COVID-19 Exam Software Survey – 2020

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Introduction

With the advent of COVID-19 and ensuing social distancing measures, universities in the Australasian higher education sector found themselves not being able to run their traditional face to face examinations (in the majority of cases). This required all institutions to look for alternative methods and processes to run these important assessments. In many cases institutions pivoted quickly and implemented a range of online proctoring tools, while others changed the forms of assessment that were required, replacing their traditional exams with other forms of online assessment.

To try and understand how universities in the Australasian sector dealt with this and to further distil some of the lessons learned from pivoting quickly to implement their solutions, The Australasian Council on Open Distance and eLearning (ACODE), in collaboration with the Council of Australasian University Directors of Information Technology (CAUDIT) ran a survey designed to provide all institutions with a sector-wide perspective on this.

The survey contained questions asking which solution/s the institutions implemented and how successfully they implemented them (see Appendix B, page 9). They were asked to reflect on some lessons learned from the implementation, share some of the service and technical issues they encountered, and to indicate whether they would continue with the solution they chose, or consider other options in the future.

Every public University in Australia and New Zealand responded to the survey, along with one institution from Fiji and one University College (both ACODE Members institutions). In total this was 47 Institutions.

Overview and general commentary

It was common for institutions to run more than one software product to deliver their online examinations and/or alternate forms of assessment. That is, most institution ran alternative forms of assessment to 'some' of their exams and chose a range of solutions to run their more formal examinations, either in a proctored or un-proctored way. Additionally, institutions delivered online examinations in a range of tools to meet their individual requirements, for example, some used non-specialist proctoring solutions, such as Zoom (and the like) to manually proctor their exams using their own tutors, rather than employ a third-party entity. Others chose a more open book approach, or quizzes within the LMS, either timed, or un-timed and aural exams (vivas).

Out of the 47 Institutions, 24 used a formal proctoring solution in conjunction with an online exam, while 23 chose alternate means, or did not run proctored exams, choosing rather to offer alternate forms of assessment, as seen in Figure 1. Even for those universities running proctored exams, it was clear that most universities took measures to minimise the number of online proctored exams they

ran, only running these were it was felt it was completely necessary. It was also well noted that having to shift quickly to online assessment, rather than run traditional exam was very labour intensive. These institutions also ran alternative assessment items, in place of formal exams.

Figure 1. The percentage of institutions running a proctoring solution

Figure 2 and Appendix A, (page 9) shows the overall percentage of tools used by institutions (as reported) to run their end of Sem/Trimester formal assessments. The 15% 'other' represents the use of a large range of tools that were used between 1-3 times. These tools are seen in Appendix A (page 10). Not surprisingly the learning management system (LMS) played a significant role in this, either linked with a formal proctoring solution or otherwise. This included the use of quizzes and long and short-form open ended questions. It should be noted that some LMS's have the capacity to lockdown the browser while a quiz is being undertaken and this feature was used in some cases where those LMS's were used (but not all).
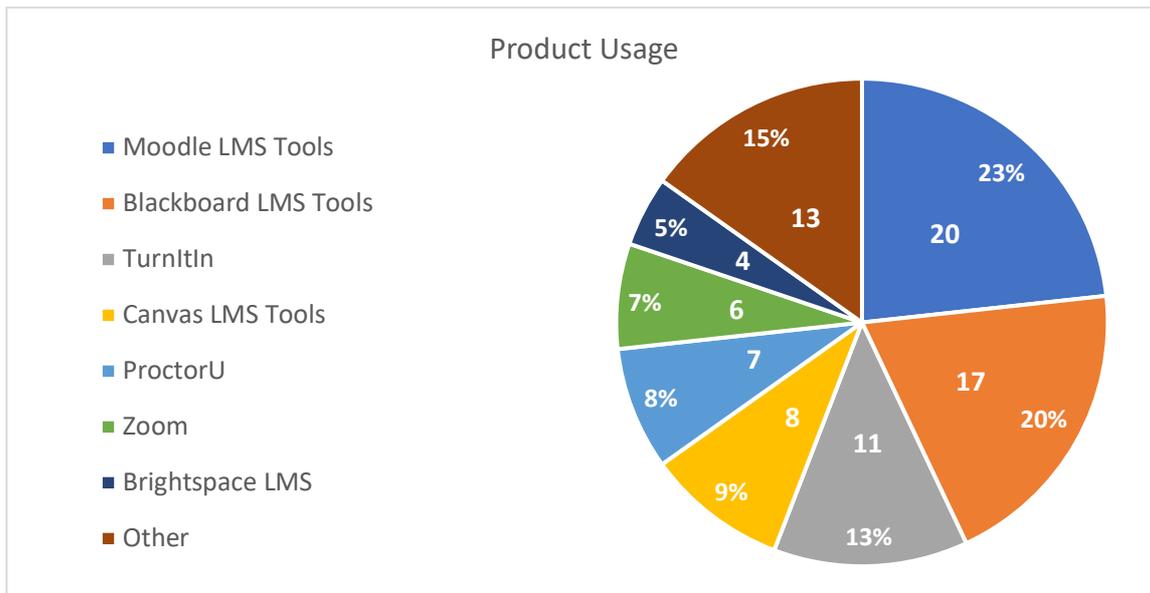
Figure 2. The overall tool usage to run exams, both proctored and un-proctored

