



Report on Benchmarking of Enabling Programs across Australia to the National Association of Enabling Educators of Australia (NAEEA)



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Acknowledgement

This is the first comprehensive benchmarking study of nine enabling programs across Australia that will make a significant contribution to the standardisation of programs, providing quality assurance, transparency, and potentially portability of qualifications for thousands of students.

We wish to acknowledge the instrumental role of the National Association of Enabling Educators of Australia (NAEEA) in supporting this national cross-institutional study of enabling programs in Australia.

NAEEA, established in 2012, is a collaborative organisation cultivated from two decades of networking by enabling educators from across Australia and New Zealand. It is closely aligned with the Foundation and Bridging Educators of New Zealand (FABENZ) and the Forum for Access and Continuing Education (FACE) in the United Kingdom. It shares with these organisations a commitment to the principles of widening participation, with a particular focus on supporting and advocating for the ongoing provision of pathways education programs which provide non-traditional, novice students access to and preparation for further studies in higher education.

The growing significance of enabling education within the higher education sector prompted NAEEA to initiate the first cross institutional benchmarking project of three enabling programs in 2016. With the support of the NAEEA founding Executive Committee member and Chairperson, David Bull from the University of Southern Queensland (UniSQ), the project was led by Professor Janet Taylor from Southern Cross University (SCU) together with current NAEEA Chairperson Karen Seary from Central Queensland University (CQUni). This initial benchmarking project set out to determine the extent to which common standards, learning outcomes, assessment, and pedagogical practices existed across three large Australian enabling education programs. These included the Preparing for Success Program (PSP) at SCU, the Tertiary Preparation Program (TPP) at UniSQ, and the Skills for Tertiary Education and Preparatory Studies (STEPS) at CQUni. The outcomes of this pilot project (see Syme, Davis et al., 2021) revealed that, despite their independent development and the lack of an overarching Australian Qualification Framework (AQF) standard for enabling education, these three programs shared common learning outcomes and standards, and used comparable and rigorous assessments and assessment practices.

The benchmarking project was then extended to a further six universities, including Charles Darwin University (CDU), Curtin University (CU), Edith Cowan University (ECU), Federation University Australia (FUA), the University of South Australia (UniSA), and the University of Tasmania (UTas), representing approximately half of all national enabling education enrolments (Department of Education Skills and Employment, 2020), and including all Australian states and the Northern Territory. Important to the success of the project has been Executive support from the participating universities including Professor Karen Nelson, Deputy Vice-Chancellor (Academic), (UniSQ); Professor Thomas Roche, Pro Vice-Chancellor (Academic Quality) and Dean of SCU College (SCU); Professor Helen Huntly, Vice President (Academic), (CQUni); Professor Braden Hill, Deputy Vice-Chancellor (Students, Equity and Indigenous) and Head of Centre Kurungkurl Katitjin, (ECU); Professor Scott Bowman, Vice-Chancellor and President (CDU); Professor Jane Long, Provost (Utas); Professor Joanne Cys, Acting Provost and Chief Academic Officer (UniSA); Professor Andy Smith, Deputy Vice-Chancellor (Academic) (FUA); and Professor Julianne Reid, Associate Provost, (CU). This support allowed for the open sharing of cross-institutional data, resources and experiences, upon which effective benchmarking is so dependent.

Also important to the project outcomes has been the contribution of colleagues at each university who assisted by blind marking student scripts and providing detailed feedback about both the assessment and the benchmarking process. This support allowed the project team to draw on expertise in the subject areas that were benchmarked, including study preparation, academic communication, and mathematics. In particular, our thanks go to Clare Robinson (UniSQ), Dr Gemma Mann (CQUni), Gabriela Toth (CQUni), Rachel Trevarthen (SCU), Dr Nell Cook (SCU), Dr Kerrie Stimpson (SCU), Dr Sulay Jalloh (CDU), Helena Trevena (CDU), Shelley Worthington (CDU), Stephen Miller (CDU), Mikiko Kawano (CDU), Liam Frost-Camilleri (FUA), Linda Sterling (FUA), and Samantha Black (FUA).

Finally, the project team would like to again acknowledge the support of NAEAA, under whose guidance the project has progressed. The collegial and supportive nature of NAEAA, its work in establishing strong sector-wide ties, and its unwavering commitment to enabling education across Australia has established a strong collaborative framework which is now characteristic of the sector, and without which authentic benchmarking and the improvements that come from the open sharing of information, could not have occurred. It is anticipated that this report will contribute to NAEAA's input into the ongoing review of the AQF and provide a valuable source of sector-wide information about the nature of enabling education and its key purpose to provide non-traditional students with access to and preparation for university.

Glossary

Term	Definition
AQF	Australian Qualifications Framework
Enabling education	Non-award courses offered by universities and private providers to prepare students with the required skills and knowledge for undergraduate study (Department of Education, Skills and Employment, 2021).
NAEAA	National Association of Enabling Educators Australia
Program	A whole program of study comprised of a number of subjects or units of study. Some institutions refer to their programs as courses.
Semester	A period of study made up of 12 or 13 weeks of teaching followed by one or two weeks of an examination period. Some institutions refer to their semester as a session, study period or term.
Subject	A unit of study that contributes towards the completion of a program. Some institutions refer to their subjects as courses or units.

Executive Summary

While there have been a number of national or institutional smaller scale studies investigating comparability of curriculum and assessment across enabling programs (Hodges et al., 2013; Baker & Irwin, 2015; Irwin et al., 2018; Relf et al., 2017), there is currently no national framework defining standards and learning outcomes. This is the first comprehensive benchmarking study of nine enabling programs across Australia that will make a significant contribution to the standardisation of programs, providing quality assurance, transparency, and potentially portability of qualifications for thousands of students. The nine participating universities in the benchmarking project are:

University	Enabling Program	Researcher
Central Queensland University (CQUni)	Skills for Tertiary Education Preparatory Studies (STEPS)	Mr Chris Cook
Charles Darwin University (CDU)	Tertiary Enabling Program	Mr George Lambrinidis
Curtin University (CU)	UniReady	Ms Kathy Lawson
Edith Cowan University (ECU)	University Preparation Course (UniPrep)	Ms Sue Sharp Ms Lisa Duffy
Federation University Australia (FUA)	Foundation Access Studies Program	Dr Stuart Levy
Southern Cross University (SCU)	Preparing for Success Program (PSP)	Associate Professor Suzi Syme
University of Southern Queensland (UniSQ)	Tertiary Preparation Program (TPP)	Ms Charmaine Davis
University of South Australia (UniSA)	Foundation Studies (MFFS)	Dr Sarah Hattam
University of Tasmania	University Preparation Program (UPP)	Dr Sarah Dempster

Enabling programs are non-award courses offered by universities and private providers to prepare students with the required skills and knowledge for undergraduate study (Department of Education, Skills and Employment, 2021). There are 48 enabling programs across Australia (Habel et al., 2016) attracting 32,579 student enrolments in 2020 (Department of Education, 2022). Enabling education has historically advanced a widening participation policy agenda, operating in a middle space between secondary school and university to disrupt educational disadvantage (Hattam et al., 2022). These programs typically attract students from low socio-economic backgrounds and other equity groups who have previously found higher education inaccessible (Syme, Roche et al., 2021).

The researchers aimed to examine whether the participating universities were explicitly or implicitly aligning their curriculum and assessments with the Learning Outcomes developed by the National Association of Enabling Educators of Australia (NAEEA) by benchmarking three subjects: study preparation, academic communication, and mathematics. In addition, the researchers discussed moderation processes, program structure and length, subject offerings and student satisfaction data. See below for NAEEA Learning Outcomes.

NAEEA Enabling Education Common Learning Outcomes	
Field	Outcome
Knowledge: Students completing an enabling program will have a knowledge of:	university environments and expectations, requirements, academic conventions and ethical practice including academic integrity; knowledge of academic literacies; and may include some discipline specific and/or technical knowledge;
Skills: On completion of an enabling program, a student will demonstrate:	cognitive skills to understand, analyse, synthesise and critically evaluate information;
	information skills to find, retrieve and analyse information for use in academic contexts;
	communication practices to foster the exchange of knowledge and ideas within an academic context;
	academic literacy skills fostering the written communication of ideas, theories and analysis; and independent learning skills.
Application of knowledge and skills: A student	engaging with the university learning and teaching environment in an ethically and contextually aware manner;

completing an enabling program will demonstrate the application of knowledge and skills by:	applying independent learning techniques to achieve their learning outcomes;
	using their developing critical thinking skills and broadening knowledge in particular contexts; and
	adopting student practices that meet their institutions' academic expectations.

A key driver for this project has been to investigate the validity of some evaluations of the enabling sector, such as lacking transparency and standardisation (Pitman et al., 2016; Shah and Whannell 2017). Additionally, sitting outside of the AQF and operating in a precarious funding position leaves enabling programs vulnerable. The establishment of a national framework can contribute to the security and longevity of the programs by setting a consensus driven rigorous standard for all programs nationally (Sadler 2017), fulfilling TEQSA and AQF requirements.

Methodology

The Benchmarking project was underpinned by Morgan and Taylor's (2013) Framework which involved six key phases:

- Phase 1: Prepare for benchmarking** by recruiting university partners and agreeing to the scope and terms of the project.
- Phase 2: Develop an evidence portfolio** of curriculum documents, assessment tasks, blind assessment scripts and student evaluation data.
- Phase 3: Compare assessment standards** through collaboration and discussion of processes and outcomes including blind marking, moderation practices, as well as learning outcomes and curriculum comparison template.
- Phase 4: Analyse and discuss findings** across the three sub-groups by comparing the data in the templates.
- Phase 5: Improve practices** through identifying areas of best practice and future improvements.
- Phase 6: Final reporting** through collation of findings into a report and the provision of recommendations to NAEAA on an approach for a national framework.

This methodology was importantly underpinned by a commitment by the researchers to engage in the "rigorous, frank and confidential exchange of information" (Taylor & Morgan, 2011, p. 5). The nine universities divided into groups of three, with each group led by a member of the original project. Robust discussions took place over a year-long process of weekly meetings on digital platforms where researchers compared subject objectives, assessment criteria, feedback forms and the overall structure, delivery and enrolment numbers of their programs. Once groups had established the curriculum and assessment elements of their subjects the blind-marking process took place of assessments. This process involved inviting teaching staff to participate in the marking and to meet to discuss the marking allocation.

Findings

This report features seven key findings which showcase that, in spite of variations across the programs such as length, structure, assessment number and type, there is notable comparability of curriculum and learning outcomes among the academic literacy and mathematics subjects. All universities also covered the same topics and learning outcomes in the study preparation subject but with a range of assessment types and volume of learning. However, it should be noted that one university offered study preparation skills in a one week intensive at the beginning of semester, and another two universities addressed the study preparation key curriculum and learning outcomes in a subject which combined these with further academic communication skills. The learning activities, assessment and learning outcomes in all three subjects were constructively aligned (Biggs, 2012). The researchers also found a congruence in moderation processes and pedagogies enacted in the enabling programs.

The report's findings highlight the rigour of these programs showing a commitment to high standards and challenging curricula to appropriately prepare students for the demands of undergraduate studies. The findings are supported with explicit detail about how these connect with 'good practices' and 'benchmarking impacts' for future improvements to programs. Online discussions throughout the benchmarking process revealed a number of common practices and approaches which were regarded by participants as having significant positive influences on student learning. Online discussions also provided the opportunity to recognise good practices and identify where improvements could be made. One of the key benefits of benchmarking is the sharing of good practices and resources with the aim of continuous improvement (Sadler, 2013; Scott, 2011).

