

Virtual Collaboration and Groupwork in Online Learning and Assessment

An ACODE Whitepaper – July 2021

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Background

COVID-19 brought many challenges for higher education that are still being worked through. For our students and educators, collaboration and groupwork were forced to take on a new virtual dimension. Face-to-Face student collaboration and groupwork strategies needed to be re-envisioned for the virtual environment and given institutions commitment to equity, it is clear that there would be challenges that needed to be addressed in the move to online with the million-dollar question being how can we continue to reap the benefits of collaboration and groupwork for students' learning in an online or blended environment?

Introduction

This white paper is a consideration of factors raised by universities prior to and during the ACODE 83 Workshop on Virtual Collaboration and Groupwork in Online Learning and Assessment, held online in April 2021. The workshop offered the opportunity for participants to share and discuss how things like collaboration and groupwork in learning and assessment may have changed due to the rapid shift online. It also considered the affordances of online and blended environment, and more specifically what equity/inclusion challenges have arisen from this, and how various universities have addressed these challenges.

Prior to the workshop, a 10 question survey was distributed to the ACODE Membership with a focus on gaining insights into the collaboration tools currently being used in the learning and teaching context. This information was drawn-on during the workshop and used as discussion starters. The survey was completed by 32 Australasian Universities. An extension activity was also conducted during the Workshop that sought to identify further issues organisations faced in the design and delivery of virtual collaborative learning.

This paper will first share insights from the initial survey, followed by further insights gained from the extension activity. It will conclude by drawing some high-level ideas drawn from both activities.

Pre-Workshop Survey Findings

The majority of responding institutions are heavily invested in centrally funded tools with Learning Management Systems, Zoom and Microsoft Teams being the key centrally funded tools available and used by staff and students for collaboration online (Figure 1). Figure 1 shows the range of collaboration tools available for use by institutions. These ranged from Discussion Forums in the ubiquitous LMS (although 2 institutions did not identify discussion forums as a key feature) to a broad range of less widely used tools.

The centrally funded tool/s used for staff and student collaboration online

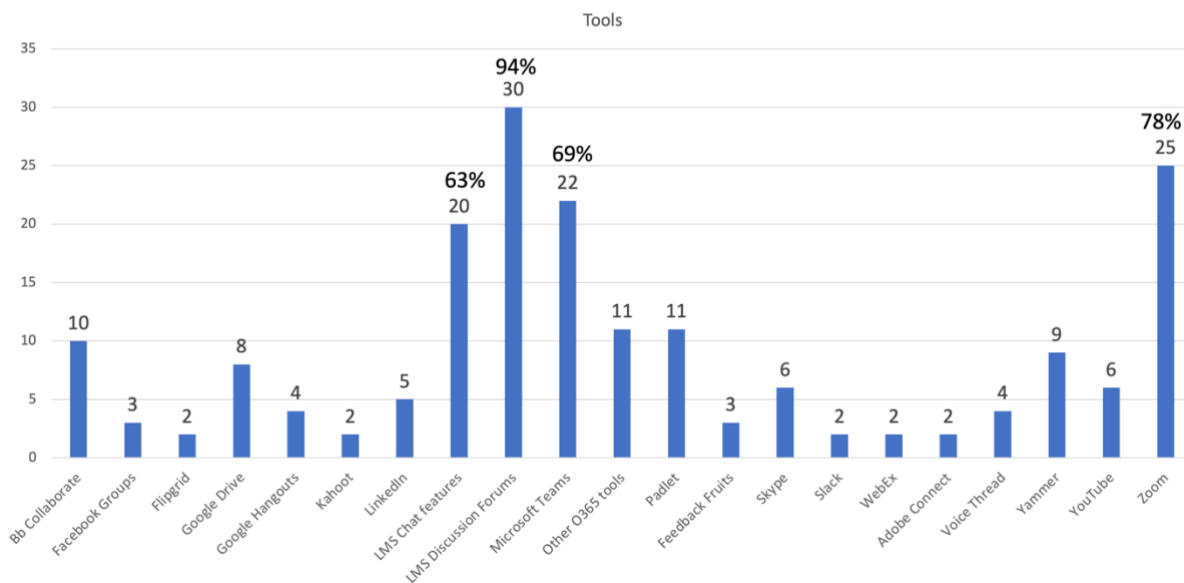


Figure 1: The centrally funded tool/s used for staff and student collaboration online.