See **Appendix A** (page 9) for a full breakdown of software utilisation.

The following chart displays the number of institutions utilising each LMS, and how many of them employed a proctoring tool as well.
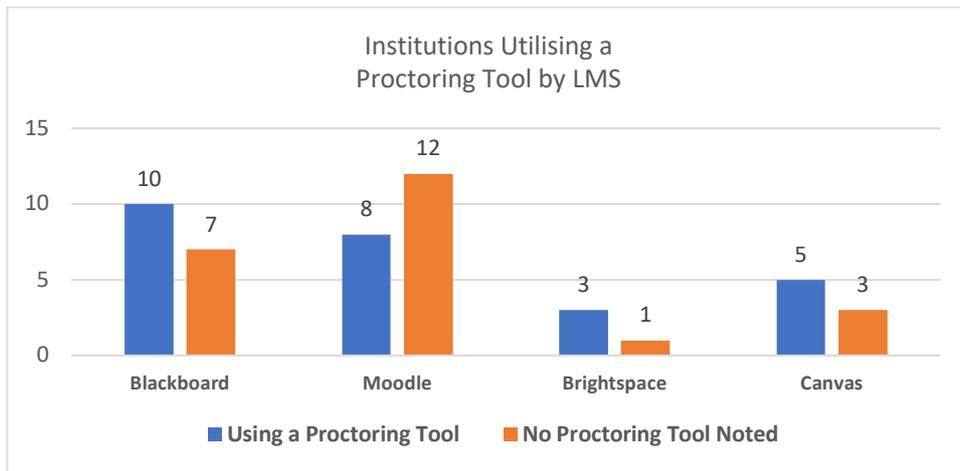
Figure 3. LMS usage as against proctoring tool used.

Note: In Figure 3, there totals 49 institutions instead of the actual 47. This is due to two Institution utilising two LMS's during this time.

Proctoring tool usage summary

Figure 4 below provides the distribution of proctoring tools used across all institutions, regardless of which learning management system was used (N=28). It indicates that the Proctor U tool was used in 7 (25%) cases, while Zoom was used by 6 (21%) institutions to help them mediate their own proctoring. It should be noted, that although Zoom is not formally a proctoring tool, where it is used with human invigilation, this is taken as being equivalent to a formal proctoring tool, such as Proctor U, as it is essentially doing the same thing, but from a more local, or personalised perspective.
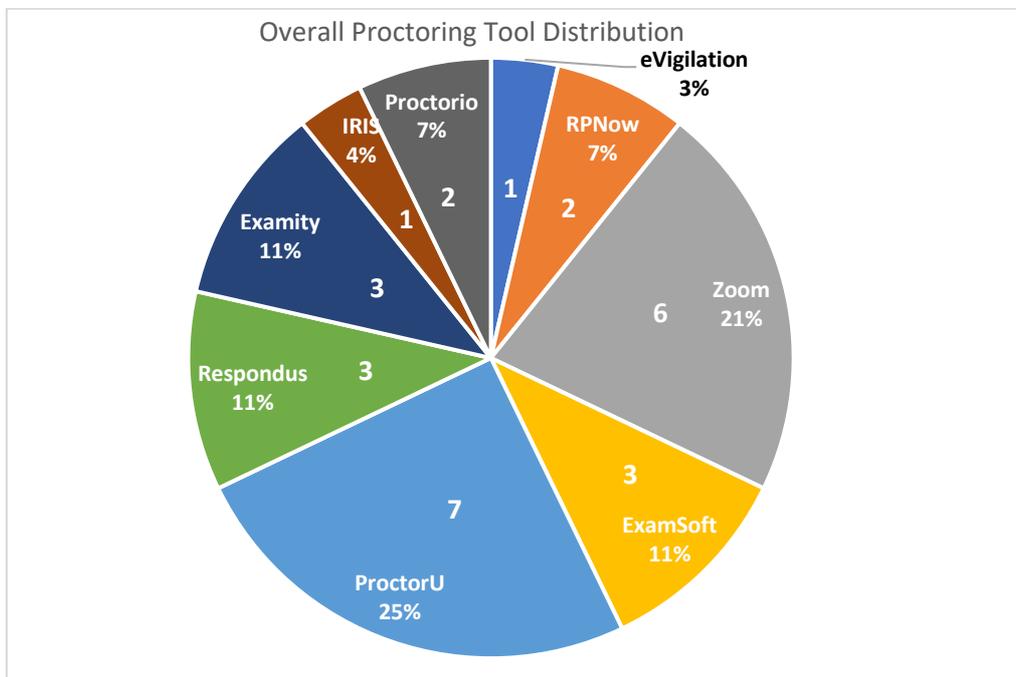
Figure 4. The proctoring tools that were used.