Finding 1: *The study preparation subjects were found to have very similar learning outcomes, topics, content and assessments across the nine programs.*

Good practices

- Explicit teaching of how to navigate academic culture, expectations, and conventions
- Opportunity to reflect and build resilience
- Low stakes and early assessment to build confidence

Benchmarking impacts

- Collaboration across universities and sharing of learning and teaching resources
- Changes to existing subject content, assessments and delivery
- Introduction of a study preparation subject in programs that did not previously have one

Finding 2: *The academic communication subjects were found to have very similar learning outcomes, topics, content and assessment across the nine programs.*

Good practices

- Scaffolded assessments to build students' confidence in attempting to write an academic essay
- Feedforward to improve students' final essay
- Rubrics that facilitated tutors' marking consistency and allowed for transparency of the grading process for students

Benchmarking impacts

- Reducing the number of assessments to allow students time to focus and benefit from feedforward
- Further embedding types of assessment which allow for better scaffolding
- Developing clearer rubrics to better align with the learning outcomes

Finding 3: *Although there was some variation in content and assessment format, the learning outcomes and topics in the mathematics subjects were very similar across the nine programs.*

Good practices

- Real-life problem-solving activities and assessments
- Scaffolding of knowledge and skills
- A commitment through different approaches to ensure weekly student engagement, e.g., quizzes
- Low stakes and early assessment to build confidence

Benchmarking impacts

- Review of assessment approaches including use of project-based models and real life related problem-solving tasks alongside quizzes and exams
- Redesign of subject content with a focus on alignment with future disciplines
- Revised rubrics to ensure clear and consistent language to facilitate common interpretations

Finding 4: *The three subjects (where relevant) from each university, including study preparation, academic communication and mathematics, together addressed the Common Learning Outcomes identified by NAEAA.*

Good practices

- Explicit statements of learning outcomes which describe in accessible language the knowledge, skills and attributes required by students for successful further study
- Common learning outcomes embedded across multiple subjects within programs
- Learning outcomes clearly aligned with assessments and curriculum

Benchmarking impacts

- Institutions to review their learning outcomes, both at program and subject levels, to explicitly articulate and align with the NAEAA Common Learning Outcomes during accreditation and reaccreditation phases
- NAEAA to review the wording of the Common Learning Outcomes to further improve clarity
- NAEAA to establish national standards based on the Common Learning Outcomes supported by the data in this report

Finding 5: *There is a high degree of comparability of standards expected of students across all three subjects, and continued discussion across the sector is required to achieve increased consensus.*

Good practices

- Assessment design enables students to demonstrate common standards of achievement across programs
- Effective assessments include a context to clearly explain the required task, along with clear and specific guidelines for students
- Effective rubrics are clear, written in accessible language and lend themselves to shared interpretations among both students and markers

Benchmarking impacts

- Increased sharing between programs of exemplar assessment rubrics to increase transparency of standards, practices and innovations

- The establishment of communities of practice to provide a powerful means of co-creating shared understandings of assessment design and rubric application
- Findings to be presented to University Academic Boards and other relevant university, government and community bodies to increase the visibility of enabling education and advocate for enabling programs

Finding 6: *All programs included a moderation process to ensure consistency of marking across teaching teams within subjects.*

Good practices

- Ensuring markers have a shared understanding of the assessment requirements, marking criteria and standards
- Having a process for multiple markers to compare sample marking outcomes prior to undertaking assessment marking
- Having a mechanism to check marking to ensure consistency before grades are released
- Presenting marking in such a way that students can interpret their marks and feedback and use this to feedforward into their future work on assessment tasks

Benchmarking impacts

- Revision of assessment tasks and rubrics to improve clarity
- Sharing of effective moderation practices to improve consistency
- Ensuring moderation practices are clearly articulated across teams

Finding 7: *Students value the learning they undertake in their enabling subjects, and positive student evaluations reflect the quality of learning and teaching practices within enabling programs.*

Good practices

- Student-centred learning and teaching practices that are meaningful and relevant to students' academic futures
- Approachable, knowledgeable and skilled lecturers and tutors
- A pedagogy of care together with a strengths-based curriculum reflected in student evaluations

Benchmarking impacts

- Validation of the curriculum and pedagogy
- Recognition of the work of enabling educators
- Impetus to establish national standards and publish these findings supported with student data

Recommendations

There are seven recommendations that arise from this report:

1. Adopt the NAEAA program learning outcomes as the national standard for enabling programs across Australia.
2. Continue to engage with the AQF review process, informed by the outcomes of this benchmarking report, to embed enabling education in a revised AQF.

3. Maintain a Community of Practice through NAEAA to support ongoing development and refinement of enabling education nationally.
4. Promote and support a culture of ongoing peer review amongst enabling programs using the benchmarking framework and templates developed for this project.
5. Support enabling educators to build cross institutional, collaborative scholarly projects and to publish findings in scholarly journals.
6. Increase advocacy of enabling programs in scholarly and other publication to make visible the critical role they play in Australian higher education to governments, institutions and communities to ensure the ongoing provision of enabling education for future generations of students.
7. Undertake a sector level study of enabling education student outcomes to determine the correlation between success in enabling study and success in further undergraduate study.

Introduction

There are 48 enabling programs across Australia that provide an entry pathway into university for students who would otherwise be excluded from higher education (Habel et al., 2016). Enabling programs are non-award courses offered by universities and private providers to prepare students with the required skills and knowledge for undergraduate study (Department of Education, Skills and Employment, 2021). In 2020, 32,579 students were enrolled in Australian enabling programs (Department of Education, 2022). These programs typically attract students from low socio-economic backgrounds and other equity groups who have previously found higher education inaccessible (Syme, Roche et al., 2021). The programs are specifically designed to build students' confidence and the academic skills, knowledge and attributes needed for successful transition to higher education. While enabling education programs have existed in Australia since the mid-1980s (May & Bunn, 2015), they developed in isolation at individual universities and are not yet part of the AQF. This factor, and their apparent diversity, has meant they have sometimes been viewed as lacking transparency (Pitman et al., 2016). Shah and Whannell (2017), for example, claim the lack of transparency and standardisation puts the integrity of enabling programs at risk. In the current changing government funding landscape and with the introduction of the Job-Ready Graduates Package in 2020, there is even greater imperative to ensure that programs across Australia provide a high level of quality assurance.

While enabling education offers nuanced programs that respond to the needs of local student cohorts, there have been several studies which have identified commonalities across programs. Hodges et al., (2013) identified many similarities in curriculum and pedagogy in five programs, along with shared challenges concerning student retention. Studies such as those by Baker and Irwin (2015) and Irwin, Baker, and Carter (2018) undertook national audits to explore how enabling programs address academic literacy and numeracy. Relf et al. (2017) conducted a study of five enabling programs to articulate the good principles in curriculum design underpinning these programs. However, the first collaborative cross-institutional benchmarking study was conducted in 2019 by Syme, Davis et al., 2021 to establish whether their three programs shared learning outcomes and standards, and to test and refine Morgan and Taylor's (2013) benchmarking framework as a strategy for developing greater comparability across the sector. While this initial study clearly indicated the comparability of these three enabling programs and paved the way for the establishment of national learning outcomes by NAEAA, there is still no national framework defining the standards and learning outcomes of enabling programs across Australia.

This benchmarking project builds on this work to include another six Australian universities, representing more than half of the enabling student enrolments in Australia (Department of Education, 2022). Thus, a key aim of the project was to investigate the comparability of learning outcomes and standards of assessments across a wider selection of enabling programs in Australia with the aim of establishing national standards. Establishing these standards will make an important contribution to the enabling education landscape, ensuring visible standards of quality learning outcomes which clearly demonstrate the viability of enabling education to successfully prepare non-traditional students for higher education (HE).

Academic standards play a critical role in assuring Australia's higher education system is meeting the needs and expectations of students and the wider community. In the Higher Education Standards Framework (Threshold Standards), the Tertiary Education Quality and Standards Agency (TEQSA) emphasises that the assessment of learning outcomes be validated through comparison with external referencing standards, particularly the AQF, and with comparable programs offered by reputable higher education institutions (Australian Government, 2021). Academic standards act as reference points for what students should know or be able to do (Bloxham et al., 2015). They allow for

transparency of achievement for students, staff, institutions, and for the wider community, providing quality assurance that standards are being met (Booth et al., 2016). Studies, such as those by Sadler (2017), argue that academic standards are consensus driven and need to be clearly articulated, consistently understood, and applied through reliable methods of assessment. Others, for example Sharp (2017), also argue that academic knowledge, including accepted academic standards, is formed through collective social activity; however, such knowledge is fluid and subject to change over place and time. Underpinning the articulation of a shared and broadly accepted academic standards framework is a necessary reference to a broad range of stakeholders. As such, this project includes benchmarking of nine enabling programs, both with each other and, in lieu of appropriate AQF standards, against the Common Learning Outcomes articulated by NAEFA in 2019.

By broadening the project to nine enabling programs, the project aims to establish a national framework of standards of enabling programs across Australia that will allow for transparency of program standards and the portability of qualifications. It also aims to demonstrate comparability and rigour, and improve performance, academic practice, and student outcomes across the Australian enabling education sector. The nine participating universities are listed in Table 1.

Table 1: Participating universities and contacts

University	Enabling Program	Researcher	Contact
Central Queensland University (CQUni)	Skills for Tertiary Education Preparatory Studies (STEPS)	Chris Cook	c.cook2@cqu.edu.au
Charles Darwin University (CDU)	Tertiary Enabling Program	George Lambrinidis	George.Lambrinidis@cdu.edu.au
Curtin University (CU)	UniReady	Kathy Lawson	Kathryn.Lawson@curtin.edu.au
Edith Cowan University (ECU)	University Preparation Course (UniPrep)	Sue Sharp Lisa Duffy	s.sharp@ecu.edu.au l.duffy@ecu.edu.au
Federation University Australia (FUA)	Foundation Access Studies Program	Dr Stuart Levy	stuart.levy@federation.edu.au
Southern Cross University (SCU)	Preparing for Success Program (PSP)	Associate Professor Suzi Syme	suzi.syme@scu.edu.au
University of Southern Queensland (UniSQ)	Tertiary Preparation Program (TPP)	Charmaine Davis	Charmaine.davis@usq.edu.au
University of South Australia (UniSA)	Foundation Studies (MFFS)	Dr Sarah Hattam	sarah.hattam@unisa.edu.au
University of Tasmania	University Preparation Program (UPP)	Dr Sarah Dempster	sarah.dempster@utas.edu.au

Key Aims

The four key aims of the project were to:

1. expand upon the benchmarking framework from the previous study (Syme, Davis et al, 2021) to determine if it is applicable in the wider context of nine Australian university enabling programs
2. compare standards and outcomes for enabling programs
3. improve collaboration, academic practice and student outcomes across the enabling education sector
4. recommend to NAEAA the establishment of national standards and provide input for inclusion into the AQF.

Key Outputs

The four key outputs include:

1. a final report to NAEAA summarising findings, indicating areas of good practice and identifying areas for improvement
2. recommendations to NAEAA for the establishment of national standards for Australian enabling programs
3. the dissemination of findings and sharing this benchmarking framework at the December 2022 NAEAA conference, and through journal publications and workshops
4. an Enabling Educators' Community of Practice to sustain rigour and improved practices across the sector.

Methodology

The methodology of the Benchmarking project was underpinned by Morgan and Taylor's (2013) Framework which was adapted from the original benchmarking project to include six phases, as outlined in Table 2 below. These phases were iterative, rather than sequential and some are ongoing. Project assistance was offered online via Zoom meetings, telephone meetings and emails, and was supported by the NAEAA Chair and Executive.

Phase 1: Prepare for benchmarking by recruiting university partners and agreeing to the scope and terms of the project.

Through enabling education networks, including the NAEAA conference in 2019 and the NAEAA Executive Committee meetings, an additional six universities to the original three volunteered to be part of an expanded benchmarking project. These additional universities were selected as they represented a cross-section of the enabling education landscape in Australia. The universities consented to complete an ethics agreement and were invited to an inaugural online meeting to discuss the outline and aims of the project. An initial online meeting of the nine participating universities was held in February, 2021 and a formal agreement specifying the parameters of the project, confidentiality protocols, and the collaborative approach of the project to allow for "the rigorous, frank and confidential exchange of information" (Taylor & Morgan, 2011, p. 5) was instigated. One university subsequently withdrew from the project and was replaced by another in May 2021.

The overall aims of the project, data collection processes and instruments, data management, and timelines were discussed and agreed to. The nine universities divided into groups of three, with each group lead by a member of the original project. Each group then established set their own calendar of data collection, which included online meetings and collation of templates to meet the overall project

schedule. It was agreed that the project would continue to focus on three key subjects: study preparation, academic communication and mathematics, as per the preliminary study. It was also agreed to collect de-identified samples of the highest weighted assessment (major assessment) in each selected subject for easy comparison of the data.

Phase 2: Develop an evidence portfolio of curriculum documents, blind assessment scripts, assessment tasks and student evaluation data.

The subject outlines, assessment descriptors, and rubrics for the three selected subjects were collected and uploaded into an online repository. Each participating university then collected four de-identified samples of the major assessment task for each selected subject to disseminate within their group of three for blind marking. These samples included assessments that were initially graded a pass and a fail, and two other grades (determined by each university). These selections were made to increase the rigour of blind marking by avoiding having one sample from each of the five available grading levels, which could have influenced marking outcomes. Student evaluation results were also tabled.

Phase 3: Compare assessment standards through collaboration and discussion of processes and outcomes including blind marking, moderation practices, as well as learning outcomes and curriculum comparison template.

During this phase, the groups completed the Curriculum Comparison, Common Learning Outcomes, Blind Marking, Student Evaluation and Moderation Practices Templates, and met regularly online via Zoom to discuss and compare this data.

For the blind marking process, markers were selected by their respective universities, and de-identified samples were distributed for marking, along with the relevant rubrics and assessment instructions. Markers were given one month to complete the blind marking. Feedback on the process was also collected and uploaded into the online repository.

Phase 4: Analyse and discuss findings across the three sub-groups by comparing the data in the templates.

