Fostering active assessment: re-convergence of student learning profile and assessment methods

Research team

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Dynamic Learning Demands

- Tertiary education is being challenged to become more open with portfolio of programmes that is accessible and reflective of the real-world that we live in

- The critical areas studied are current assessment designs to test student memory and authenticity of valid assessments.

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Current practice

- Educational assessment in education is the systematic way of measuring student performance on their knowledge, hand skills and attitude to ascertain their level of achievement during the course of their study in the chosen field.

- The assessments are based on knowledge, skills and application of knowledge and skills as established by New Zealand Qualification Authority.

- Assessment design measures students with pre-specified questions or activities under similar conditions however it does not include the type of learners undertaking the assessment and the diverse learning abilities.

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Research questions

Are memory-based assessment methods used in tertiary education institutes valid for today's students?

- How valid is memory-based assessments in tertiary education programmes of study?

- What is the impact of the ever-expanding information technology on student memories?

- What are the barriers to implement authentic assessment in vocational education?

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Literature review

- **Memory** – Willis (2007) suggest that there are many types of memory from the basic of environment through patterning and connection to rational memory and ultimately to long term memory shortage.

- **Information technology -** Marc Andreessen and a colleague developed NCSA Mosaic, the graphic web browser that opened the world up to the potential of the internet in 1994 and was launched for public access and use and to date billions of people around the world share information through this digital platform using their computers.

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Literature review

- **Assessments** - The introduction of the internet has created a divergence between current students and the methods of assessment practiced in traditional programmes of study. As the education sector is being made accessible to an ever-growing pool of students, one of the biggest attitude changes has to occur within the mentality of assessors and the administrators of assessments. .

- The key to creating a convergence of student learning styles and assessment methods will be putting students at the foremost and adapting the assessments to meet student profile. Zaleza (2022) rightly points that education pedagogies must strengthen systems of knowledge measurements and assessments need to be appropriate, meaningful, carefully thought out and develop the talents that each student brings.

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Literature review

- ***Memory based assessments -*** Willis (2007) suggests that memory is classified in a number of categories from the basics of being aware of our environment, rote memory, short term memory, rational memory and finally long-term memory. Memory is further complicated by individual neuro-diversity.

- Literature on neuro diversity is limited and covers mostly people who are autistic, dyslexic and those suffering from dyspraxia, however we are opening the terminology for people who are not neuro-typical and just think differently from others in the group. Austin and Pisano (2017) suggest that neuro-diverse people have extraordinary skills and yet often struggle to fit the general profiles.

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Literature review

- ***Authentic assessment -*** Authentic assessment is described in a number of ways; however, the defining characteristic is being in the real world within the complexities of its social and economic environment.

- Raymond, Homer, Smith and Gray, (2013) argue that assessment is a fundamental aspect of learning in real life and simulated situations enhancing deeper learning. They further suggest that authentic assessment requires students to demonstrate the same competencies, a combination of skills, knowledge and attitudes that they need to apply in a real workplace.

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Literature review

- ***Consolidated Review -*** Traditional assessments are designed for wide applications and is almost universal practice to have time limited controlled memory-based examinations. This practice is derived from the assumption that to have a knowledge measurement that is subject to comparative student performance, there has to be scalable processes and non-negotiable conformity to standardised knowledge measurement tools.

- The distractions imposed by the digital media platforms and the better understanding of learning styles of neurologically diverse students requires innovative assessment designs that promotes stimulation of memory through familiar objects.