Other online assessment tool usage summary

The below chart (Figure 5) shows the overall non-proctored online assessment tool usage distribution across all institutions who chose to use other tools (N=18). Interestingly, 11 (61%) institutions

nominated that they used Turnitin, this was mostly where assignments where used to replace an exam and for open book exams.
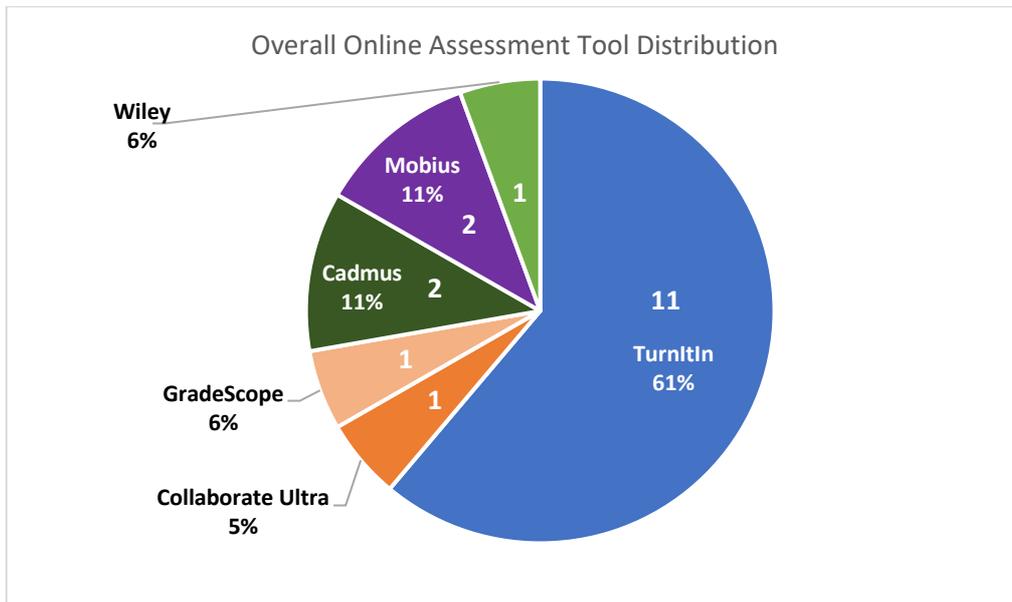
Figure 5. Distribution of non-proctoring tools.

There were 23 institutions out of the 47 total, that did not mention utilising a proctoring solution. Of these 23 institutions:

- 15 did not identify the use of any Online Assessment Solution in addition to their LMS, and
- 8 noted the use of at least 1 Online Assessment Solution in addition to an LMS.
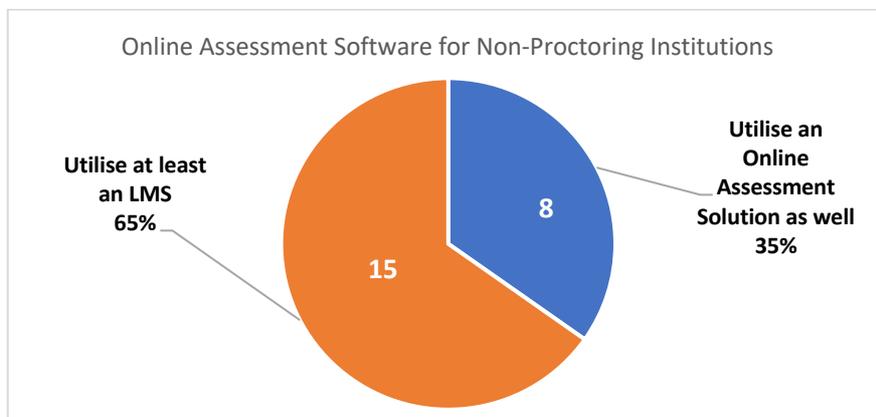
Figure 6. Distribution assessment tolls used in and out of the LMS. N=23

Following on from Figure 6, of the 8 (35%) Institutions noted, Figure 8, identifies the tools that were utilised. Out of these 8 institutions, 6 of them used TurnItIn.