Data from the templates were analysed by the lead group of three universities. The lead group met online each fortnight over a two-month period to discuss the completed templates for all nine universities, compare the grades awarded, and evaluate the process. This was completed collaboratively through regular Zoom meetings.

An online meeting with all nine participating universities was held to discuss and compare the data. Each group of three reported to the whole group on their data and findings. Using minutes of online discussions, the framework was evaluated to determine whether it fostered genuine benchmarking of curriculum, shared approaches to assessment and common standards. Consideration was also given to whether the process fostered open discussion and contributed to improvements across programs.

Phase 5: Improve practices by identifying areas of good practice and areas for future improvements.

Each group of three recorded improvements to be made based on the findings. An online, recorded meeting with the markers and the leads from each university was held to discuss further insights into the marking process and lessons learned. These lessons provided the impetus for improvements to each program and identification of examples of best practice. A further outcome included setting up a community of practice, inviting academic staff across the nine universities to attend online Zoom meetings to discuss areas of common interest in their subject areas.

Phase 6: Report and provide recommendations to NAEAA on an approach for a national framework.

The findings and recommendations in this report will be submitted to NAEAA for further dissemination and used to contribute to discussions on a national framework for enabling programs in Australia.

Table 2: Key Phases of Benchmarking Framework

Phase	Description/Steps
Phase 1: Prepare for benchmarking	Recruit benchmarking partners
	Develop benchmarking agreement and protocols , including the establishment of: <ul style="list-style-type: none"> • a formal agreement between the participating universities • ethics agreements • agreements around confidentiality • an understanding of the collegial rather than competitive nature of the project • an outline of the project and initial team meeting • expectations of time and commitment • agreements for authorship and proposed papers.
	Negotiate parameters of project. Processes for project work across the nine participating universities need to be consistent in order to ensure rigour and comparability of results and to meet timeline requirements. This includes clarifying: <ul style="list-style-type: none"> • documents to be collected • document repository access • timelines for completion of each stage of the project • a meeting schedule.
Phase 2: Develop an evidence portfolio	Develop an evidence portfolio by compiling documents as described in the framework. Documents to be uploaded to repository include: <ul style="list-style-type: none"> • curriculum documents – subject descriptors/subject specifications • assessment tasks • de-identified student samples • success rates of students in the selected subjects • student evaluation data.
Phase 3: Compare assessment standards	Collaborate to complete templates and upload to repository for comparison and analysis. Templates to be completed and uploaded include: <ul style="list-style-type: none"> • curriculum comparison template • common learning outcomes comparison template • blind marking outcomes template • moderation practices template • student evaluation template • minutes of online discussions.
Phase 4: Analyse and report findings	Analyse findings by using the completed templates (Phase 3) as a basis to: <ul style="list-style-type: none"> • analyse data and compare elements across each of the three sets of three universities • discuss findings within each group and across the nine participants • use the minutes of online discussions to evaluate the framework, open discussion and promote growth and improvement.
Phase 5: Improve practices	Conclusions and lessons learned (ongoing). Identify and record: <ul style="list-style-type: none"> • areas of best practice • areas for improvement • areas for future sharing and collaboration • improved practice strategies adopted/planned by participating university project members in response to benchmarking findings.
Phase 6: Final reporting	Final reporting includes the following activities: <ul style="list-style-type: none"> • finalise report and disseminate findings to NAEAA • make recommendations for NAEAA on national standards for enabling programs • university project members report to their own institutions • journal publication and conference paper evaluating the framework.

(Adapted from Morgan & Taylor (2013))

Findings

Program structures and subjects

The nine enabling programs in this benchmarking project (identified in Table 3 below) included a range of structures and individual core subjects, with varying entry requirements and timeframes.

Table 3: A comparison of program entry requirements, core (compulsory) subjects and timeframes

University	Programs	Entry requirements*	Core subjects	Completion (core + elective/s)	Time to complete
CDU	Tertiary Enabling Program (TEP)	At least 18 years of age or completed Year 12; diagnostic test.	TEP021 Computing for Tertiary Study TEP022 Academic Language and Learning TEP023 Foundation Maths	3 core + 1 elective	1 semester full time or longer part time.
CQUni	Skills for Tertiary Education Preparatory Studies (STEPS)	At least 18 years of age in the academic year of enrolment; literacy, numeracy and computing diagnostic** tests; interview.	SKIL40025 Preparation Skills for University and LNGE40049 Essay Writing for University	1 core + minimum of at least 2 electives, including a writing subject	1 semester full time or longer part time.
CU	UniReady	Open access; must be past the compulsory school age as defined by the Western Australian School Education Act 1999 in the year of study; must reside in Australia for the duration of at least one UniReady unit.	PWRP0001 Fundamentals of Academic Writing COMS0002 Foundations of Communication	2 core + 2 electives	1 semester full time or longer part time.
ECU	University Preparation Course (UniPrep)	Entry requirements for this program can vary depending on circumstances. Whole of program entry requirement: Year 12 completion or equivalent. English competency requirement: *Year 12 General English grade C or better; *Special Tertiary Admissions Test; or* *Other tests, courses or programs defined on the English Proficiency Bands page.	UPU0001 Learning Skills UPU0002 Academic Writing UPU0006 Essential Mathematics	3 core + 1 elective	1 semester full time or longer part time.
FUA	Foundation Access Studies Program (FAST)	Literacy and numeracy entry tests (mature age students) and defined English and mathematics school achievement for recent school leavers.	ATSGC1369 Understanding University Learning FASTP1011 Introduction to Tertiary Studies FASTP1015 Academic Writing	3 core + 1 of 2 maths electives	1 semester full time or longer part time.
SCU	Preparing for Success Program (PSP)	Year 10 or equivalent and at least 18 years of age.	UNIP1001 Managing Your Study UNIP1002 Communicating at University UNIP1003 Applying Quantitative Concepts	3 core + 1 elective	1 semester full time or up to 1 year part time

UniSA	Foundation Studies (MFFS)	Open access; 18 years of age; numeracy and literacy placement test**.	EDUC1075 University Studies MATH 48 Maths Fundamentals	1 core, 2 literacy and 5 electives	2 semesters full time or longer part time.
UniSQ	Tertiary Preparation Program (TPP)	Open access; at least 18 years of age in first year of study; literacy and numeracy placement** tests.	TPP7122 Study Management; TPP7123 Communicating at University B; At least one mathematics subject	3 core + 1 elective as required	1 semester full time or longer part time.
UTas	University Preparation Program (UPP)	Open access.	UPP010 Learning at University UPP014 Writing in Practice UPP015 Numeracy and Data in Practice UPP016UPP Project A UPP017 Communication Skills in Practice UPP018UPP Project B	6 core + 2 electives	2 semesters full time or longer part time.
<p>*Does not include IELTS or equivalent for students who do not meet university English Language entry requirements.</p> <p>**For subject placement only.</p>					

Of the nine enabling programs benchmarked, seven required the completion of four subjects, with two of these allowing a degree of flexibility depending on student needs. Of these seven, all could be completed on a full-time basis over the course of six months, or over one period of study. Two programs required eight subjects for completion and a full year of full-time study. All programs offered options for full-time and part-time study, and online or on-campus modes of study. Six programs included a core study preparation subject, while all included a core academic communication subject. Of the two that did not, one included an additional academic communication subject which comprised an implied study preparation curriculum. The second included a compulsory week-long orientation program incorporating the same study preparation skills, and this university has since introduced a full study preparation subject following reaccreditation. Completion of a mathematics subject is a core requirement in six of the nine programs.

All programs indicated entry was restricted to domestic students who were typically post-school age, usually 17 or 18 years. Three programs specified additional entry requirements, with two specifying the achievement of a minimum Year 10 or equivalent, and two requiring evidence of minimum achievements in Year 12. Four programs also provided literacy and/or numeracy test options for placement in different subjects. Evidence provided by the researchers indicated additional factors were often taken into consideration when assessing applications by students who did not directly meet entry requirements, such as personal circumstances, disadvantage, and work and life experiences.

Curriculum and assessment comparisons

Subject learning outcomes and topics, along with assessment types and requirements, were compared across the nine universities. The completed templates for each benchmarked subject allowed for easy comparison of the learning outcomes, topics, assessment types, timing, and weightings across the nine universities. Similar to the initial benchmarking study (Syme, Davis et al., 2021), a close thematic analysis of the learning outcomes was undertaken followed by careful mapping of subject descriptors for each subject. Assessment types, timing, and weightings were also analysed and compared. See below Tables 4, 5, and 6 for each core subject. Discussion at online meetings provided opportunities to identify good practices that were shared collegially in the spirit of continuous improvement to benefit both students and staff. The identification and implementation of improvements and

modifications to subjects as a result of these discussions was also an ongoing and integral part of the project and in line with one of the key aims of benchmarking (Sadler, 2013).

Study Preparation

Six universities offered a study preparation subject, while one university offered a week of intense study preparation in the first week of semester that covered the same topics of time management, self-management, learning strategies and goal setting. Another two offered a combined University Studies subject that included both study preparation and academic literacy topics.

Table 4 below provides a comprehensive overview of learning outcomes, topics and assessments at each university that clearly demonstrates the similarity in learning outcomes and subject descriptors, often with almost identical wording. Although the number of learning outcomes and topics varied, there were common themes of helping students plan their time, navigate their way around university systems, apply learning strategies for university success, goal setting, self-management, working in groups and preparing for their future career. However, some also included research skills and critical thinking as well as academic integrity while others included digital literacy with one also including statistical literacy. These additional skills, while not shared within this subject, were nevertheless covered in other subjects such as the academic communication and the mathematics subjects by the other universities (see Table 5 and Table 6).

The number of assessments ranged from three to five and some had assessments broken into multiple parts with in-class weekly comprehension quizzes used to focus class discussions. There was a mix of assessment types that ranged from quizzes, learning portfolios, group work, oral presentations, paragraph writing tasks, reflective writing, a research paper, test, and an essay. Students are thus being exposed to a wide range of assessment experiences that they will encounter in their undergraduate studies. Despite these varied assessment types, students were still being assessed on similar learning outcomes that focused on study skills preparing them to transition into university study. This subject emphasised a demystifying of university discourses and practices (Devlin, 2013) through explicit teaching of the tacit understandings required to negotiate this environment. A focus of this subject was for students to reflect and build resilience and confidence in their ability to engage with university expectations.

Table 4: Overview of learning outcomes, topics and assessment in study preparation subject

Subject Name and Code	Learning Outcome	Topics	Assessment
CQUni SKIL40025 Preparation Skills for University	<ol style="list-style-type: none"> 1. Develop strong study habits and effective learning strategies to become a confident and self-directed learner. 2. Apply critical thinking skills in a range of contexts, with a particular focus on critical self-reflection. 3. Set and manage goals for individual study and career paths. 4. Find and evaluate relevant, scholarly research 5. Negotiate procedures and systems used at university. 6. Develop communication skills appropriate for higher education. 	<ul style="list-style-type: none"> • Preparing for university • Practical tips for effective learning • Learning styles and personality types • Active reading and listening (introduction to note-taking and paraphrasing) • Research skills (finding and evaluating scholarly information) • Oral presentation skills • Career planning • Stress management and resilience • Assessment strategies and brain-based learning • Critical thinking • Looking back, looking forward 	<ol style="list-style-type: none"> 1. Online Quiz, Week 3, 10% 2. Learning portfolio, Week 4, 30% 3. Online Quiz, Week 6, 20% 4. Learning portfolio, Week 11, 40%
CU COMS0002 Foundations of Communication	<ol style="list-style-type: none"> 1. Identify and use interpersonal strategies appropriate for purpose and audience when communicating in spoken, written and online modes in the learning environment. 2. Execute an oral presentation using visual tools to enhance the message. 3. Participate in a team project and produce a blog or wiki on an assigned topic that demonstrates effective online, interpersonal and collaborative learning practices. 4. Demonstrate competent communicative skill in using English for academic purposes (in reading, writing, speaking and listening). 	<ul style="list-style-type: none"> • Academic and digital integrity • Understanding what communication is • Communication types and settings • Effective communication skills • Visual communication • Online security, social media and online educational tools • Collaborating and communicating effectively in teams • Working in teams • Public speaking and oral presentations • Oral communication tools • University learning environment 	<ol style="list-style-type: none"> 1. Structured discussion, Week 5, 20% 2. Group task, Week 10, 40% 3. Oral presentation, Week 14, 40%
ECU UPU001 Learning Skills	<ol style="list-style-type: none"> 1. Use appropriate learning strategies to organise and manage learning in an academic environment. 2. Use professional communication and teamwork skills for effective participation in small interactive group learning activities. 3. Deliver an effective oral presentation demonstrating effective use of technology and reflective practice. 	<ul style="list-style-type: none"> • Time management strategies • University ICT skills and Learning Management Systems • Strategies for learning • Employability and career planning • Reflective writing • Strategies for oral presentations 	<ol style="list-style-type: none"> 1. Portfolio tasks <ul style="list-style-type: none"> • Part A: weekly and semester planner, Week 3, 10% • Part B: note making and synthesis assessment on career planning, Week 8, 40% 2. Reflective oral presentation on learning journey

