

# Teaching a Computing Programme using two Different Delivery Modes - Staff Perspectives from a New Zealand Polytechnic

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## Introduction

- The New Zealand Diploma in Information Systems (NZDIS) is a one-year level 5 diploma worth 120 credits for entry level students in computing.
- Medium impact blended delivery (predominately face-to-face with some online activities) was used in Semester 1, 2021.
- The Covid-19 lockdown in August forced to move the classes from campus to online delivery in Semester 2, 2021.
- The purpose of this research is to compare the delivery of NZDIS in semester 1 and semester 2, 2021.
- Teachers perspectives of delivering the programme and academic advisor perspective of supporting them.
- We conclude this piece of research by identifying good teaching and assessment practice for the future.

## Background

- Seven courses, structured into six 15-credits courses and one 30-credit project course were delivered in each semester of 2021.
- Students gain broad, generalist understanding of Information System (IS) skills, soft skills and technical skills and knowledge to be employed in a range of entry level IS roles.
- Semester 1, 2021 – 34 out of 56 students were under 25 age group.
- Semester 2, 2021 – 32 out of 67 students were under 25 age group.
- Although this programme is aimed at under 25 age group there is a large variance in the composition of the students background.
- Majority of under 25 students require assistance in developing self-management skills (i.e., class discipline and time-management).
- These skills are integral part of the programme graduate outcomes and important for student success.

## Comparison



(Public Domain Vectors, 2018)

### Semester 1, 2021

- easier to teach mathematics using white board.
- teaching hardware hands on was in a designated network laboratory.
- students were able to build real network as they had access to all hardware required.
- more face-to-face interaction.
- students progress was seen passively.
- classroom management of a multi-faceted topic was difficult as theory and activities needs to be interleaved for each subtopic.
- the structure of students coming to campus assisted them with the classroom discipline and time management.
- device and internet issues were very limited as most of the time students were on campus and IT support was also available.
- all 13 assessments were delivered as planned.
- group assessment were used as it was easy for students to collaborate at same time.
- assessment 1 of the programming course consisted of 3 timed tasks which were logistically time consuming.
- project plan was not adhered to despite advise from the teachers.



(Pixabay, 2020)

### Semester 2, 2021

- teaching mathematics online required the development of additional resources.
- teaching hardware online was impossible.
- building real network was not possible as all the students had no access to the required hardware.
- less face-to-face interaction (i.e., students turn their camera's off at all times).
- students progress was only seen if a student took action.
- classroom management of a multi-faceted topic as was easier through the use of Zoom application breakout rooms.
- many students struggled at home with competing demands for their time.
- device and internet issues were common and IT support was unable to help. Total 7 students requested deferral to next semester.
- 5 assessments out of 13 had to be reconfigured for online environment.
- group assessment had to be changed as there were issues with students communication and availability.
- assessment 1 of the programming course needed careful planning, writing 2 version of 2 tasks, redesigning of answer sheets and using groups option in Moodle. However, it was easier to run in an online environment.
- students perception that project management only applies to group work.

## Conclusion

- Assessment 1 of programming course will remain online.
- The 30 credit project course work will stay online for part-time students.
- 3 courses did not require any change therefore they can remain online.
- Develop capability in using Moodle features more efficiently for both teaching and assessment delivery.
- Record small chunks of theory and short demonstration videos. Make them available via Moodle course page. Students can view them at their own time and pace in case if they miss the class or are struggling with the concepts.

## References

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