

Module Reflection:

Reflection for the Module Security and Risk Management

Tobias Zeier, the 21st of October 2024
e-Portfolio: <https://tobizeier.github.io/>
University of Essex Online

This reflection covers what I have experienced in the course of the second module on my journey to my master's degree. The module has covered content in the discipline of security and risk management. My whole e-Portfolio and all the work I have created during this module can be found here: <https://tobizeier.github.io/>

Expanding my knowledge in Security and Risk Management

When we first started this module, I thought I would know quite a few things about security and risk management (SRM) since I am a member of the IT contingency organisation with my current employer and therefore, I have received some extra training and have participated in several tabletop exercises over the last 4 years. Even though Edzén (2014) states that tabletop exercises do not accurately reflect the reality of wicked problems and that there are better alternatives for exercises in emergency management, I find them highly useful because we not only learn about technical problems which can occur but more importantly, we get used to emergency situations and how to manage them. After the first few units however, I had to admit to myself that there was a lot in this field that I did not know yet. I was surprised at how many different frameworks there are for modelling and assessing risks. My first key takeaway from this module is the differentiation between qualitative and quantitative risk modelling frameworks. Learning about this taught me how difficult it can be to quantify different threat aspects to calculate a score based on mathematical formulas (Wunder et al., 2024). When I first read about the Common Vulnerability Scoring System (CVSS), which is designed in a way that I have just described, by quantifying to perform a calculation, I had the impression that this system was somewhat superficial and rather simplified. Only after I acquired more knowledge about it, I came to conclusion that creating a threat scoring system is rather difficult. It cannot be designed too complex because it would lead to frustration for the people using it however, it still needs some depth and different viewpoints to cover as many aspects as necessary.

Later in the module I encountered Monte Carlo simulations and Bayes theorem for the first time, although I had already heard about their existence, I had never applied them in practice. The second assignment was insofar quite challenging, as I was not familiar with Monte Carlo simulations prior to that module and hence was struggling to create a simulation for the task at hand from scratch without having any values and numbers to work with. Similar to the first module, where we had to write a sorting algorithm in Python, I was breaking my head about where to start and how to tackle the challenge. Once again, I have learnt that I simply need to start somewhere. Of course, I gather a few basic ideas first, so that I do not have to revise the document umpteen times, but many thoughts and ideas only arise once I have started writing and I am working intensively on the task.

As for the disaster recovery and business continuity part, I was able to take away some interesting and crucial ideas. Since there is a dedicated department in our organisation, dealing with exactly these topics and based on that setting up

infrastructures, I usually do not deal with the design and implementation of such solutions. Nevertheless, I regard it as helpful knowledge which will add to my broader understanding of the whole topic.

I find it extremely valuable to not just learn certain terms such as recovery time objective (RTO) or recovery point objective (RPO) but to be tasked to apply them in an assignment. That way I do not only learn what the term means but more importantly I can form a connection to a scenario and understand its applicability. The same applies for the e-Portfolio, I enjoyed learning using GitHub, connecting my Visual Studio Code with it and build my repository, even though it took quite some time to understand it, I can now follow when my team members are talking about branches and merging.

Group assignment

In this module I experienced my first group assignment with the University of Essex Online. We were asked by the tutor about our preferences before he went on to form the groups. Unfortunately, I did not take the opportunity to raise my preference, a mistake which I will avoid for the next group assignment because I strongly believe that my group would have done better if I had taken the chance and select my group members. We started as a group of four people which is the perfect size for effective groups (Thom, 2020). Unfortunately, another group was dissolved, which meant there was one person joining our group after we already started with the project. Group work offers several advantages, such as fostering social skills, enhancing learning, and promoting accountability among students. It also prepares students for real-world collaboration and provides valuable formative feedback. However, there are challenges, including the difficulty of fair assessment, with issues like free-riding and bias in peer assessments. Additionally, students often find the criteria for evaluating individual contributions unclear, which can lead to dissatisfaction with the grading process. Despite these drawbacks, group work remains an important tool for developing key skills and promoting cooperative learning (Forsell et al., 2020). I certainly enjoyed working with people from other countries as well as other cultures, all group members were located in different countries. On the other hand, it made the collaboration more difficult because we had to find timeslots which were suitable for different time zones. I was appointed to be the meeting manager which meant I was responsible to find exactly these slots, schedule group meetings and make sure everyone got the opportunity to contribute their ideas. Furthermore, my task was to create a risk overview, rate these risks and come up with possible mitigations. This part of our work was one of the very few that our tutor found to be good. Luckily another group member and I were insisting on using this piece of work in our essay because there were different preferences in our group. This ended in exchanging an almost ready to submit document with a completely new one. I strongly believe our group would have gotten a better grade if we would have submitted the first document. However, I am still thankful for this experience since it made me learn that sometimes I must insist more strongly, when I am certain of my opinion. As an action plan, I will closely observe the group dynamic in our next group assignment and raise my opinion more clearly, should I encounter another similar situation. This also applies for my professional life, where I often hold back with my concerns, opinions and ideas because of fear of disturbing the group harmony as well as the dynamic. I enjoy collaborations which are highly efficient and do not like to debate over and

over about specific aspects. Though, as I have learned from this assignment, sometimes it is worth spending time to discuss and standing up for my own opinion.

Word count: 1216

References

Edzen, S. (2014) 'Table-Top Exercises for Emergency Management: Tame Solutions for Wicked Problems', *2014 47th Hawaii International Conference on System Sciences*. Waikoloa, HI, USA, 6-9 January. IEEE. 1978-1985 DOI: <https://doi.org/10.1109/hicss.2014.250>

Wunder, J., Kurtz, A., Eichenmüller, C., Gassmann, F., & Benenson, Z. (2024) 'Shedding Light on CVSS Scoring Inconsistencies: A User-Centric Study on Evaluating Widespread Security Vulnerabilities', *2024 IEEE Symposium on Security and Privacy (SP)*. San Francisco, CA, USA, 19-23 May. IEEE. 1102–1121. DOI: <https://doi.org/10.1109/sp54263.2024.00058>

Thom, M. (2020) Are group assignments effective pedagogy or a waste of time? A review of the literature and implications for practice. *Teaching Public Administration* 38(3): 257-269. DOI: <https://doi.org/10.1177/0144739420904396>

Forsell, J., Forslund Frykedal, K., & Hammar Chiriac, E. (2020) Group Work Assessment: Assessing Social Skills at Group Level. *Small Group Research* 51(1): 87-124. DOI: <https://doi.org/10.1177/1046496419878269>