When asked, institutions identified that the most widely used of these tools was the LMS Tools/Discussion and Zoom (Figure 2). Comparatively, despite institutions providing central funded tools, not all teaching staff make use of the tools available. For example 30 institution (Figure 1) indicated they provide LMS Discussion Forums, but only 19 of these institutions (Figure 2) indicated that the LMS discussion tool was widely used. A similar patten is seen for Zoom.

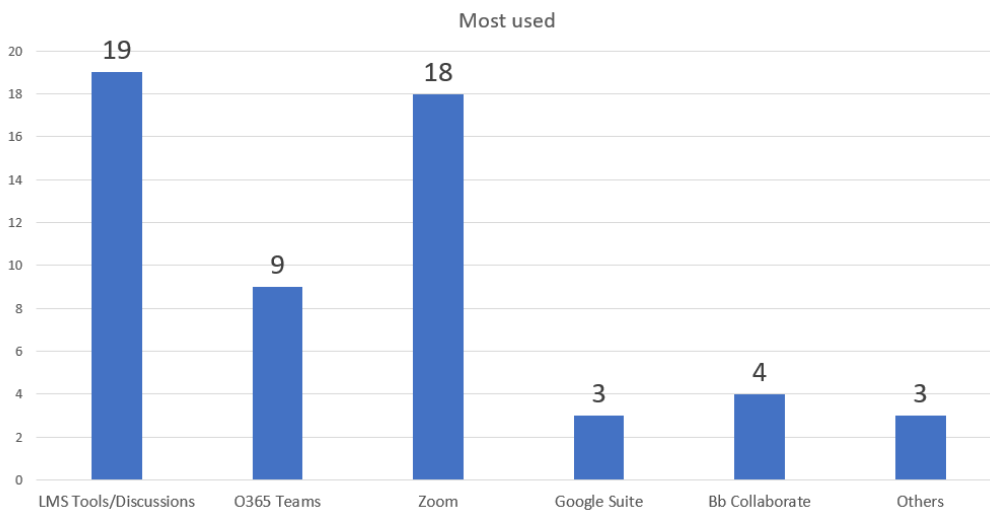


Figure 2: Central funded tools most widely used.

Tools That Could be Better Utilised

Of the tools listed, a high proportion of respondents, when asked which tools could be better utilised, identified the potential of Microsoft Teams for collaboration, highlighting the following:

- The potential levels of flexibility and sophistication, but there is so much in it we are only just scratch the surface.
- Some are particularly interested in Teams because this is what they expect their students will use in the business world.

- The integrated nature of Teams and its capacity as a collaboration platform, including Stream, document sharing, online meetings, and other features, providing both document-centric and "conversation-centric" collaboration capabilities.
- Some noted the advantage of persistent chat, video calls, screen sharing, breakout rooms, user tagging, files storage, assignment scheduling and integration with other MS O365 applications e.g. One Note, FlipGrid, Whiteboard, et al.
- Three institutions noted that Teams is growing in popularity and will continue to grow.

Technical Challenges

Despite the potential advantages of Teams, respondents also highlighted the technical challenges their institutions were facing in implementing Teams:

- Issues of dual tenancy were raised that make it harder to integrate students' data into 'Class' teams.
- It is in the early stages of rolling out at the institution and there are still a number of technical issues with making it available in the way we want for the purpose of learning and teaching.
- For some it's available but not being used much yet, while some are still evaluating it as a possible virtual classroom solution for the whole university.
- One person mentioned the non-persistent nature of some tools (whiteboard etc.) that require groups to prepare documents to share, leading to the loss of work if one forgets to save.
- If Teams was properly supported for, teaching, development, misc meetings etc., all would be using same tool which would lessen the support load across the uni and potentially efficiency would increase,

Main Business Drivers

The main business drivers for the combination of virtual collaboration and teamwork tools relate to prior investment in and the integration of those systems used by students and staff. Other drivers were pedagogical in nature concentrating on learning and teaching and graduates being job ready. For example:

- LMS integrations were seen as really important.
- Existing availability in the LMS and existing partnerships with Microsoft for enterprise-wide productivity software that are centrally supported.
- Teams was highlighted due to all Staff and Students having access to Office 365 and Zoom and because they are reliable.
- Every unit of study has an LMS course, so by default discussion boards become a place for study.
- Finances and a disinclination to embrace additional or alternative tools at this time.
- Emergency remote teaching and cost savings, as many already have the O365 tools and LMS
- 21st Century skills as part of the core graduate learning outcomes, to ensure our students are job-ready. Moving away from boutique tools to more professional tools.
- A TEL strategy and set of standards for digital learning that ensures resources, activities, assessment, support, and technologies are current, relevant, purposeful, and supported.
- The focus on active, collaborative and authentic learning, teaching and assessment

Primary Tools Used for Assessment

When asked about tools used for assessment, the trend for the use centrally funded systems was consistent with LMS Features, Zoom and Teams topping the list. Of course, new players in this field, tools like Teams and Feedback Fruit, have only appeared in the L&T market over recent years.