			<ul style="list-style-type: none"> • Reflective oral presentation, 40% • Groupwork, attendance and engagement, Throughout semester, 10%
FUA FASTP1011 Introduction to Tertiary Studies	<ol style="list-style-type: none"> 1. Demonstrate appropriate writing and research skills for university study. 2. Demonstrate appropriate reading and study skills for university study. 3. Identify learning strategies appropriate for university study. 4. Identify the study practices appropriate in an adult learning environment. 5. Utilise the university's e-learning environment. 6. Engage with university e-learning platforms. 7. Analyse and interpret learning strategies appropriate for a variety of university teaching and learning settings. 8. Prepare assessments according to university requirements. 9. Reflect upon the practices of university learning. 10. Produce and submit tertiary level assessment tasks. 11. Analyse, interpret and transmit appropriate independent learning strategies and practices. 12. Effectively use university e-learning platforms. 	<ul style="list-style-type: none"> • World of university / University systems • Independent learning / Library session • Self-efficacy / Who am I as a learner - note taking • Study skills / Ethics and plagiarism • Approach to university tasks / Writing at university • Collaboration / University communication • Learning at university / Anxiety and engagement • Dealing with feedback / Consultation at university • Effective communication / Public speaking • Cultural competence / Optimising learning • Statistical literacy / Digital literacy • Moving on and looking back / Exam techniques 	<ol style="list-style-type: none"> 1. Preparation and comprehension tasks, Weeks 3, 6 & 8, 30% 2. PowerPoint Presentation & Paper: Researched PowerPoint presentation with Moodle submission of slides, reference list and reflective evaluation (On-campus students assigned to groups; Online students' group or individual narrated presentation submitted in Moodle), Week 10, 40% 3. Test: Short and extended written response test at end of semester (On-campus students in class time; Online students in Moodle), Week 12, 30%
SCU UNIP1001 Managing your Study	<ol style="list-style-type: none"> 1. Demonstrate an understanding of university culture by applying university language, processes and technologies to their own study. 2. Use academic, information literacy, and study skills and strategies in their learning. 3. Demonstrate teamwork skills for study. 4. Prepare and evaluate a plan for future study. 	<ul style="list-style-type: none"> • Orientation for study at university <ul style="list-style-type: none"> - Structures - Language - Processes - Technologies • Self-management skills and strategies <ul style="list-style-type: none"> - Goal setting - Time management - Action planning academic skills - Study as an individual or study in groups - Managing assessments, goal setting and planning for future study 	<ol style="list-style-type: none"> 1. Planners, Week 1, 5% 2. Mind map, Week 3, 30% 3. Group work, Week 5, 25% 4. Critical reflective essay, Week 6, 40%

UniSA EDUC1075 University Studies	<ol style="list-style-type: none"> 1. Plan and manage their study. 2. Read and comprehend texts appropriate to undergraduate study. 3. Access and use effectively, a range of sources related to their study. 4. Recognise and apply academic conventions required for written assignments. 5. Understanding different assessment methods and intent in a university setting. 	<ul style="list-style-type: none"> • Introduction to university life • Organisation of resources and time • Topic/question analysis and research planning • Finding, evaluating and managing resources • Reading for meaning, method, argument and validity in a range of disciplines • Research based writing and academic conventions • Research skills and notetaking • Referencing and academic integrity • Generating a summary, direct citations and paraphrasing • Critical thinking 	<ol style="list-style-type: none"> 1. Online quiz, Week 3, 15% 2. Annotated bibliography 900 words, Week 6, 20% 3. Argumentative paragraphs 600 words, Week 9, 20% 4. Research paper 1500 words, Week 14, 35% 5. Participation, 10%
UniSQ TPP7122 Study Management	<ol style="list-style-type: none"> 1. Describe the identity and role of a student in the contemporary university environment. 2. Engage with university systems, policies, processes and practices relevant to first year study. 3. Apply lifelong learning strategies related to academic success at a university and in career related contexts. 4. Evaluate the effectiveness of self-management decisions on learning progress. 	<ul style="list-style-type: none"> • Transitioning to university • Understanding and managing choices and change • Engaging with and managing learning: Learning to learn • Exploring content specific learning experiences • Evaluating and planning an individual learning journey 	<ol style="list-style-type: none"> 1. Portfolio Part A, Week 7, 30% 2. Online Quiz, Week 10, 20% 3. Portfolio Part B, Week 11, 20% 4. Portfolio Part C, Week 13, 30%
UTas UPP010 Learning at University	<ol style="list-style-type: none"> 1. Develop skills, techniques and strategies for learning within the university environment. 2. Critically reflect on learning experiences and skills to generate plans for development. 3. Describe and apply academic concepts and skills to work independently and collaboratively. 4. Investigate a field of inquiry using academic research methods. 	<ul style="list-style-type: none"> • Reflection, assessment, strength-based approach • Strengths, hobbies and interests, flow, motivations • Self-management, time management, resilience, work styles, goal setting • Public speaking strategies, communication styles, rubrics • Critical thinking, problem solving, referencing • Career investigation, transferable skills, future opportunities 	<ol style="list-style-type: none"> 1. Journal reflection, Week 5, 15% 2. Oral presentation, Week 7, 30% 3. Expository essay, Week 11, 30% 4. Unit reflection, Week 1, 25%

Finding 1

A comparison of the subject study preparation revealed the same learning outcomes, topics and close alignment with the study preparation content and assessment.

It should be noted that one university offered study preparation skills in a one week intensive at the beginning of semester. Two universities addressed the study preparation key curriculum and learning outcomes in a subject which combined these with further academic communication skills. Nevertheless, all universities covered the same topics and learning outcomes but with a range of assessment types and volume of learning.

Good practices included:

- Explicit teaching of how to navigate academic culture, expectations, and conventions
- Opportunity to reflect and build resilience
- Low stakes and early assessment to build confidence

Benchmarking impacts included:

- Collaboration across universities and sharing of learning and teaching resources
- Changes to existing subject content, assessments and delivery
- Introduction of a study preparation subject in programs that did not previously have one

Academic Communication

The core writing subject compared across programs was an academic communication subject. Table 5 demonstrates a high degree of similarity in the learning outcomes and topics in this subject with nearly identical wording that focused on promoting student understanding of the culture of university, academic writing expectations, researching, and communicating ideas using academic language and conventions in a written essay. While the number of learning outcomes varied from two to five, and topics ranged from five to twelve, they covered the same key outcomes for students to be able to read critically, research, and communicate effectively using academic conventions in a written essay. All the assessments involved a range of scaffolding tasks that included quizzes, essay plans, and draft paragraphs before the completion of a final essay. The number of assessments ranged between three to five, with a focus on breaking the task of producing an academic essay into stages which allowed for feedback to inform further essay development. Thus, the timing of assessments afforded students the opportunity to make use of feedback in their final essay assessment. Two universities had a final exam worth 35% and 45% of the final mark, both focusing on producing extended academic writing.

Several subjects also recognised the need for early low stakes assessment with tasks ranging from an online quiz, a proposal and reflections. While not all subjects offered these early low stakes assessments, they did share the same approach of scaffolded tasks designed to build students' confidence and understanding of essay writing in a university context. This shared approach to learning outcomes, topics and assessment indicate a common understanding of academic literacy as "the ability to communicate competently in an academic discourse community" (Wingate, 2015, p. 6). It also reflected a shared emphasis on the need to develop students' understandings of language use within an academic context and building a command of the academic conventions and norms expected in this environment.

Table 5: Overview of learning outcomes, topics and assessment types, timing and weightings in the academic communication subject

Subject Name and Code	Learning outcomes	Topics	Assessment types, timing, weightings.
CDU TEP022 Academic Language and Learning	<ol style="list-style-type: none"> 1. Reflect on who they are as a learner. 2. Demonstrate effective study skill strategies. 3. Read critically and write an academic text. 4. Critically assess and edit their writing. 5. Take notes and summarise academic texts. 6. Research for credible information for assignments and use standard referencing. 7. Learn collaboratively in an online environment. 	<ul style="list-style-type: none"> • Activities related to academic writing and paragraph writing, preparation of drafts for essays • Library tutorials, referencing tasks, paraphrasing/summarising readings • Readings, discussions and writing on topics relating to study skills and reflections as a learner • Weekly readings, analysis of academic writing samples 	<ol style="list-style-type: none"> 1. Online learning reflections, Weekly, 10% 2. Paragraph writing, Week 6, 10% 3. Short academic essay, Week 7, 20% 4. Annotated bibliography, Week 9, 20% 5. Extended argument essay, Week 13, 40%
CQUni LNGE40049 Essay Writing for University	<ol style="list-style-type: none"> 1. Evaluate information for relevance, authority, objectivity and currency. 2. Paraphrase, quote and summarise information using appropriate referencing conventions. 3. Plan and write an academic essay that integrates sources to support a reasoned argument. 	<ul style="list-style-type: none"> • Pen to paper • Critical reading • Referring to the ideas of others • Citations and the reference list • Finding information • The structure of effective essays • From plan to paragraph • Polishing paragraphs • Variations to paragraph structure • Introductions and conclusions • Editing and preparing your essay for submission • Submitting your essay and reflecting on your progress 	<ol style="list-style-type: none"> 1. Annotated bibliography, Week 5, 20% 2. Portfolio, Week 9, 30% 3. Essay, Week 13, 50%

Subject Name and Code	Learning outcomes	Topics	Assessment types, timing, weightings.
CU PWRP0001 Fundamentals of Academic Writing	<ol style="list-style-type: none"> 1. Identify and implement relevant study processes, strategies and attitudes to effectively manage personal study demonstrated by completing specific learning development tasks including reflection. 2. Consistently apply academic research and writing conventions and practices including information literacy, appropriate use of scholarly literature, and a formal writing style when producing written assignments. 3. Construct an essay to demonstrate application of effective planning, structuring, editing and proofreading skills. 4. Demonstrate competent communicative skills in reading and writing, in using English for academic purposes. 	<ul style="list-style-type: none"> • Optimising your learning and studying • Reading critically and learning reflectively • What do we mean by 'academic'? • Academic knowledge and evaluating sources • Academic Integrity and plagiarism • Plagiarism and referencing • Types of assignments: the argumentative essay • Structuring your writing: the essay & paragraph • Pre-writing strategies & formal writing style • Incorporating feedback & unpacking submission requirements • Preparing and polishing your essay 	<ol style="list-style-type: none"> 1. Reading response, Week 4, 15% 2. Essay planning, Week 9, 40% 3. Exam, Examination period (2 hours), 45%
ECU UPU0002 Academic Writing	<ol style="list-style-type: none"> 1. Locate and evaluate relevant academic sources in readiness for undergraduate study. 2. Paraphrase, summarise and synthesise ideas from the literature to support academic writing. 3. Construct sentences, paragraphs, introductions and conclusions for academic essay writing. 4. Reference using APA style and conventions, focusing on personal responsibility and academic integrity 	<ul style="list-style-type: none"> • Research • Essay structure • Referencing • Grammar and style • The writing process 	<ol style="list-style-type: none"> 1. Argumentative essay and preparation, 60% <ul style="list-style-type: none"> • Referencing test, Week 5, 8% • Peer review of essay plan, Week 6, 2% • Essay plan, Week 8, 10% • Final Essay, Week 11, 40% 2. Final assessment Cadmus exam, 40% <ul style="list-style-type: none"> • Literature matrix, Week 14, 5% • Cadmus timed exam, Week 15, 35%