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Methodology

The methodology adopted is quantitative as the data required for this research is stored in programmes and institutional documents.
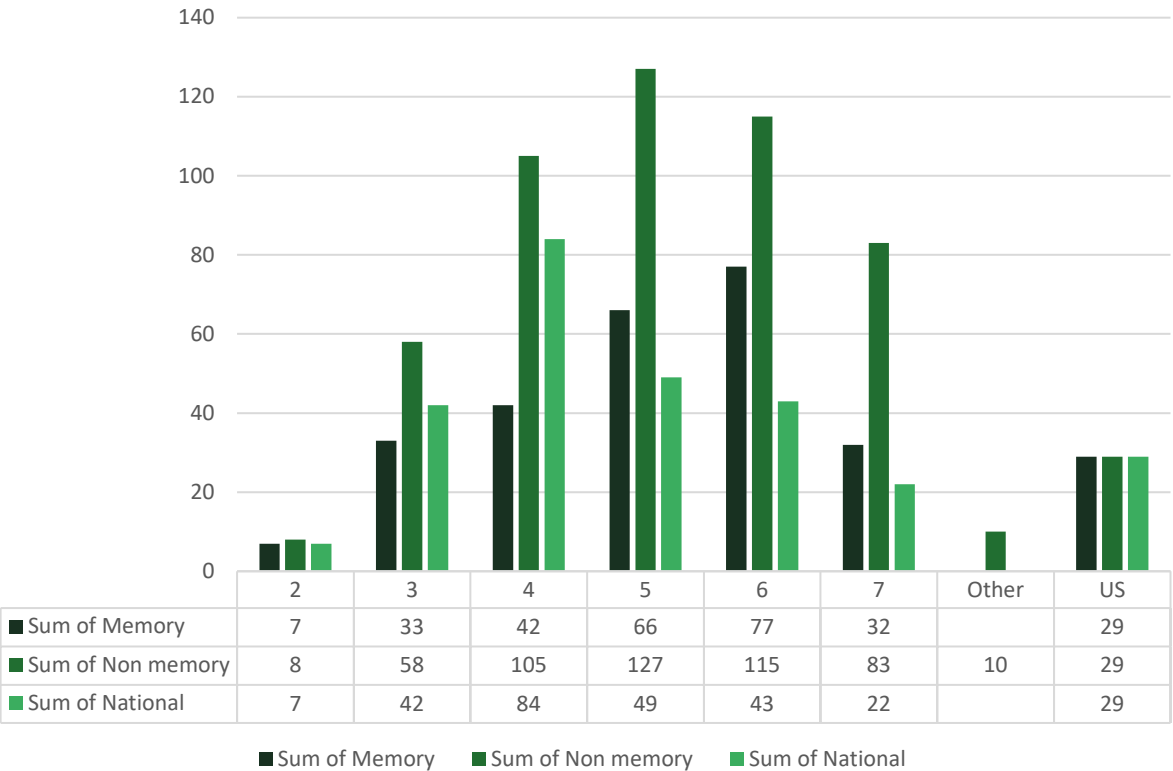
Methods

- Document analysis; data mining using a systematic review of control documents related to programmes of study and institutional policies, procedures and institutional documents.

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Findings

- **National assessments:** The assessments are set by a panel appointed by the professional body and may include internal assessments with a small weighting. It culminates with normally a 3-hour examination at the end of the semester. Samples of previous examination are archived centrally and students can review the previous examination papers to prepare for the own examination.

- **Provider qualifications** - Assessment methods are designed by the teaching team and most course assessments include a range of methods that may include group work, class tests and individual assignments.

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	2	3	4	5	6	7	Other	US
■ Sum of Memory	7	33	42	66	77	32		29
■ Sum of Non memory	8	58	105	127	115	83	10	29
■ Sum of National	7	42	84	49	43	22		29

■ Sum of Memory   ■ Sum of Non memory   ■ Sum of National

This graphical representation demonstrates the distribution of types as assessment from level **2 to 7.**
Number of courses analysed: **593**
Memory based assessments peak at level 6.

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Discussion

- Assessment activities need to shift away from ideological towards a more inclusive humanitarian approach challenging academics to take an active evolution of their assessment philosophies.

- The literature review establishes that students have a range memory retention levels depending on their immediate environment, emotions and self-esteem, social, cultural and physical needs.

- Team work and group knowledge development are now seen as better learning style for most cultural groups.

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Opportunities for improvement

- As we learn more about learning styles, memory behaviour, multi-sensory resources and personal beliefs, the pressure on validity of assessments and design increases in complexity.
- Awareness of the cohort of students learning styles and well aligned assessment activities support students' achievement and ensures no student is disadvantaged.
- Students show what they have learned in more than 1 way.
- Assessments are learning experience.

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Summary

Current student learning and retention

Increase in online information – reduction in student information retention

"Maybe there is a better way to do things" Andreessen (2020)

Pre 1994 Converged learning and assessment methods

Divergence point 1994 Introduction of internet

Memory-based Assessment methods

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Conclusion

- Teachers and educational policy makers need to fully understand student memory recall ability and acquisition of knowledge.

- Growing evidence shows that long final examinations are not the best tool to measure students learning.

- A deficiency in the ability of student cognitive recall does not indicate that the student will have an inability to perform tasks requiring knowledge.

- There has to be a balance in types of assessment in which student has an opportunity to demonstrate their learning within their strong learning domain.

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Ngā mihi

Thank you for participating

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