**What have I learnt this week?** This week I have learnt about three ways to represent complex adaptive systems, which include system dynamics models, network models and also agent based models.

**What do I 'now know' that I did not before?** I now know what system dynamics models and also what agent based models are as I didn’t know what they were before this week. System Dynamic Models are models that help understand the nonlinear behaviour of complex systems by utilising things such as feedbacks and delays. I now know that agent based models cover a collection of agents who make decisions within the system after evaluating the situation.

**What insights have I gained?** One of the main insights I have gained is these models can be applied to big current real world situations. For example, we have seen agent based models be applied to potentially one of the biggest world issue currently which is COVID 19. By using agent based models we have seen different scenarios of solutions to the virus and the various impacts that it can have on the whole world. Another insight I have gained is network models are increasingly being used in the world.

**What are (my/the) perceived strengths and weaknesses that I have observed?** One strength that I have observed is in terms of what was being taught about network systems, I learnt about it pretty well.

Another strength of mine is I understood the link between agent based models and preventing COVID 19. This is due to two factors which include myself having a deep interest in the prevention of COVID 19 as well as the material covered in class to be concise and easy to understand. This is because I learnt about nodes, network structures and examples of networks etc. during the HSC Course of Information Processes Technology.

One of my perceived weaknesses was originally I didn’t understand much about what system dynamics models were and what its perceived purpose is etc.

**What were the challenges I have encountered/observed and how well (did I/my team) handle them?** As mentioned above the main challenge that I encountered was I didn’t understand system dynamics models. This was due to the fact that I have had no exposure to them in the past throughout my learning experience. The situation was handled well though, because I did further research into what system dynamics models are and its functionalities etc.

**What would I do better next time and with what anticipated results?** One of the things that I could have done better next time is I should have done some pre reading before this week’s workshop. By doing this will mean that I would have understood more information about system dynamic models and would have saved me time in the long run as I wouldn’t have needed to do extra research.

**What theory proved to be useful and why? What have I learnt from this?** The theory that proved to be the most useful was understanding agent based models because I was able to see how it can be used to show how to prevent real world issues by mapping out different situations and scenarios.

Another bit of the theory that proved to be useful is comprehending network models. By learning different types of networks such as LinkedIn will be able to increase the connections of individuals, which increases the likelihood of finding jobs controlling the worldwide issue of unemployment.