- LMS Features x29 (91%)
- Zoom for oral presentations and monitoring x6 (19%)
- Teams x4 (13%)
- Bb Collaborate x3
- FeedbackFruits x2
- Other single responses including, Cadmus, Perusall, Mural and Google

Student Equity Issues

Given the rapid move online and institutional requirements to support student equity, the survey asked how institutions assessed collaboration/assessment tools for digital equity purposes? The respondents indicated that assessment strategies ranged from 'poorly and ad-hock' (6 responses) to active compliance with WCAG standards (4 responses), the use of the ASCILITE TELAS Framework and/or compliance with other country laws and standards was seen in 3 responses.

Five respondents (16%) explicitly mentioned that technology committees took an active interest, with input from accessibility/disability groups, who consider aspects such as bandwidth and internet availability. In another three cases LMS tools needed to be deemed accessible. This meant actively working with vendors, testing etc., and using tools like Bb ALLY to provide alternatives formats.

Other interesting elements mentioned by multiple institutions included: The testing for visual and auditory accessibility; Testing of bandwidth and computer system requirements; Small group pilots with a number of processes, checklists and partnership with other business areas to assess suitability; Regular review mechanisms, guided by policy and procedures; Evaluations when considering new tools, including specific questions in the procurement process; Considering closed captions and transcription options; Bandwidth was also considered for those who have internet issues; and the potential the usability features in MS Teams provide in this space.

Other Equity Considerations

In considering other equity factors, beyond access, when one plans for technology integration, it was pleasing to see that six institutions (19%) explicitly mentioned that they did consult with Access, Wellbeing and Equity colleagues, Disability Services and student representatives for requirement gathering and evaluation process. Five institutions also actively conducted academic PD in the context of student diversity, including through teaching Universal Design for Learning (UDL), multiple representations of concepts, celebrating cultural/social/gender diversity in teaching contexts, understanding students' needs/backgrounds, negotiated curricula and assessment. Another three institutions explicitly referred to Digital Literacy assistance and good orientation for students along with PD being available for teaching staff. Having said that, it was highlighted that there seemed to be an expectation that students have their own suitable device to access systems.

It was noted by four institutions that this was done on a rather ad hoc basis - depending on the tools and the context, but that it is becoming a more prominent as more centrally governed technology were being adopted. Interestingly, it was observed by four institutions that selecting more mainstream and easier to

use tools assists with supporting students who have a disability because options are included in technology packages for accessibility during implementation. Two institutions mentioned working with Academics on their Learning Designs and encourage considering equity beyond access and inclusive digital assessment practices.

Support Resources for Students

The resources provided to students to help address access and the use of ICTs included fifteen (47%) institutions who identified ICT support services, technology spaces and hubs, accessibility services, counselling services, and support for personal computers and training to help students with their private devices. Supported by online portals that included resources for learning from home, university supported technologies for learning, and more, where 4 (12.5%) said that they only had limited general resources and limited central funding provided, rather just provided advice as to where students can find funding. Some Schools did pay for transcriptions.

A couple (2) highlighted the role of the Library in developing support resources (+ people) to address student issues and the availability of Student support online in they are not on campus, with digital literacy training embedded in orientation. A further two institutions stated that they had 'standard' resources, supports and services, including, but not limited to: general support and advocacy, examination adjustments, assignment extension recommendations, study skills assistance, alternative formatting, assistive technology and equipment.

Three institutions identified that they did provide elements such as transcripts of recordings, working with lecturers to make some materials available in different formats or provide these in advance. A further three identified using Bb Ally to generate alternative file formats.

Interestingly, eight (25%) institutions identified bursaries and loan schemes were available to assist with acquisition of ICTs, and devices and dongles for short term loan from the library, etc.