Subject Name and Code	Learning outcomes	Topics	Assessment types, timing, weightings.
FUA FASTP1015 Academic Writing	<ol style="list-style-type: none"> 1. Explain the nature and structure of academic writing. 2. Identify the requirements and components of academic writing. 3. demonstrate technical knowledge of academic writing specifically for assessment at university. 4. Engage with e-learning writing specific to a university learning environment. 5. Identify types of academic writing. 6. Interpret assessment criteria. 7. Produce assessments that conform to university requirements. 8. Reflect upon the nature and structure of tertiary writing. 9. Produce and submit tertiary level assessment tasks. 10. Analyse the nature and structure of academic writing. 11. Communicate and transmit ideas about academic writing through: formal and informal discussion, written assessments, and reflective writing. 	<ul style="list-style-type: none"> • Course overview & learning to write • The writing process & academic language • Essay structure, thesis statements & topic sentences • Referencing & integrating evidence • Paragraph structure, summarising & paraphrasing sources • Combining the parts of an essay • Report writing • Reflective writing • Introductions & conclusions, and the revision process • Improving written expression, sentences & punctuation • Essay writing workshop • Exam writing 	<ol style="list-style-type: none"> 1. Engagement and active participation, Weekly, 5% 2. Quizzes, Weeks 7 & 11, 20% 3. Essay plan: essay plan including topic sentences, Week 4, 15% 4. Essay draft: essay body paragraphs and reference list, Week 6, 30% 5. Essay: final revised essay plus introduction and conclusion, Week 10, 30%
SCU UNIP1002 Communicating at University	<ol style="list-style-type: none"> 1. Demonstrate an understanding of the culture of writing in a university context. 2. Organise, synthesise and evaluate written information using academic conventions. 3. Plan and write a summary, an annotated bibliography and an essay. 4. Critically reflect on their own academic writing. 	<ul style="list-style-type: none"> • Role of evidence in the culture of writing in the university context • Reading and summarising; question analysis; efficient reading; reading from different genres; paraphrasing, summarising and quoting; and referencing • Preparation to write an essay; searching for, evaluating and comprehending sources; preparing an annotated bibliography; what is an essay?; essay plan; writing an essay; structure of an essay and the nature of building an argument; writing introduction, paragraphs, conclusion and reference list; and reflecting on academic essay writing • Improving written expression, sentences and punctuation 	<ol style="list-style-type: none"> 1. Quiz, Week 1, 10% 2. Annotated bibliography, Week 2, 20% 3. Essay plan, Week 4, 30% 4. Essay, Week 6, 40%

Subject Name and Code	Learning outcomes	Topics	Assessment types, timing, weightings.
UniSA EDUC1075 University Studies	<ol style="list-style-type: none"> 1. Plan and manage their study. 2. Read and comprehend texts appropriate to undergraduate study. 3. Access and use effectively, a range of sources related to their study. 4. Recognise and apply academic conventions required for written assignments. 5. Understanding different assessment methods and intent in a university setting. 	<ul style="list-style-type: none"> • Introduction to university life • Organisation of resources and time • Topic/question analysis and research planning • Finding, evaluating and managing resources • Reading for meaning, method, argument and validity in a range of disciplines • Research based writing and academic conventions • Research skills and notetaking • Referencing and academic integrity • Generating a summary, direct citations and paraphrasing • Critical thinking 	<ol style="list-style-type: none"> 1. Quiz – online, Week 3, 15% 2. Annotated bibliography, Week 6, 20% 3. Argumentative paragraphs, Week 9, 20% 4. Research paper, Week 14, 35% 5. Participation, Ongoing, 10%
UniSQ TPP7123 Communicating at University B	<ol style="list-style-type: none"> 1. Competently find, meaningfully comprehend, use, and engage critically with information resources, including information communication technology resources, to match the ethical and academic expectations of the academic community. 2. Competently communicate ideas using the standard of logic and evidence required for first year university studies at the bachelor level. 	<ul style="list-style-type: none"> • The culture of university communication • Reading strategies • Introducing the academic essay • Reading more critically • Organising ideas • Constructing an argument • Writing successful academic paragraphs • Referencing • Finding and using information responsibly • Academic communication and further study 	<ol style="list-style-type: none"> 1. Essay step 1 (proposal), Week 5, 5% 2. Essay step 2 (plan), Week 7, 15% 3. Reading response (8 set articles), Week 8, 20% 4. Essay step 3 (partial draft), Week 10, 15% 5. Essay step 4 (final essay), Week 13, 45%
UTas UPP014 Writing in Practice	<ol style="list-style-type: none"> 1. Plan and create forms of writing for an academic context. 2. Communicate using academic conventions. 3. Source, locate, evaluate, and integrate academic sources. 	<ul style="list-style-type: none"> • Micro-theme 1: Documentary • Micro-theme 2: Education • Micro-theme 3: Privacy & Surveillance • Micro-theme 4: Tasmanian History • Micro-theme 5: Ethics • Essay Writing Support: Editing and Proofreading 	<ol style="list-style-type: none"> 1. Writing journal #1, Week 6, 25% 2. Writing journal #2, Week 10, 25% 3. Academic essay, Week 14, 50%

Finding 2

A comparison of the academic communication subject offered at the nine universities clearly demonstrated the comparable learning outcomes, the same topics and close alignment between academic literacy content and assessment.

Good practices included:

- Scaffolded assessments to build students' confidence in attempting to write an academic essay
- Feedforward to improve students' final essay
- Rubrics that facilitated tutors' marking consistency and allowed for transparency of the grading process for students

Benchmarking impacts included:

- Reducing the number of assessments to allow students time to focus and benefit from feedforward
- Further embedding types of assessment which allow for better scaffolding
- Developing clearer rubrics to better align with the learning outcomes

Mathematics

Table 6 provides an overview of the learning outcomes, topics and assessment types and weightings for the mathematics subject offered at the nine universities. A thematic analysis of the learning outcomes and topics revealed the same learning outcomes suited for novice students in a mathematics subject with similar topics identified by the same subject descriptors. The number of learning outcomes ranged from five to twelve and eight of the nine benchmarked subjects included the ability to communicate, evaluate and interpret mathematical concepts and apply to real life contexts. The subject descriptors were the same across all nine programs and included work on numbers, graphing relationships, statistics, and algebra. In some programs these subjects covered higher level mathematics topics that included bivariate analysis, normal distribution and inferential statistics.

While the learning outcomes and topics were almost identical, there was greater variety in assessment tasks. Generally, the number of assessment tasks across these subjects was higher than in the study preparation subjects and less than in the academic communication subjects. The number of assessment tasks ranged between two and five with an even distribution: three subjects had 2-3 assessments; three subjects had four; and three subjects had five. Weekly engagement tasks were utilised by three subjects, and six subjects utilised either quizzes or exams as part of their assessment practices. Three subjects did not have a final exam, while the other six had a final exam with a weighting ranging between 30-60%. Less than half of the subjects commenced with small (less than 20%) low stakes assessment tasks. Those subjects without an exam required students to apply their mathematical skills to interpret and communicate solutions to real life, problem-solving scenarios.

The similarities in the content of the mathematics subjects co-selected for benchmarking indicate a widely held belief in the importance of ensuring that enabling program completers enter their undergraduate degrees with sound mathematical skills. For completers seeking to enter undergraduate degrees with higher level mathematical demands such as engineering or engineering pathways, five programs offered advanced mathematics subjects as an elective, two programs required students to attain a specified or elevated level of achievement in the mathematics subject, and two programs required students to enter a pathway degree. The diversity of program approaches, and the differences among the advanced mathematics subjects, excluded them from this benchmarking exercise and remains an area for future potential investigation.

While the level and complexity of mathematics topics varied there were common key topics across all subjects. There was an expectation for students to apply mathematical skills to real life situations in all subjects except in one where that expectation was not identified in the learning outcomes. The use of small, low-risk initial assessment tasks was less prevalent than in the other benchmarked subjects, and most subjects retained the use of exams as a significant assessment component. Student evaluations of the mathematics subjects was typically lower than the other benchmarked subjects, with evaluations higher than the program average at only two institutions.

Table 6: Overview of learning outcomes, topics and assessment in mathematics subject

Subject Name and Code	Learning Outcomes	Topics	Assessment
CDU TEP023 Foundation Maths	<ol style="list-style-type: none"> 1. Demonstrate foundational knowledge of integers, fractions, algebra, measurement and data. 2. Identify and interpret key information in mathematical problems. 3. Select and use appropriate strategies to solve mathematical problems. 4. Analyse and communicate mathematical solutions in context. 5. Use and apply mathematics in abstract and real-world contexts. 	<ul style="list-style-type: none"> • TEP Start • Integers • Fractions • Ratios, decimals and percentages • Algebra • Equations and formulae • Measurement • Data statistics • Data graphing 	<ol style="list-style-type: none"> 1. Online diagnostic test, Week , 5% 2. Calculations assessments 1-3 3. Initial diagnostic test – online quiz, 5% 4. Assignment 1: integers, decimals and fractions, Week , 15% 5. Assignment 2: ratios, percentages and algebra, Week , 20% 6. Assignment 3: algebra and measurement, Week , 20% 7. Assignment 4: final application assessment - Data, maths in career scenarios and research, Week , 40%
CQUni MATH40237 Fundamental Mathematics for University	<ol style="list-style-type: none"> 1. Recall fundamental mathematical concepts and techniques such as operations, percentages, introductory algebra, simple equation solving, exponents, linear equations, introductory statistics and units and conversions 2. Apply appropriate mathematical techniques 3. Develop solutions to applied mathematical problems 4. Reflect on assessment to improve mathematical comprehension 5. Analyse information using mathematical techniques 6. Communicate mathematical solutions. 	<ul style="list-style-type: none"> • The study of mathematics • Basic operations with numbers • Percentages • Introduction to algebra • Solving algebraic equations • Graphs and linear equations • Introduction to statistics • Exponents • Units and conversions 	<ol style="list-style-type: none"> 1. Module tests, weekly, Pass/Fail (50% overall required to pass) 2. Take Home Exam, Week 6, 40% 8. Take Home Exam, Week 13, 60%

CU MATH0003 Mathematics Basics	<ol style="list-style-type: none"> 1. Perform calculations involving fractions, decimals and percentages and apply these concerns when solving more complex problems 2. Use the metric system to convert between measurements and to perform calculations involving measurement (including rates) 3. Analyse and interpret data using both descriptive and inferential statistics applying tests for normality as required 4. Interpret, solve and develop algebraic equations, with a focus on linear functions and interpret graphs of these equations or graphs displaying data 5. Apply exponential functions to solve problems in financial and health science contexts 	<ul style="list-style-type: none"> • Metric measurement • Introduction to algebra • Algebraic equations • Linear equations • Exponential functions • Displaying & analysing categorical data • Displaying & analysing continuous data • Bivariate analysis • Normal distribution • Inferential statistics 	<ol style="list-style-type: none"> 1. Assignment 1: ETest, Weeks 4 & 7, 30% 2. Assignment 2: investigation, Week 11, 30% 3. Assignment 3: examination, Weeks 15-16, 40%
ECU UPU0006 Essential Mathematics	<ol style="list-style-type: none"> 1. Formulate and solve numerical questions 2. Use appropriate tools and technologies to calculate mathematical problems 3. Explain mathematical methods and techniques to evaluate problems 4. Interpret probability and statistical data to enable the formulation of conclusions 6. Apply data ethically to real world situations 	<ul style="list-style-type: none"> • Decimals, fractions, percentages and mathematical operations. • Perimeter, area, volume, unit conversion, ratio and rates. • Financial and business-based problems. • Algebra and word problems. • Linear equations. • Probability, graphs and charts, measures of centre and spread, correlation, skewness. 	<ol style="list-style-type: none"> 1. Online Test 1: modules 1–3, Week 5, 10% 2. Mid-semester test: modules 1–5, Week 8, 30% 3. Online Test 2: modules 6 –8, Week 12, 20% 3. Final assessment: exam modules 6–10, Week , 40%

FUA FASTP1013 Mathematics and Introductory Statistics	<ol style="list-style-type: none"> 1. Conceptualise and explain the meaning of place value and the decimal system 2. Conceptualise and explain the meaning of the binary number system 3. Conceptualise and explain the four basic operations of addition, subtraction, multiplication and division, as well as exponential notation 4. Conceptualise and explain the connection between fractions, percentages, and decimals 5. Conceptualise and explain how to add, subtract, divide and multiply fractions by whole numbers and by other fractions 6. Conceptualise and explain how to add, subtract, divide and multiply decimals and percentages 7. Conceptualise and explain the use of scientific notation 8. Conceptualise and explain expressions that contain variables (pronumerals, or letters of the alphabet) 9. together with numbers 10. Conceptualise and explain the meaning of equality as an intrinsic mathematical notion, allowing them to solve otherwise intractable problems 11. Conceptualise and explain the usefulness of algebra in solving real life problems 12. Identify, conceptualise and explain the difference between numerical and categorical data 13. Identify, conceptualise and explain measures of central tendency and spread 14. Use the four basic operations of addition, subtraction, multiplication and division, as well as exponential notation. 15. Apply index laws to numerical expressions. 16. Competently work with fractions decimals and percentages. 17. Work with expressions that contain variables (pronumerals, or letters of the alphabet) together with numbers. 18. Use equality as an intrinsic mathematical notion to solve otherwise intractable problems. 19. Present statistical data in useful ways. 	<ul style="list-style-type: none"> • Arithmetic: <ul style="list-style-type: none"> - Number systems - Basic operations - Order of operations - Fractions, decimals and percentages - Exponential notation • Algebra: <ul style="list-style-type: none"> - Evaluation, expressions and equations - Equality and transforming equations - Solving linear equations - Formulas in real world problems - Worded problems • Statistics: <ul style="list-style-type: none"> - Data presentation - Measures of central tendency - Measures of spread 	<ol style="list-style-type: none"> 1. Written test: arithmetic, Week 5, 15% 2. Written test: algebra, Week 9, 15% 3. Written assignment: statistics application task, Week 12, 20% 4. Written assignment: Submitted folio of completed exercises and summaries at end of each topic arithmetic, algebra and statistics, Week 12, 10% 5. Written exam, Exam period, 40%
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	20. Add, subtract, divide and multiply fractions by whole numbers and by other fractions. 21. Add, subtract, divide and multiply decimals and percentages. 22. Solve problems involving fractions percentages and decimals. 23. Use algebra to solve real life problems. 24. Create and interpret data and graphs in order to come to logical and useful conclusions.		
SCU UNIP1003 Applying Quantitative Concepts	1. Analyse situations and apply suitable mathematical skills in problem solving. 2. Interpret numerical situations (including graphs, tables, figures, statistical summaries) and derive meaning. 3. Show proficiency in the use of mathematical skills in areas such as number, measurement, basic algebra, exponents, and statistics. 4. Communicate in a structured and logical sequence the steps to a solution. 5. State limitations, acknowledge assumptions made, and comment on the practicality of the solution used and be able to examine the suitability of alternative solutions to problems.	<ul style="list-style-type: none"> • Solving problems using numbers • Using powerful numbers • Comparing quantities • Measuring quantities • Generalising quantities: algebra • Visualising quantities: graphing relationships • Describing data: statistics 	1. Two Quizzes, Week 1 & 5, 20% 2. Problem solving, Week 3, 35% 3. Problem solving, Week 6, 45%