Tool name	Institutions using this tool
TurnItIn	6
Collaborate Ultra	1
Cadmus	1
Mobius	2
Wiley	1

Figure 7. Alternate tools used for online assessment

Institution: Chosen solution continuation sort and long-term

Each institution was asked if they would continue with the use of their chosen solution, first in the sort-term and then in the long-term. The results of these two questions were quite different.

Out of the 47 institutions, the below graph (Figure 8) identifies intention to continue with the same solution suite in T/S 2 2020. This could be for a number of reasons, 1) contracts are usually for a minimum of a year, 2) it would be to difficult and costly to use two different solutions in one year; to have to pivot again so soon, and 3) the need for more time to assess the solution implemented. Several institutions (8) noted they would rethink the products they've used, for future semesters/trimesters, with reasons ranging from dissatisfaction with the product, to relevance in the changing environment.
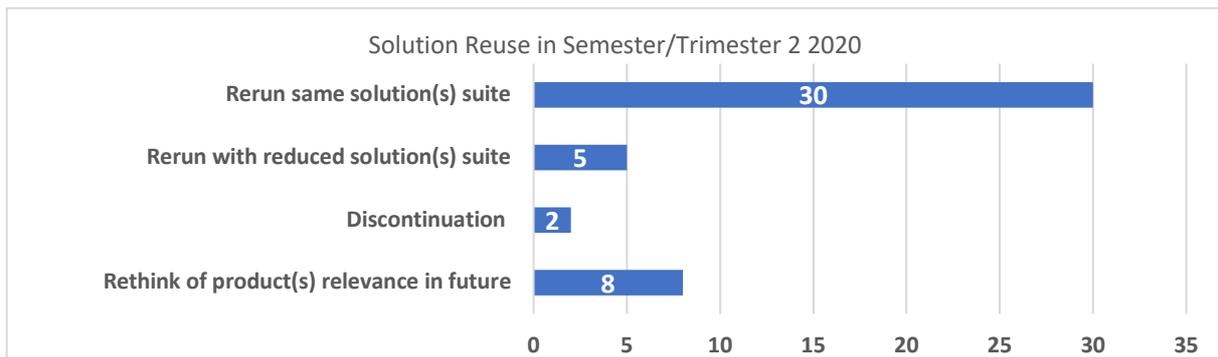
Figure 8. Sort-term intentions to maintain solution.

Each institution was also asked whether they plan to retain or change their solution longer term (Figure 9). As a couple of institutions chose to implement more that one solution, in this case the N=50, in that some institutions where happy with one of their choices but not with another. Therefore, 13 (26%) institutions indicated they would retain their existing solution. However, 37 (74%) indicated that they were still reviewing their requirements and processes to ensure a long-term sustainable solution could be identified.
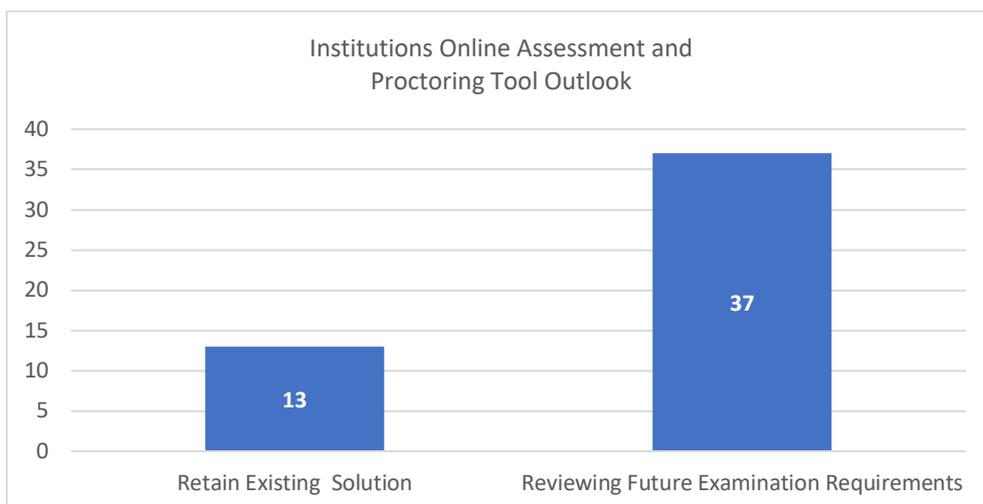
Figure 9. Longer term intention to maintain solution.