ACODE 83 Workshop Extension Activity

The workshop activities explored the issues institutions faced in the design and delivery of virtual collaborative learning. 62 issues were collected (Appendix 2). Participants were asked to nominate the most pressing issue for their institution. Of the 62, 26 were identified as pressing issues. The top three were; pressure of time and managing workload (16.92%), lack of familiarity of new ways of learning and teaching online, including technology and attitudes (11%), and perception by academics that this is a conversion from face to face to online rather than creating new experiences (11%). Two of these pressing issues raise the move between face to face and online and new ways of designing and delivering curriculum alluding to the need for academics to make a paradigm shift in their thinking and teaching practice.

Adapting Muilenburg & Berge (2005) Eight Barrier factors to theme the responses, the majority of responses were congregated into three main themes; Academic skills (44.62%), Time and support (22%), and Motivation (15%).

Academic skills capture the perceived barriers to virtual collaboration and assessment due to a lack of academic learning and teaching skills examples being; lack of familiarity of new ways of learning and teaching online including technology and attitudes, teaching and assessing and practise teamwork skills, and aligning to learning outcomes, and lack of professional development to plan and design scaffolded experiences.

Time and support was the next most popular theme capturing the perspective on whether a lack of time or support from people in the workplace causes barriers to ability to implement virtual collaboration and assessment. The key issue being pressure of time and managing workload.

Motivation relates to the perception by educators that would affect their motivation to embed virtual collaboration and assessment. The key issue in this theme being the perception by academics that this is a conversion from FTF to online rather than creating new experiences.

Concluding Discussion

We began the whitepaper indicating that institutions would face challenges when re-envisioning collaboration and groupwork for the virtual environment. We asked the million-dollar question of how can we continue to reap the benefits of collaboration and groupwork for students' learning in an online or blended environment? The pre-workshop survey and subsequent workshop extension activity have provided a snapshot of the challenges and issues. Technologically, institutions had access to tools that would enable moving collaboration and groupwork in learning and assessment to the virtual environment. Centrally funded Learning Management Systems, Zoom, Microsoft Teams providing the core suite of tools available.

Student equity issues were identified as a major new driver to adopting certain tools that incorporated newer accessibility features, such as text to speech, automated transcript generation and student support. Within that, it was identified that practices such as applying Universal Design for Learning principles and the importance of coordinated centralised IT and Library support where fundamental to providing a complete package of support for students, along with the provision of alternate formats of learning materials.

The workshop activities, in exploring the issues institutions faced in the design and delivery of virtual collaboration and groupwork, clearly highlighted that human resources were the most challenging aspect of reaping the benefits of collaboration and groupwork in a virtual environment.

Many institutions provided additional support for staff as an emergency remote learning response to COVID-19. However, what some institutions have found is that their educators are not necessarily prepared for a more permanent paradigm shift for creating new experiences in virtual environment. Predominantly the lack of skills in and familiarity with new ways of learning and teaching online including technology and attitudes, and planning, and designing and scaffolded experiences was identified. The other key challenge for staff in relation to time and support was that some institutions were undergoing major restructures that included the loss of staff, that was placing additional workload on remaining staff.

Realising the benefits of collaboration and groupwork for students' learning in an online or blended environment will require investment in developmental opportunities for academics that help them to embrace the paradigm shift and expand their knowledge and skills for learning and teaching in the virtual space.

References

Muilenburg, L.Y., & Berge, Z.L. (2005) Student barriers to online learning: A factor analytic study, *Distance Education*, 26:1, 29-48, DOI: 10.1080/01587910500081269



The Australasian Council on Open Distance and eLearning

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Any queries related to this paper should, in the first instance, be addressed to the ACODE Secretariat at: secretariat@acode.edu.au

Appendix 1: Survey Questions

1. What centrally funded tool/s does your institution use for staff and student collaboration online? You may choose as many as you use, and add others below if necessary, by also selecting 'Other'
2. Which of these tools would be the most widely used?
3. In your opinion which of these tools could be better utilised and why?
4. What are the main business drivers that have influenced your institution to use this combination of virtual collaboration and teamwork tools?
5. Which of the tools you selected would be specifically used to run course/unit assessments in?
6. How does your institution assess collaboration and assessment tools for inclusion and digital equity purposes?
7. How do you factor in equity, beyond access, as you plan for technology integration in your course/units or teaching spaces?
8. What resources do you provide students to help address equality/inequality to access and the use of ICTs?
9. Any further comments you would like to make that would help us gain a better understanding of your context, to any of the above questions?
10. Which institution are you from? (This will not be made public)