UniSA MATH 48 Maths Fundamentals	<ol style="list-style-type: none"> 1. Recognise Hindu-Arabic numeration system and place values. 2. Recognise the place value of each digit of a whole number. 3. Explain the concepts of addition, subtraction, multiplication and division. 4. Perform addition, subtraction, multiplication and long division involving whole numbers using vertical format. 5. Solve problems relating to whole numbers. 6. Recognise directed numbers. 7. Explain the use of directed numbers. 8. Perform addition, subtraction, multiplication and division involving directed numbers. 9. Solve problems relating to directed numbers. 10. Know the order of operations rule when evaluating mixed operations in an expression. 11. Identify and explain errors when evaluating mixed operations in an expression. 12. Describe a scenario or a situation in context for an expression with mixed operations. 13. Explain the concept of fractions. 14. Recognise proper fractions, improper fractions, mixed numbers and equivalent fractions. 15. Find the multiples of numbers, common multiples and the least common multiple of two numbers, factors of numbers, common factors of two numbers and the greatest common factors of two numbers. 16. Find the prime factorisation of numbers. 17. Simplify a fraction into its simplest form. 18. Perform addition, subtraction, multiplication and division involving two fractions, fractions with mixed numbers, whole numbers and directed numbers. 19. Solve problems relating to fractions. 20. Relate fractions to decimals. 21. Identify the values of each digit in a decimal number 22. Perform addition, subtraction, multiplication and division involving decimals using vertical format. 23. Round decimals to the nearest required place value. 24. Solve problems relating to decimals. 	<ul style="list-style-type: none"> • Apply basic mathematical principles • Perform basic mathematical calculations • Use mathematical techniques to solve problems • Whole number operations • Directed numbers • Order of operations • Fractions • Decimals • Simplifying algebraic expressions • Solving linear equations in one unknown • Linear equations in two variables • Metric units of measurement • Ration, ratios, rates and proportions • Percent • Descriptive statistics • Introduction to geometry 	<ol style="list-style-type: none"> 1. 12 topical quizzes, Weekly, 2.5% each 2. Learning engagement in weekly lesson, weekly, 10% 3. 40% 4. Online test content from Weeks 1 – 6, Week 8, 30% 4. Examination 2 hours, exam period, 30%
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	<ul style="list-style-type: none"> 25. Use appropriate terminologies to describe algebraic expressions. 26. Apply commutative, associative and distributive law in simplifying algebraic expressions. 27. Explain the concept of equality in an equation. 28. Apply Properties of Equality in solving linear equations in one unknown. 29. Write linear equations in one unknown to represent scenarios and find the solutions. 30. Find the solution for a variable in a given formula. 31. Describe relationship between independent and dependent variables in a linear equation. 32. Find the value of a variable when a value of another variable is given in an equation. 33. Draw graphs of linear equations utilising Cartesian coordinate system. 34. Read the value of a variable from a graph when given the value of the corresponding variable. 35. Write ratios and rates to compare quantities. 36. Write proportions and apply the fundamental properties of proportion in problem solving. 37. Recognise the units of lengths, mass and capacity in metric system. 38. Convert between common metric units for length, mass and capacity. 39. Relate per cent to fractions and decimals. 40. Convert per cent to fractions and decimals and vice versa. 41. Solve problems involving per cent. 42. Describe mean, median and mode as measures of central tendency and range as a measure of dispersion. 43. Calculate mean, median, mode and range for a given dataset. 44. Extract information from tables and graphs. 45. Calculate the perimeter, area and volume of common plane geometric figures and solids. 46. Solve problems involving plane geometric figures and solids. 		
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UniSQ TPP7181 Tertiary Preparation Mathematics 1 (Mathematics)	<ol style="list-style-type: none"> 1. Demonstrate an understanding of mathematical topics essential for tertiary study as detailed below. 2. Interpret and solve a range of problems involving mathematical concepts relevant to this course. 3. Demonstrate the skills and understanding necessary to extend mathematical knowledge into everyday life and other studies. 4. Effectively interpret and communicate mathematics within a range of concepts. 5. Demonstrate an understanding of learning strategies used in the study of mathematics. 6. Demonstrate an ability to manage, and reflect on, their learning of the mathematics in this course. 	<ul style="list-style-type: none"> • Managing mathematics • Revision of topics covered in TPP7180 • Comparing numbers – percentages, fractions, ratios and rates • The power of numbers – power rules, scientific notation, metric system • Representing relationships – formula and introduction to graphs • Representing relationships – straight line, parabolic and exponential graphs • Dealing with data – statistics and probability, introduction to graphing in Excel • Representing relationships – algebra 	<ol style="list-style-type: none"> 1. Assignment 1, Week 2, 2% 2. Assignment 2, Week 5, 12% 3. Assignment 3, Week 7, 12% 4. Assignment 4, Week , 7%, due 4 May 2021. 5. Assignment 5, Week , 7%, due 25 May 2021. 6. Online examination (End of exam block) 60%
UTAS UPP015 Data and Numeracy in Practice	<ol style="list-style-type: none"> 1. Identify and describe research methods, data collection and analysis techniques for a variety of academic contexts. 2. Communicate numerical ideas and information in a range of formats. 3. Examine research sources and evaluate numerical evidence to inform decision making or practice. 	<ul style="list-style-type: none"> • The research cycle • Locating information: “I Googled it!” • Research design, collecting data, and tables • Representing data: bar charts and line graphs • Analysing & interpreting data: averages, distributions, and histograms • Boxplots: is there a difference? • Scatter plots, correlations, and predictions • Percentages, probability, and modelling • Fermi estimations: is my answer reasonable or not? • Making informed decisions: is climate change a real thing? • Communicating conclusions: report writing • Where to next: preparation for further study 	<ol style="list-style-type: none"> 1. Assignment 1: the research process, Week 5, 20% 2. Assignment 2: data collection, representation, and analysis, Week 7, 25% 3. Assignment 3: data collection, representation, and analysis, Week 9, 25% 4. Assignment 4: evaluating research, Week 13, 30%

Finding 3

The learning outcomes and topics in the mathematics subject were similar across the nine programs, although there was some variation in the selection of specific areas of focus. While the level and complexity of mathematics topics varied there were common key topics across all subjects. There was an expectation for students to apply mathematical skills to real life situations in all subjects except in one where that expectation was not identified in the learning outcomes. The use of small, low-risk initial assessment tasks was less prevalent than in the other benchmarked subjects, and most subjects retained the use of exams as a significant assessment component. Student evaluations of the mathematics subjects was typically lower than the other benchmarked subjects, with evaluations higher than the program average at only two institutions.

Good practices included:

- Real-life problem-solving activities and assessments
- Scaffolding of knowledge and skills
- A commitment through different approaches to ensure weekly student engagement, e.g. quizzes
- Low stakes and early assessment to build confidence

Benchmarking impacts included:

- Review of assessment approaches including use of project-based models and real life related problem-solving tasks alongside quizzes and exams
- Redesign of subject content with a focus on alignment with future disciplines
- Revised rubrics to ensure clear and consistent language to facilitate common interpretations

Common Learning Outcomes

While this project draws largely on the model of benchmarking articulated by Morgan and Taylor (2013) whereby curriculum, learning outcomes, assessments and marking are benchmarked with those of comparator programs at other institutions, another common approach to comparing standards is benchmarking against external standards. While no common external standards for enabling education exist in Australia's qualifications framework, the statement of Common Learning Outcomes developed by NAEEA in response to the recommendations of the Australian Qualifications Framework Review (Department of Education, 2019) provides something of a proxy. Table 7 below articulates these learning outcomes, which were collectively generated by members of the NAEEA Executive Committee and drew on previous work in the sector (O'Rourke et al., 2019; Relf et al., 2017; Syme, Davis et al., 2021).

There is clear alignment between these outcomes and those identified in curriculum documents from each university. This indicates a high degree of consensus regarding what constitutes essential knowledge, skills and attributes expected of enabling education students once they articulate into undergraduate study. Further, it is clear that the benchmarked enabling programs address these explicitly at a program level.

Table 7: NAEAA Common Learning Outcomes

NAEEA Enabling Education Common Learning Outcomes	
Field	Outcome
Knowledge: Students completing an enabling program will have a knowledge of:	university environments and expectations, requirements, academic conventions and ethical practice including academic integrity; knowledge of academic literacies; and may include some discipline specific and/or technical knowledge.
Skills: On completion of an enabling program, a student will demonstrate:	cognitive skills to understand, analyse, synthesise and critically evaluate information;
	information skills to find, retrieve and analyse information for use in academic contexts;
	communication practices to foster the exchange of knowledge and ideas within an academic context;
	academic literacy skills fostering the written communication of ideas, theories and analysis; and
Application of knowledge and skills: A student completing an enabling program will demonstrate the application of knowledge and skills by:	independent learning skills
	engaging with the university learning and teaching environment in an ethically and contextually aware manner;
	applying independent learning techniques to achieve their learning outcomes;
	using their developing critical thinking skills and broadening knowledge in particular contexts; and
	adopting student practices that meet their institutions' academic expectations

(NAEEA, 2019)

Of the nine programs which were benchmarked, six had program level descriptors which included learning outcomes describing what students exiting the program had demonstrated through their completion of the program. These program level learning outcomes were mapped against the NAEAA Common Learning Outcomes to determine the extent to which these curriculum documents articulated alignment with these outcomes. To allow for consistent and comparable labelling, these codes were used: 'explicit', indicating the outcome was explicitly stated in the curriculum documents; 'implied', indicating that the learning outcomes are addressed although not explicitly stated; and 'not evident', meaning that there was no evidence in the reviewed curriculum documents that the outcome was addressed in the program.

While the NAEAA Common Learning Outcomes express the program level outcomes which students completing an enabling program could be expected to have demonstrated, to add nuance to this mapping process, each of the benchmarked subjects from each institution was also mapped against these Common Learning Outcomes. This demonstrates the extent these learning outcomes were being met by these individual subjects in each program. Using the same coding as applied to the program level comparison, the curriculum documents outlining subject rationales, synopses, learning outcomes, topics and assessment plans were mapped against these Common Learning Outcomes.