The general consensus amongst respondents was that it is too soon in the requirements gathering and evaluation stages to definitively identify suitable candidates for future consideration/implementation.

Issues Encountered

Based on the above, some intuitions reported experiencing a range of issues, however these can be broadly defined in two main categories:

1. Institution Service Delivery Issues relating to the institution and its effort to deliver online exams with a given set of services, and
2. Technical Issues relating to the service or platform during use.

It should be noted that institutions, when attempting to implement a new service are restrained by a range of factors, including institutional policy, culture and existing solutions. Additionally, each institution has unique goals to achieve with the new service, and this can influence the success factors.

Institution service delivery issues

Of the 9 service delivery issues reported (Figure 10), only 1 institution noted a moderate issue with Zoom, this was related to the lack of invigilation quality using this service. The remaining 8 minor issues were primarily related to teething issues in adopting a new service in a short time frame, including adapting and converting processes and content. None of the minor issues prevented the delivery of the service.
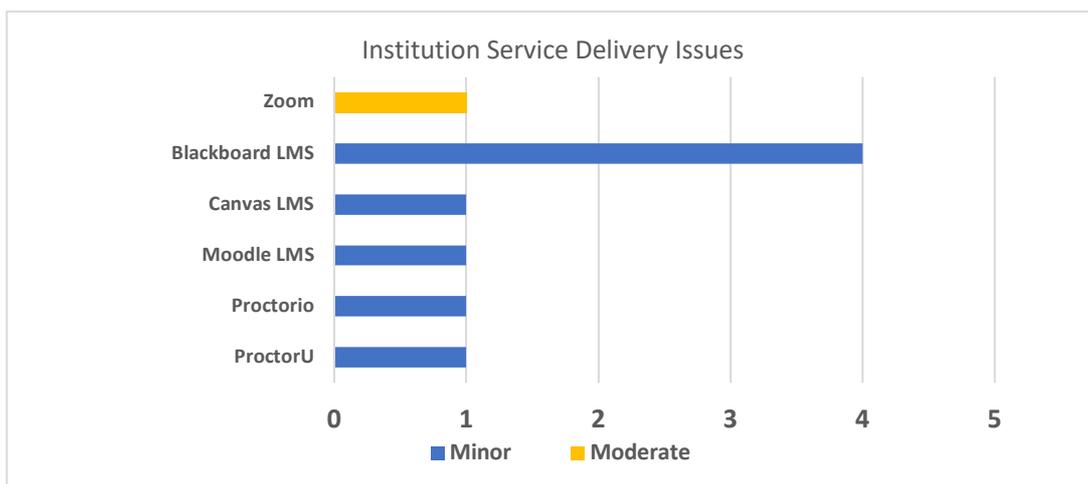
Figure 10. Systems experiencing service delivery issues

Technical issues

One institution utilised an inhouse custom Moodle solution called eAssessment. This had a yet 'to be identified' 3rd party integrated proctoring service. This proctoring service created major issues and has since been dropped (Figure 11).

It was found that approximately 10-20% of students had significant issues with the Examity service, requiring the institution to quickly shift to deliver the remaining exams in house via Zoom invigilation.

A moderate issue was experienced with ProctorU, related to their Live+ service. During the delivery of exams for one institution, it took in excess of an hour for proctors to become available for scheduled exams.

