

## Individual Reflection

Module: Research Methods and Professional Practice

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ePortFolio web page address: <https://nithya8483.github.io/ePortfolio/>

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## **1.0 Introduction**

As a Master's student in the course of Artificial Intelligence (AI), the module "Research Methods and Professional Practice" has been a crucial step in my academic journey. This module has provided me with a comprehensive understanding of research methodologies, ethical considerations, and risk management in the context of computing. In this reflection, I will discuss my learning experiences and how it has shaped my perspective and skills in the field of AI research (Bubnys, 2019).

## **2.0 Description**

Throughout the module, I engaged in a variety of activities and tasks, ranging from understanding ethical considerations in computing, mastering research methodologies, and delving into statistical analysis techniques. These activities included studying about research questions, literature reviews, and research proposals, as well as exploring research methods such as quantitative, qualitative, and mixed methods research. I also learned about data collection techniques, including interviews, surveys, observations, and case studies. Additionally, I completed summative assessments, conducted a SWOT analysis, and developed an action plan for my professional development in the field of computational research.

## **3.0 Interpretation**

The most important and relevant aspect of my learning was the in-depth exploration of ethical considerations in computing. Understanding the principles of informed

consent, privacy, and responsible conduct of research is critical, especially in a field that deals with sensitive data and advanced technologies. This learning has helped me appreciate the importance of conducting AI research in an ethical and responsible manner.

Another significant aspect of my learning was the exposure to a wide range of research methodologies, from quantitative to qualitative and mixed methods. Knowing when to apply each methodology and understanding their strengths and weaknesses is invaluable in designing robust research projects. Additionally, I gained knowledge in data collection methods, which deepened my understanding of how to gather and analyse data effectively in AI research.

This broadened my perspective and provided a more comprehensive framework of the importance of ethical research practices and expanded my knowledge in research methods. Moreover, the module reinforced the idea that research is a dynamic and evolving field. It emphasised the need to stay current with the latest tools, technologies, and ethical standards. This has changed the way I think about my role as a researcher and the need for continuous learning and adaptation (Chang, 2019).

#### **4.0 Outcome**

What I have learned from this module is the importance of meticulous planning and organisation in research. The SWOT analysis and action plan I created have become valuable tools for my personal and professional development. I've also learned to manage my time more efficiently.

Moving forward, I need to find out more about advanced statistical and data analysis techniques in AI, such as Bayesian analysis and big data analytics. These skills are increasingly in demand in the AI field. Additionally, I plan to apply the knowledge gained from this module in my professional life by incorporating ethical considerations into my research and maintaining the highest standards of conduct. I will also continue to seek opportunities to improve and share knowledge with the AI research community.

### **5.0 Emotional Response and Analysis**

At the beginning of the module, I felt excited and enthusiastic about delving into the world of research methods. The prospect of acquiring new knowledge and skills in a field I am passionate about was refreshing (Lim et al., 2021).

As the module progressed, the volume of information and the complexity of some topics occasionally led to feelings of frustration and overwhelm. Juggling work, studies, and family responsibilities often made it challenging to find the time needed to meet the module's demands.

Despite the challenges, I remained curious and engaged in discussions, listened to seminars, and various assignments. The interactive nature of the module provided opportunities for mutual learning and the exchange of diverse viewpoints, which kept me motivated.

Learning about research methods and ethics in computing, as well as improving my statistical analysis skills, made me feel empowered. I realised that these skills are valuable tools that can open doors to more meaningful and impactful research.

Completing the summative assessments, including the literature review and research proposal presentation, brought a sense of relief and satisfaction. These milestones marked the culmination of my efforts and showcased my growing proficiency in research methods.

The SWOT analysis and action plan activities encouraged self-reflection (Addams & Allfred, 2013). They made me realise the need to adapt to better manage my time and energy effectively, aligning my personal and academic responsibilities.

## **6.0 Learning and Changed Actions**

The emotional rollercoaster experienced during the module played a significant role in shaping my learning and driving me to change certain actions (Johansson & Svensson, 2019).

Frustration and overwhelm taught me the importance of effective time management. I recognised that better planning and prioritisation were essential to balance my responsibilities as a working mother. I started allocating specific time slots for study, assignments, and family, which improved my efficiency.

The feelings of curiosity and empowerment encouraged me to persist even when the module became challenging. I learned that persistence is the key to overcoming hurdles and mastering new concepts. This newfound tenacity pushed me to keep going when faced with complex statistical analyses or demanding assignments.

The self-reflection prompted by the SWOT analysis and action plan revealed areas that needed improvement (Addams & Allfred, 2013). This led to changes in my study routine, making it more adaptable to my energy levels and external commitments. I

also adjusted my approach to certain assignments, tackling them in smaller, manageable sections to reduce feelings of overwhelm.

My learning during the module has led to a more holistic approach to my studies and life. I now recognise the interplay between emotional well-being, effective time management, and academic success. This realisation has influenced not only my academic actions but also my personal and professional decisions.

## **7.0 Conclusion**

In conclusion, this module brought a transformative experience that not only expanded my knowledge but also reshaped my approach to learning, time management, and emotional resilience. The emotions I experienced, both positive and challenging, contributed to a deeper understanding of my capabilities and the importance of adapting to thrive in academic and personal pursuits and has empowered me to be a more effective and resilient learner.

**References:**

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