Figure 1: Mapping of Program level and NAEAA Common Learning Outcomes

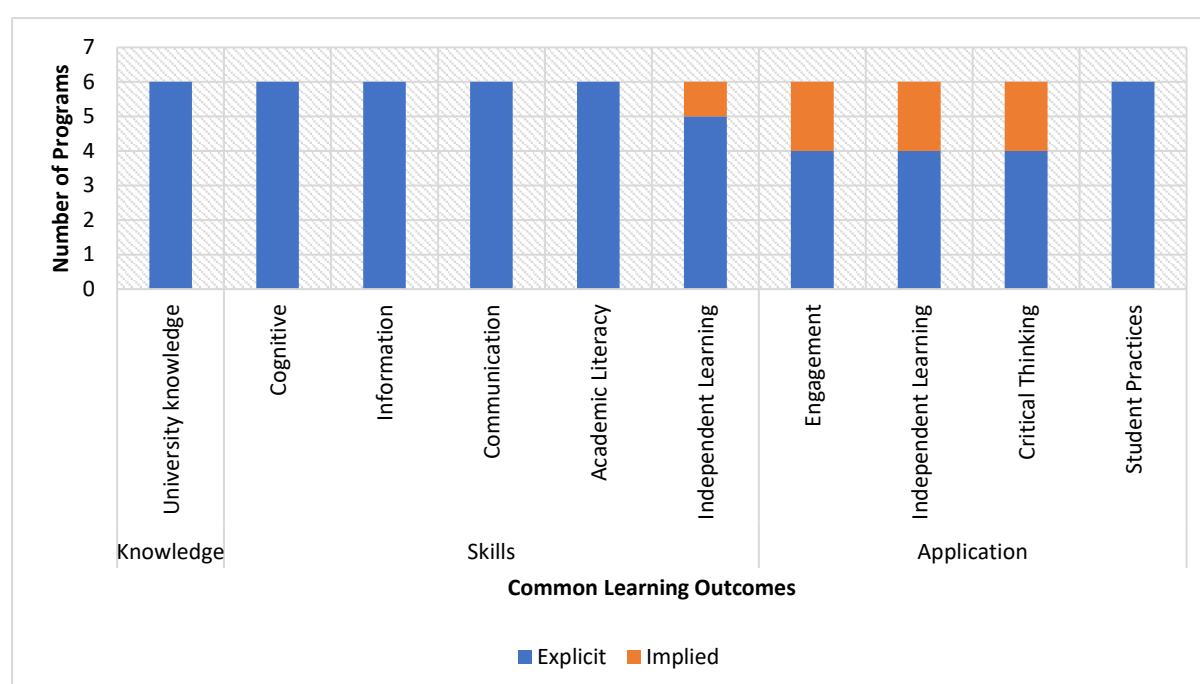


Figure 1 above indicates the mapping of the learning outcomes evident in the six programs which had overarching program level learning outcomes. The table demonstrates shared expectations that students undertaking these enabling programs would develop the knowledge and skills outlined in the Common Learning Outcomes. Statements explicitly describing how the students would apply their knowledge and skills were not as strongly aligned, but the outcomes still emphasise the development of students' abilities to meet the expectations of study in a tertiary environment.

Figure 2: Mapping of study preparation subjects and NAEAA Common Learning Outcomes

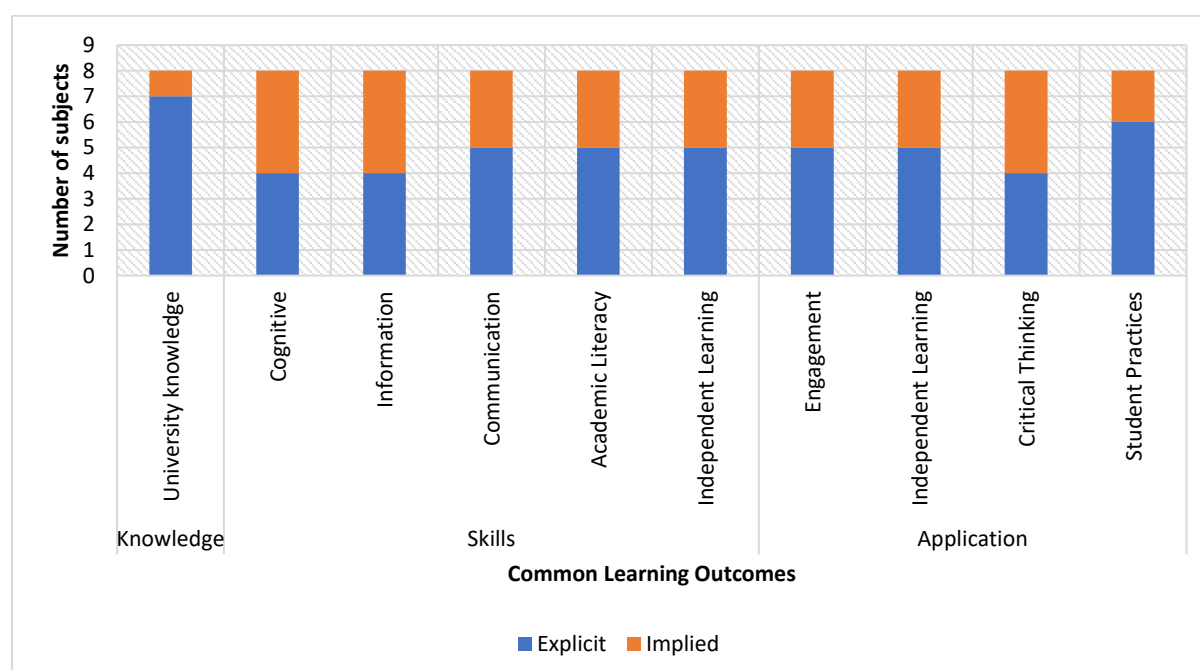


Figure 2 above indicates the mapping of the study preparation subjects against the common learning outcomes. This table demonstrates strong alignment with the common learning outcomes and a

particular emphasis on the development of student knowledge of university culture, practices and discourses. Commonly the application of this knowledge was demonstrated through the completion of assessment tasks requiring familiarity with university learning and teaching practices. This table reflects alignment with common learning outcomes evident in the eight programs which included the relevant subject.

Figure 3: Mapping of academic communication subjects and NAEAA Common Learning Outcomes

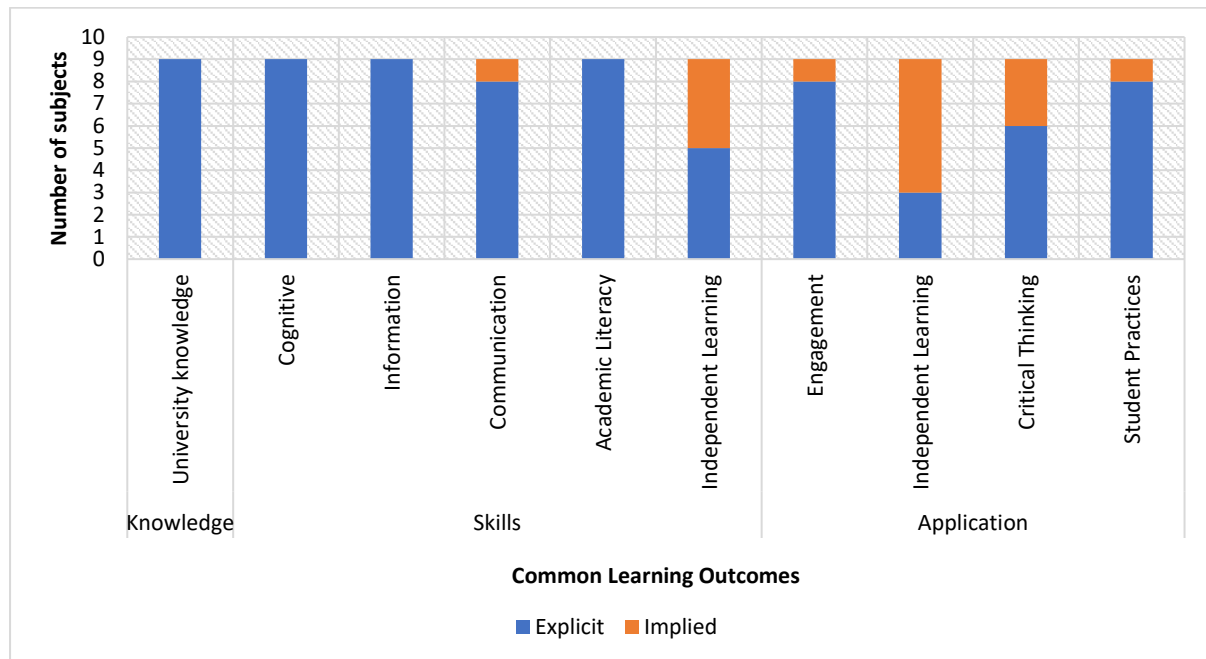
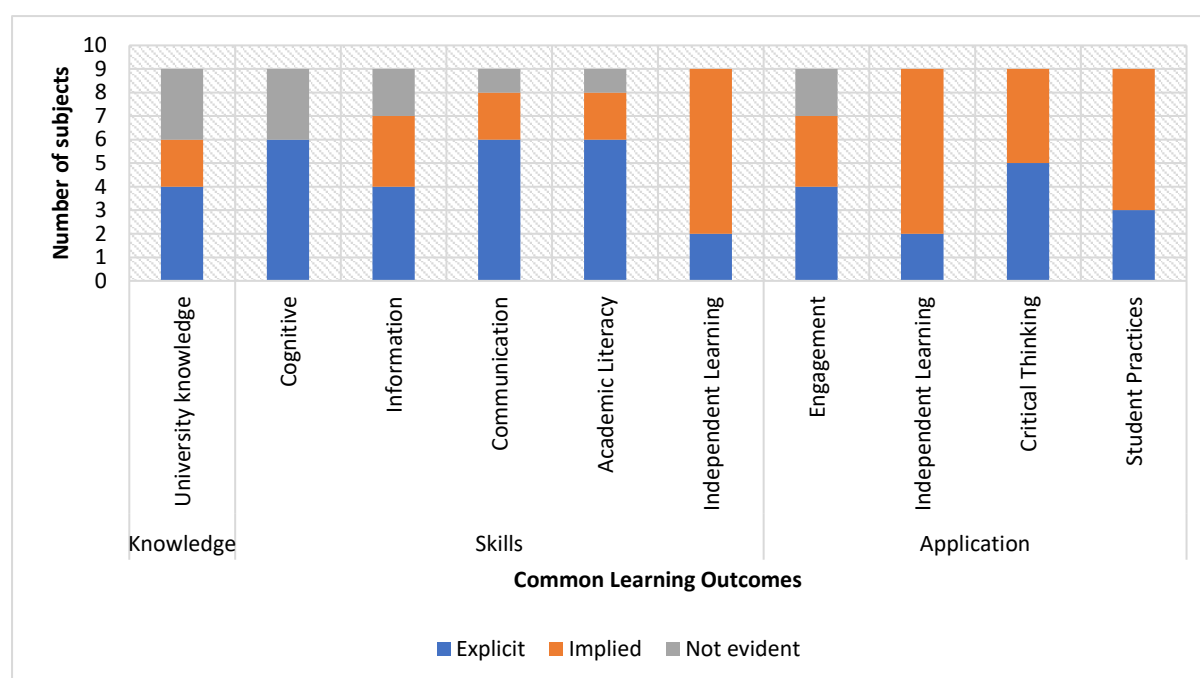


Figure 3 above demonstrates a very high degree of alignment between the Common Learning Outcomes and each subject, with all learning outcomes either addressed explicitly or implied in curriculum documents. This supports the finding that the academic communication subjects across the nine programs were closely aligned with each other, demonstrating very similar approaches to curriculum and assessment practices.

Figure 4: Mapping of mathematics subjects to the NAEAA Common Learning Outcomes



Alignment between the NAEAA Common Learning Outcomes and the mathematics subject is illustrated in Figure 4 above. This includes data from the nine subjects that were benchmarked and demonstrates variable degrees of alignment. Among the three subjects benchmarked (study skills, academic communication and mathematics), the mathematics subjects were least aligned with the identified common learning outcomes. The project team acknowledges that while each subject contributes to program learning outcomes, the extent of that contribution may be variable. The overarching program level learning outcomes are addressed through the combination of subjects students undertake.

Finding 4

The three subjects (where relevant) from each university, comprising study preparation, academic communication and mathematics, together addressed the Common Learning Outcomes identified by NAEAA. There is clear alignment between these outcomes and those identified in curriculum documents from each university. This indicates a high degree of consensus regarding what constitutes essential knowledge, skills and attributes expected of enabling education students once they articulate into undergraduate study. Further, it is clear that the benchmarked enabling programs address these explicitly at a program level.

Good practices included:

- Explicit statements of learning outcomes which describe in accessible language the knowledge, skills and attributes required by students for successful further study
- Common learning outcomes embedded across multiple subjects within programs
- Learning outcomes clearly aligned with assessments and curriculum

Benchmarking impacts included:

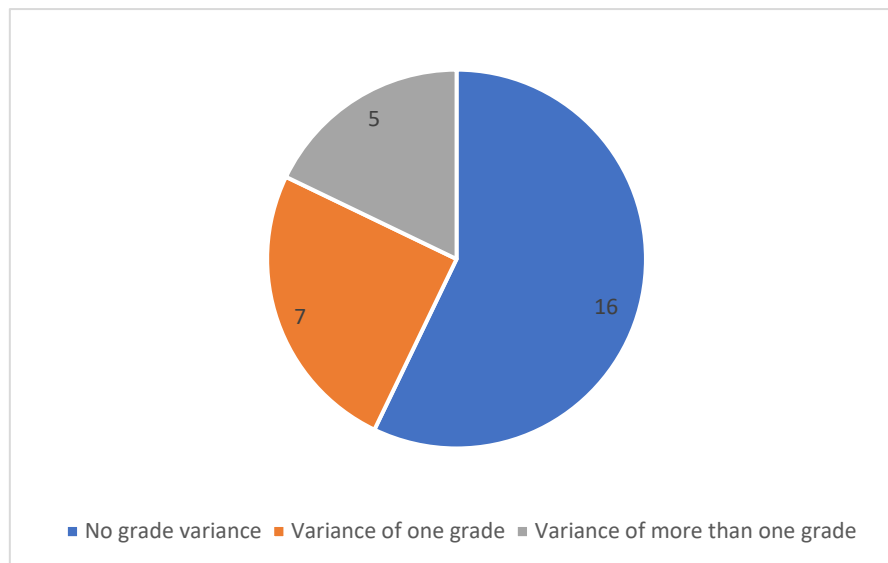
- Institutions to review their learning outcomes, both at program and subject levels, to explicitly articulate and align with the NAEAA Common Learning Outcomes during accreditation and reaccreditation phases
- NAEAA to review the wording of the Common Learning Outcomes to further improve clarity
- NAEAA to establish national standards based on the Common Learning Outcomes supported by the data in this report

Blind marking and standards consensus

After establishing a high degree of comparability across the three subjects at each of the participating universities in terms of learning outcomes, curriculum and approaches to assessment, the group undertook blind marking of de-identified student scripts. Working in sub-groups of three, the grades originally awarded to students were recorded, and scripts were then marked by staff from the two other universities in the group. The scripts were marked using the rubric that accompanied each of the assessment tasks, and which the students had access to while they prepared their assessment. Staff undertook this process without any pre-marking moderation discussions, thus requiring them to use their existing understandings to interpret the rubrics and apply what they believed to be appropriate grades. The degree of comparability in this marking is reported below based on the number of marks for each of the scripts according to the following coding: 'No grade variance' for matching grades, where all three staff awarded the same grade; 'Variance of one grade' for grades with one level of variance (for example, where the grades might include both a pass and credit grades), and 'Variance of more than one grade' for grades with more than one level of variance across the three grades.