A range of minor issues were noted by institutions, ranging from internet issues to performance or service issues within the LMS or proctoring service.
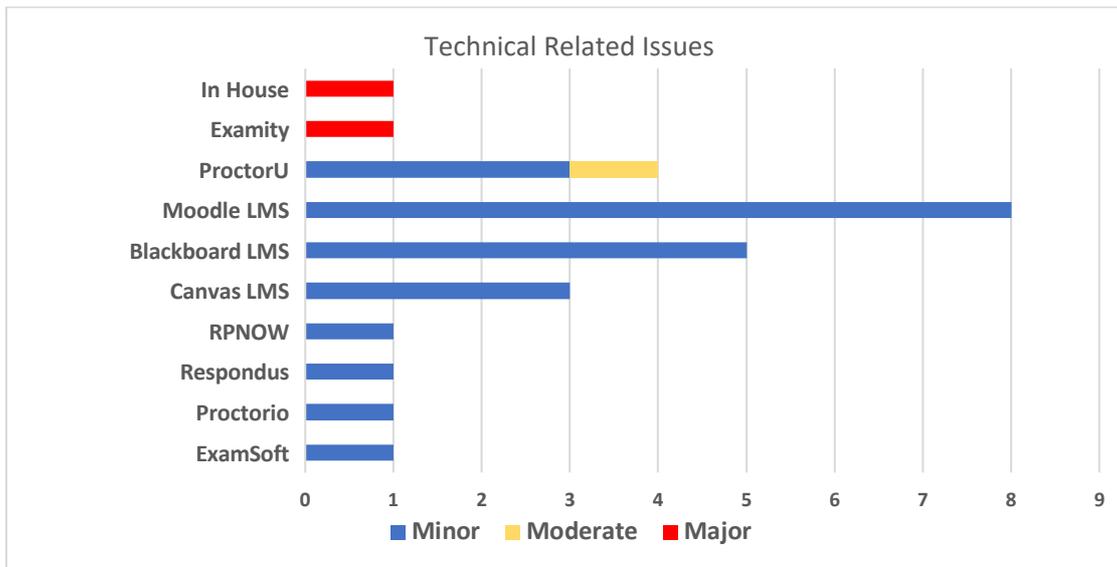
Figure 11. Experiencing technical issues during delivery.

Student support mechanisms

The data below (Figure 12) notes the types of support offered by institutions during the exam period and number of institutions providing this. This list is not exhaustive, and institutions likely provided many of these without noting them in the survey.
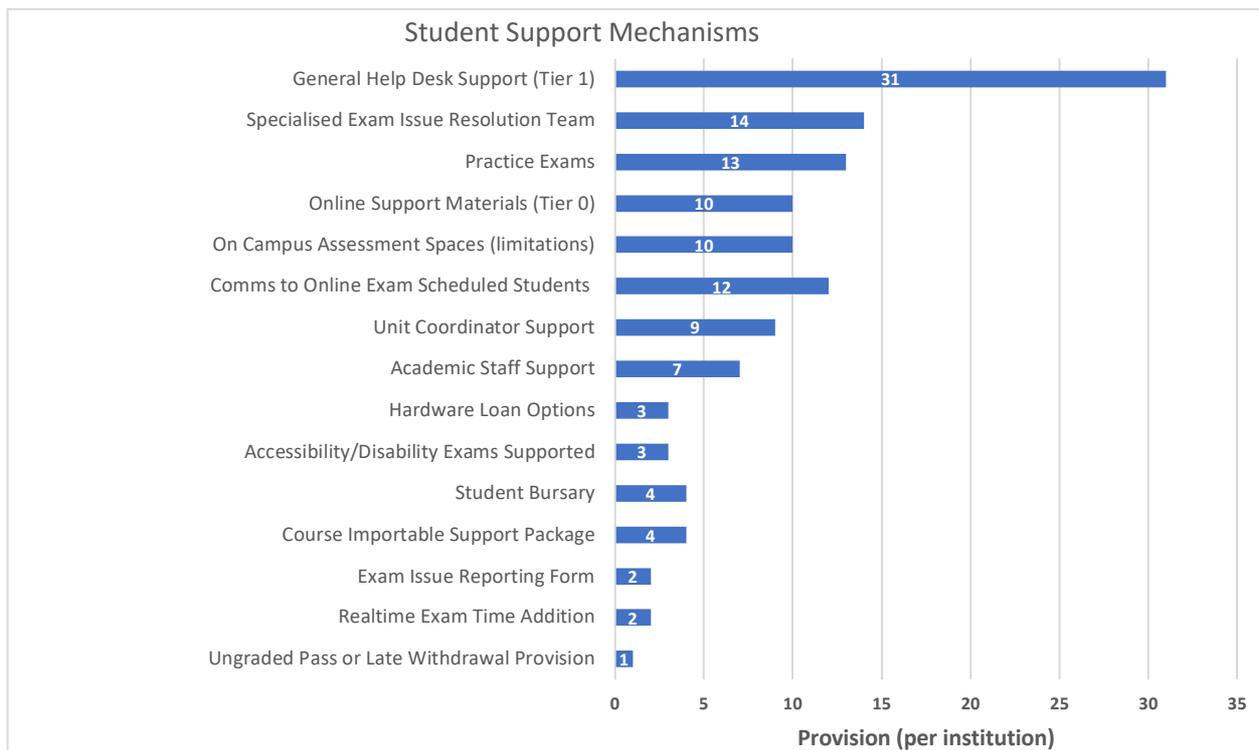
Figure 12. Types of support offered by institutions during exam period.