Appendix 2: Poll Issues list

Pressure of time and managing workload	Facilitation of learning technologies
Dropping away of project-based environment (no planning)	Equity issues that arise when encouraging synchronous engagement
Blurring line between learning design and academics, and responsibility	Understanding of Universal Design for Learning Principles;
Ability to build rapport and reluctance of students to engage when online;	Challenge in enabling flexible learning journey in collaborative learning for students;
Lack of familiarity of new ways of learning and teaching online including technology and attitudes	Perception by academics that this is a conversion from FTF to online rather than creating new experiences
Ability to give scaffolded/equitable experience for all students	Dealing with practical classes via online collaboration;
Academic ability to design a complete learning journey (not just using LMS as repository)	Challenge when developing learning outcomes using groupwork;
Ensuring design leads use of technology	Understanding the benefit of using the tools;
Good blend of experience when both online and on campus students	Cognitive load when redeveloping for online learning;
Lack of professional development to plan and design scaffolded experiences	Teaching and assessing and practise teamwork skills, and aligning to learning outcomes;
Appetite by students to experience something more transformative	Influence of self-organisation of students within the university's learning environment;
Equity of design for collaboration	Distraction during online synchronous sessions;
Delegation and communication within the student groups	Mindsets of academic staff when engaging with groupwork
Lack of understanding of student cohort	Retrofitting on-campus to online
Technical complexity of setting up online collaborative work	Skill sets of students when shifting from FTF to online
Student engagement in online delivery mode	Inequity of groupwork design more broadly
Burden of choice for pedagogical approach and ed tech options	Student fatigue in the overuse of Zoom breakout rooms
Complexity of use of learning space (including space and tech);	Access to tools and technology (internet/bandwidth)
Cultural and physical barriers that influence student engagement;	Technical complexity of setting up online collaborative work
Challenges when designing for authenticity;	Tool availability and limitations of LMS;
Approach to assessment;	Inconsistent use of tools by academic staff;
Different levels of learning;	'Emergency Service Model'
Upgrading skills in technology for students & staff;	Ability to measure engagement of students online;
Privacy and data issues	Access by students to correct tools;
Not enough tools that address wide enough range of needs (privacy/data issues)	Influence of prior experience (or lack of) by students;
Fairness and perceptions of fairness	Logistics of teaching online;
Disadvantages for online/hybrid students	Need to plan for specific learning engagements;
Levels of digital literacy in student group	Unpredictable planning environment;
Accounting has not been consistent nationally. Some Unis did not have to have proctored exams while others were still forced to.;	Challenges associated with academic integrity (tools/data/importance);
Tendency to generalise & issues associated with this	Impact on understanding of what a 'campus' is?
Fostering relationships between academic staff and learning designers	Influence of self-organisation of students within the university's learning environment

Appendix 3: Top 26 issues themed.

Poll responses by Theme	% of total
Academic skills	
Lack of familiarity of new ways of learning and teaching online including technology and attitudes	10.77
Teaching and assessing and practise teamwork skills, and aligning to learning outcomes;	6.15
Lack of professional development to plan and design scaffolded experiences	6.15
Academic ability to design a complete learning journey (not just using LMS as repository)	4.62
Ability to build rapport and reluctance of students to engage when online;	3.08
Challenges when designing for authenticity;	1.54
Cognitive load when redeveloping for online learning;	1.54
Equity issues that arise when encouraging synchronous engagement;	1.54
Approach to assessment;	1.54
Burden of choice for pedagogical approach and ed tech options	1.54
Challenge in enabling flexible learning journey in collaborative learning for students;	1.54
Cultural and physical barriers that influence student engagement;	1.54
Understanding of Universal Design for Learning Principles;	1.54
Complexity of use of learning space (including space and tech);	1.54
Challenges associated with academic integrity (tools/data/importance);	1.54
Time and support	
Pressure of time and managing workload	16.92
Blurring line between learning design and academics, and responsibility	4.62
Motivation	
Perception by academics that this is a conversion from FTF to online rather than creating new experiences	10.77
Mindsets of academic staff when engaging with groupwork	4.62
Disadvantages for online/hybrid students	3.08
Fairness and perceptions of fairness	1.54
Technical problems	
Tool availability and limitations of LMS;	4.62
Not enough tools that address wide enough range of needs (privacy/data issues)	1.54
Technical skills	
Technical complexity of setting up online collaborative work	3.08
Inconsistent use of tools by academic staff;	1.54
Skill sets of students when shifting from FTF to online	1.54