) Ethical and legal issues in research involving human subjects: Do you want a piece of me? *Journal of Clinical Pathology* 59(4): 335–339. DOI: <https://doi.org/10.1136/jcp.2005.030957>.
- Mayo, N. E., Asano, M., & Barbic, S. P. (2013) When is a research question not a research question? *Journal of Rehabilitation Medicine* 45(6): 513–518. DOI: <https://doi.org/10.2340/16501977-1150>.
- Schwarz, N., & Skurnik, I. (2003) Feeling and thinking: Implications for problem solving. in Davidson, J. E. and Sternberg, R. J. (eds) *The Psychology of Problem Solving*. Cambridge: Cambridge University Press 263-290. DOI: <https://doi.org/10.1017/CBO9780511615771.010>.