Staff support mechanisms

As seen above with the Student support mechanisms, the data below (Figure 13) notes the types of support and number of institutions providing support to their staff. The list of types is also not exhaustive, and institutions likely provided many of these and more without noting them in the

survey. It is clearly seen that the redesign efforts were significant, both in relation to the support and training of staff.
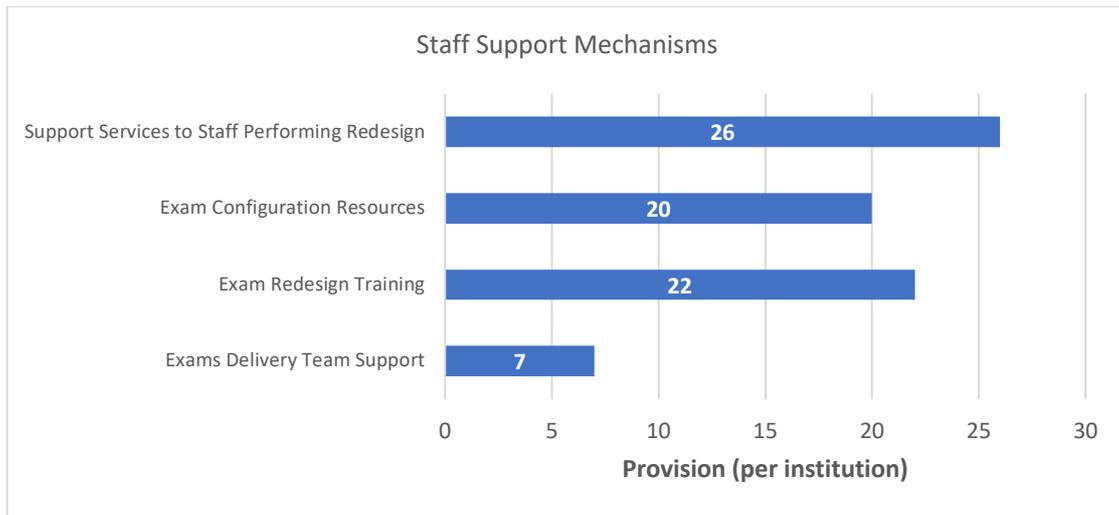
Figure 13. The main staff support requirements.

Product security or personal privacy issues

Only a small number of institutions (4) noted any specific security or personal privacy issues with the product used (Figure 14).
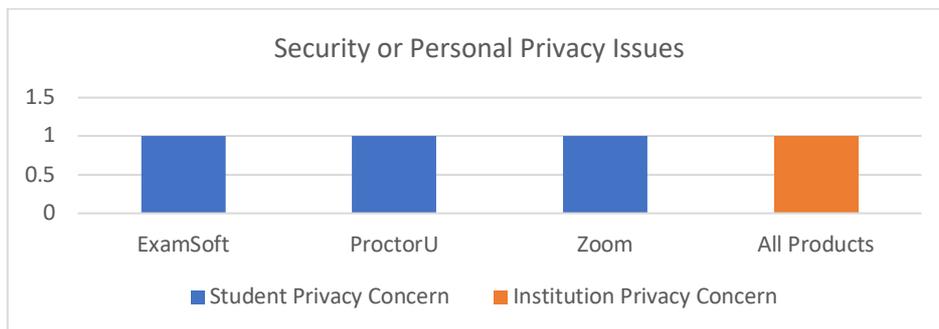
Figure 14. Tools that raised some security or personal privacy issues

Conclusion

The COVID-19 Exam Software Survey (Appendix B) was responded to by 47 institutions, including every public University in Australia and New Zealand. It was administered by ACODE on behalf of ACODE and CAUDIT. Institutional representatives from these groups have been provided the full set of data for internal use only. ACODE is truly grateful to all those who participated in the survey and hope that it will be of use to the sector, as a whole, as we all navigate this new and emerging space of online invigilated assessment and exams.

It is anticipated that over time additional information will surface as member institutions seek to further clarify their positions and as ACODE and CAUDIT seek a deeper understanding of the emerging issues associated with running online invigilated assessments.

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

Appendix A

The following is the full list of products utilised during the tri/semester 1nexam period.

