Reflective Piece

https://mutegibeatrice.github.io/module8.html

My journey through the module, Research Methods and Professional Practice: June 2023, has been a transformative experience, challenging me to critically examine various aspects of research, ethics, methodology, professionalism and deductive and inductive reasoning.

This reflection aims to explore the most pivotal aspects throughout this module, drawing connections between theory and practice, and examining their implications on my professional growth and its potential impact on future career prospects.

While my e-portfolio, link is on the heading, includes a breakdown of the units, assessments done, evidence of the artifacts and skills learnt throughout the module.

Reflecting on Collaborative discussions (in unit 1-3 and 7-9), seminars, as well as tutor and peer feedbacks, I understood that learning extends beyond acquiring knowledge; it involves interacting with and understanding the world. For instance, during my participation in the collaborative discussions, it became clear that ethical considerations and professionalism were not peripheral but fundamental to good research design and practice, and neglecting their significance could potentially jeopardize one's research or qualifications (Farrimond, 2013). This insight also encouraged me to approach learning with curiosity and openness, embracing both assimilation and accommodation of new concepts, ideas and point of views.

The significant aspect of my experience was research writing, which entailed qualitative and quantitative data collection and data analysis methods, overcoming ethical dilemmas, the extraction of meaningful insights from raw data, focus on case studies, considerations of validity and generalisability in research. This prompted discussions on biases and the scope of relevance, highlighting the intricate nature of research in computer science. Upon reflection of this experience, I came to recognize the importance of case studies in qualitative research and the significance of selecting appropriate data collection methods, akin to computational problem-solving, where creativity influences methodological choices, all while underscoring the crucial role of ethical considerations. Since the need for transparency, confidentiality, data privacy and fairness in algorithmic decision-making is a pressing concern (Farrimond, 2013); (Turillli & Floridi, 2009); (User research community, 2018).

One of the most challenging aspects was conducting a comprehensive literature review and research. It required a deep dive into existing research, critical analysis, and the ability to identify gaps that could contribute meaningfully to the field. The feedbacks from my tutor emphasized the need for increased critical thinking and focus in my research endeavours, better planning, and improve on my research writing and presentation skills. Constructive feedbacks from my peers and tutor played a pivotal role in encouraging critical examination and refining my understanding of research fundamentals, ethics and professionalism, - while reinforcing the significance of collaboration in the learning process.

The experience also underscored the importance of choosing the right data collection methods, from interviews, observation, focus groups, surveys and questionnaires, - that

align seamlessly with research objectives and emphasized the need to ensure that they contribute meaningfully to the research since a single error can lead to significant consequences (Paradis, et al., 2016); (Axinn & Pearce, 2006); (Bhat, N.D.).

Additionally, covering inferential statistics and Inferential Statistical worksheets facilitated understanding of complex statistical concepts that enabled me to understand complex statistical concepts, decipher the language of numbers and transform data into actionable insights, - a skill that is crucial in academia and the professional realm where data analysis and interpretation are pivotal in deriving insights and making informed decisions (Berenson, et al., 2015).

The seminar discussions with the tutor fostered dynamic discourse and feedback, while the real-world instances of case studies enabled me to dissect and analyse complex problems and identify solutions which is a skill that is indispensable in the computer science field.

Finally, the Professional Skills Matrix, Action Plan, and SWOT Analysis provided a valuable opportunity for me to contemplate the skills I have acquired and the challenges I have encountered during the module, as well as the specific areas that require further development. It was more than just an assessment; it allowed me to engage in self-reflection and consider what is essential for future success.

This journey has been instrumental in honing my research skills, understanding research ethics, and nurturing professionalism within the realm of computer science. Not only did I encounter challenges and revelations that prompted deep self-questioning and evaluation of my learning process, but also, I got to cultivate my understanding of

project management and risk mitigation, skills that are highly relevant in computer science and beyond. Additionally, the ability to manage risk is crucial in a field where technology is constantly evolving. Identifying potential risks and implementing mitigation strategies can mean the difference between project success and failure (Farrimond, 2013); (Oates, et al., 2012); (Resnik & Elliott , 2019); (Shamoo & Resnik, 2009). This has equipped me with the knowledge and skills to navigate uncertainties and lead projects to successful outcomes.

In conclusion, engaging with the units and artifacts: collaborative discussions, quizzes, lectures, seminars with tutors, feedbacks from the tutors and peers, writing of literature review and research proposal, analysing of case studies, and readings from recommended sources, - throughout this module really shaped my understanding of research ethics, the scientific method, deductive and inductive reasoning, and professionalism within computer science.

This critical reflection has allowed me to delve deeper into the significance of each module and its impact on my learning journey. It has reinforced the importance of critical thinking, ethical considerations, effective communication, and continuous learning in computer science. As I move forward in my career, I will carry these lessons with me, knowing that they will be invaluable in shaping my future success.

Furthermore, the content within my e-portfolio highlights a transformative journey marked by growth and development in research skills, critical thinking, and professionalism within the field of computer science.

This journey has provided valuable insights into the significance of cooperation, the scientific method, and the importance of open-minded learning, all of which will serve as guiding principles in both my academic and professional pursuits.

References

Axinn, W. G. & Pearce, L. D., 2006. *Mixed Method Data Collection Strategies.* New York: Cambridge University Press.

Berenson, M. L., Levine, D. M. & Szabat, K. A., 2015. *Basic Business Statistics.* 13th ed. Harlow, UK: Pearson Education.

Bhat, A., N.D.. *Qualitative Research Methods: Types & Examples.* [Online]
Available at: https://www.questionpro.com/blog/qualitative-research-methods/
[Accessed 1 September 2023].

Farrimond, H., 2013. *Doing Ethical Research.* New York: Palgrave Macmillan.

Oates, B. J., Griffiths, M. & McLean, R., 2012. *Researching Information Systems and Computing.* 2nd ed. London: SAGE.

Paradis, E. et al., 2016. Design: Selection of Data Collection Methods. *Journal of Graduate Medical Education,* 8(2), pp. 263-264.

Resnik , D. B. & Elliott , K. C., 2019. Value-entanglement and the integrity of scientific research. *Studies in History and Philosophy of Science Part A,* Volume 75, pp. 1-11.

Shamoo, A. E. & Resnik, D. B., 2009. *Responsible conduct of research.* 2nd ed. New York: Oxford University Press.

Turillli, M. & Floridi, L., 2009. *The ethics of information transparency.* [Online]
Available at:
https://www.researchgate.net/publication/226497023_The_ethics_of_information_transparency
[Accessed 10 August 2023].

User research community, 2018. *Managing user research data and participant privacy.* [Online]
Available at: https://www.gov.uk/service-manual/user-research/managing-user-research-data-participant-privacy
[Accessed 10 August 2023].