Software instance per institution
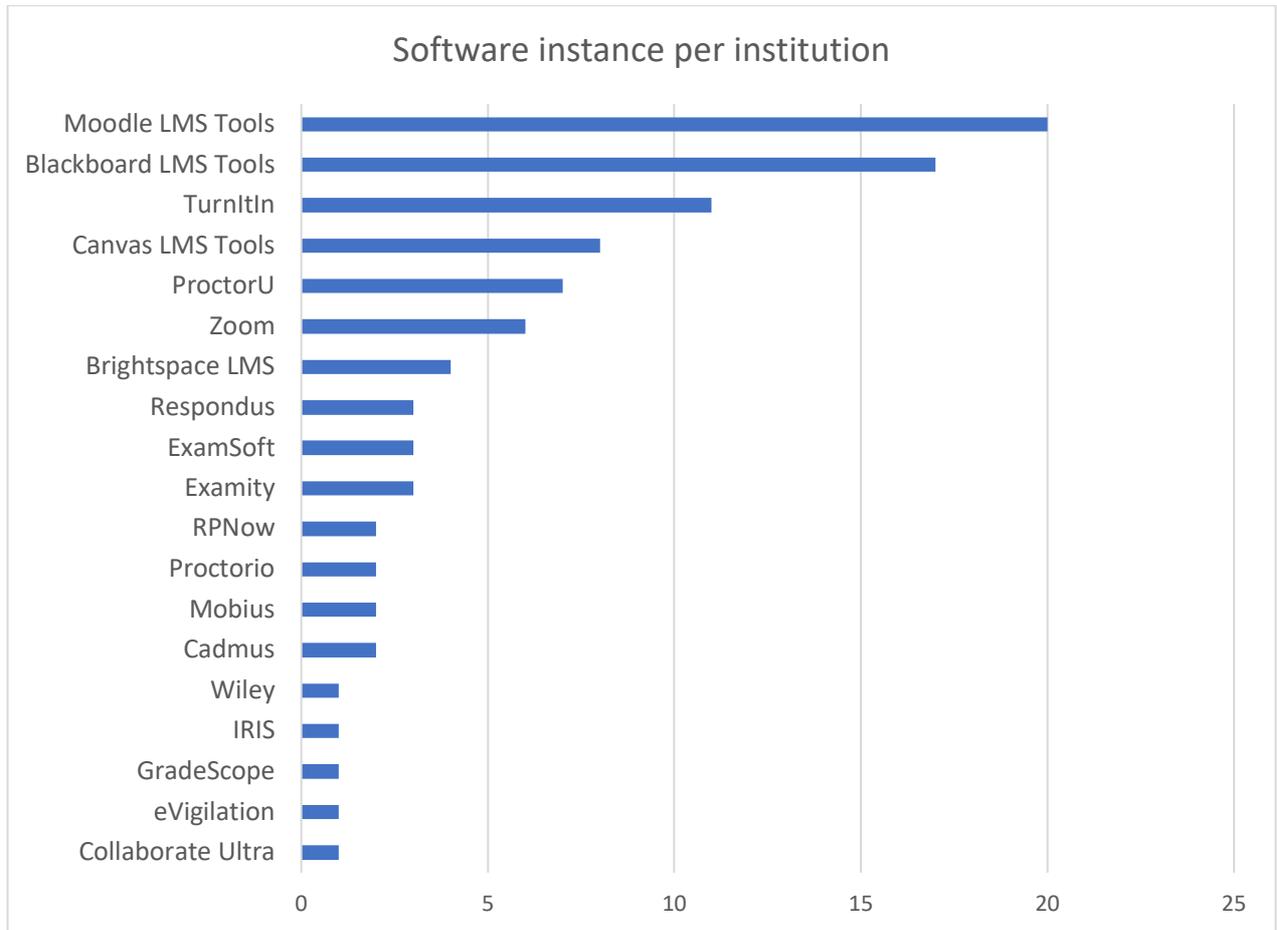
Appendix B

Following are the main questions (apart from demographics) that were asked of institutions:

1. What/which software application/s did you end up using to run online exams in Semester/Trimester 1 this year?
2. How did that go, did you encounter many problems with any of these?
3. What kind of student support mechanisms were put in place by your institution?
4. What kind of staff support mechanisms were put in place by your institution?
5. Are you going to run with the same solutions in Semester/Trimester 2 this year?
6. Did you experience any security or personal privacy elements in the solutions you chose?
7. To what extent is your current approach sustainable longer term?
8. Longer term, do you think you will look to change the solutions you currently have in place (say, next year) or are you happy with what you have?
9. Any further comments, or anything we may have missed?