There were some challenges that arose during this process. The nine universities do not use a common grading system, with grades being determined by different percentage cut offs at different universities. In some instances, scripts were awarded the same percentage mark but different grades based on the relevant university's grading system. Further, in some instances, marks were within one or two percentage points, but due to grade cut offs were awarded different grades. These factors mean that marking is somewhat more consistent than it appears in the figures below. Variations in the grades were discussed to determine reasons and the impact this might have on the participants understanding of the standards required for students to achieve the various grade levels in their subjects.

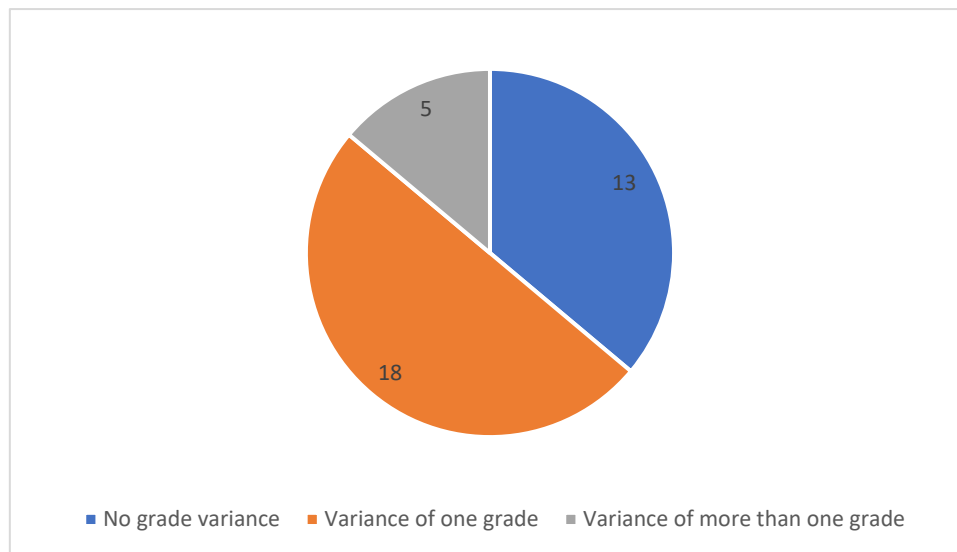
Figure 5: Alignment of grades from blind marking outcomes for study preparation subjects



As three universities did not offer a specific study preparation subject, a total of 28 scripts were graded. While most of these papers were given identical grades, there were five instances where grades varied by more than one grade level. In each of these instances of greater variation, there was agreement by two markers, with the third grade an outlier. These variations generated a great deal of discussion about what standards were generally accepted, what types of assessment tasks most clearly allow students to demonstrate the achievement of learning outcomes, the clarity of rubrics and the need for detailed description of contextual factors and task requirements on each assessment task.

Of the 28 scripts, there were two instances when there was not a consensus on the cut off between a pass and fail grade. This demonstrates the importance of clearly defined requirements for each grade, including a rubric and other contextual information. It also suggests that shared understandings emerge through practice over a period of time, rather than being absolute and removed from context, and the importance of a shared understanding of the context of the assessment. This was confirmed by the academic staff undertaking the benchmarking who observed that the lack of an explicit context produced challenges in the interpretation and application of rubrics.

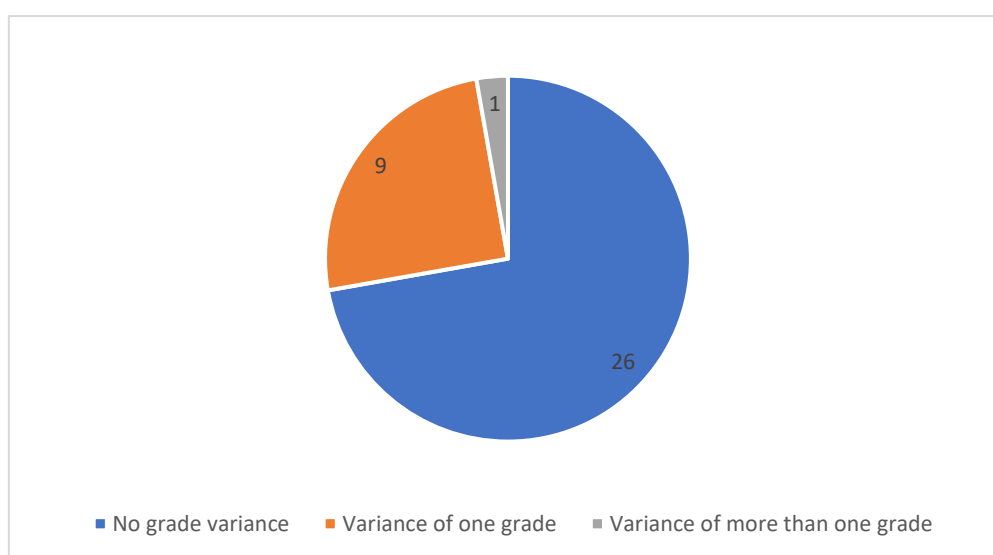
Figure 6: Alignment of grades from blind marking outcomes for academic communication subjects



Of the 36 academic communication scripts marked, 13 were awarded identical grades by all three markers, while half were awarded a grade with one level of variance. When the different cut off grades and borderline marks were considered, this reflects a high degree of consensus about the standards generally required of students across these subjects. However, there were five samples which were awarded grades which varied by more than one level. In four of these instances, there was one outlier grade and consistency between the remaining two grades. Again, this led to considerable discussion, often relating to interpreting rubrics, and the fact that different universities had slightly different understandings of some of the features of an academic research essay, which are not necessarily articulated in the assessment task requirements.

Of the 36 scripts that were blind marked, there were two instances where there was not a consensus about the cut off between a fail and a pass grade. In one case, the original mark was lower than the two benchmarking evaluations which were identical. This was discussed in detail, and it was agreed that the standard required by the originating university for a pass was higher for some learning outcomes than what is expected across other programs, representing something of an outlier. In the second instance, which was also discussed at length, there were different understandings of what types of tasks are required to demonstrate learning outcomes, particularly related to the use of research material.

Figure 7: Alignment of grades from blind marking outcomes for mathematics subjects



The marking of mathematics scripts indicated the highest degree of comparability. In this case, there was one instance where marking varied by more than one grade level, and the outlying mark was within one percentage point of the cut off percentage required. There were three instances where there was not a consensus of the pass-fail cut off point. However, each of these involved interpreting a borderline result.

The results of this blind marking process led to considerable discussion among participants, with a focus on understanding the reasons behind both similarities and differences in marking. There was rich discussion about the standards of work expected of students in each of the subjects. Some participants indicated that, following these discussions, they would award some of the previously marked scripts a different grade in light of emerging shared understandings of standards. These findings highlight the value of open and collegial sharing of ideas (Stella & Woodhouse, 2007) that support ongoing improvements to practice. There was also a recognition of the importance of providing a clear context for assessment tasks, which may have been provided to students through learning materials but was not evident in some assessments. This reiterates findings by Bloxham et al. (2015) and Zahra et al. (2017) that the situatedness of marking means a shared understanding of the context of an assessment underpins consistent marking. There was also discussion about the need for rubrics to be written in clear language to facilitate common interpretations. Finally, this blind marking exercise highlighted the need for rigorous moderation practices, particularly across subjects with large numbers of students and multiple markers.

Finding 5

There is a high degree of comparability of standards expected of students across all three subjects and continued discussion across the sector is required to achieve increased consensus.

Good practices included:

- Assessment design enables students to demonstrate common standards of achievement across programs
- Effective assessments include a context to clearly explain the required task, along with clear and specific guidelines for students
- Effective rubrics are clear, written in accessible language and lend themselves to shared interpretations among both students and markers

Benchmarking impacts included:

- Increased sharing between programs of exemplar assessment rubrics to increase transparency of standards, practices and innovations
- The establishment of communities of practice to provide a powerful means of co-creating shared understandings of assessment design and rubric application
- Findings to be presented to University Academic Boards and other relevant university, government and community bodies to increase the visibility of enabling education and advocate for enabling programs

The above findings indicate that the nine programs share a commonality of purpose, learning outcomes and standards in three key subjects. Furthermore, they are committed to ongoing collaborative improvement and development of enabling education in Australia for the benefit of students and staff.

Moderation practices

Moderation serves to ensure that marking is “consistent, fair and reliable” (Price, 2005, p. 217) so that students, staff and institutions are assured that learning outcomes are achieved to a comparable standard. Moderation provides the opportunity to clarify expectations and assessment standards across marking teams. As Yorke et al., (2000) point out, it is essential that marking teams have a shared understanding of the underlying rationale of the assessment task, the expectations of what the student is required to do, and how the marking criteria align with the assessment instructions. These are key to ensuring the transparency of the marking process and the consistency of the grades awarded (Price, 2005).

The nine universities completed the template on the moderation processes used in their subject which were then analysed and compared. A comparison of practice revealed that most of the nine universities applied very similar moderation processes for the majority of subjects to achieve consensus about the assessment task and marking criteria, marking of samples followed by discussion to calibrate grades awarded, and some spot checking of High Distinctions and Fails. Overall, the process was as follows:

1. Pre-moderation: Establishment of consensus on assessment task requirements and marking criteria; de-identified samples circulated among team members to mark
2. Moderation: meeting of markers to discuss grades and feedback
3. Post moderation: Subject Coordinator undertook spot checking of grades, especially High Distinctions and Fails. De-identified samples collected to be used as exemplars with the permission of the student for future semesters.

While there was an overall shared understanding of the importance of moderation to ensure consistency of marking, there were some differences. One university required results to have a bell curve distribution and the Subject Coordinator had to ensure an appropriate distribution of grades. The number of samples marked as part of a moderation process varied according to institutional requirements, although the common purpose and outcome was to ensure consistency of marks. At one university, mathematics markers were required to mark five papers and send these to the Subject Coordinator to review instead of having a group meeting. Despite some differences in practice, it was clear that moderation was considered instrumental in assuring marking consistency and marker confidence in the award of grades.

Overall moderation involved a checking of the understanding of the requirements of the assessment task and marking criteria by the markers, validation of grades awarded for a selection of assessments among the marking team, and a final check of High Distinction and Fail grades by the Subject Coordinator.

Finding 6

All programs included a moderation process to ensure consistency of marking across teaching teams within subjects.

Good practices included:

- Ensuring markers have a shared understanding of the assessment requirements, marking criteria and standards
- Having a process for multiple markers to compare sample marking outcomes prior to undertaking assessment marking
- Having a mechanism to check marking to ensure consistency before grades are released
- Presenting marking in such a way that students can interpret their marks and feedback and use this to feedforward into their future work on assessment tasks

Benchmarking impacts included:

- Revision of assessment tasks and rubrics to improve clarity
- Sharing of effective moderation practices to improve consistency
- Ensuring moderation practices are clearly articulated across teams

Student evaluations

A national report on enabling education would be remiss if it did not also include the voice of students engaged in these programs. All nine universities seek student feedback at the end of teaching periods, usually with Likert scaled questions, one of which asks them to rate their satisfaction with the subject. One university phrased this question to ask students how likely they would be to recommend the subject. The other eight all had similar wording to rate satisfaction with the subject, usually on a Likert scale of five, with five the highest and one the lowest.

Table 9: Student evaluations for each subject, completed at the end of the semester.

Student evaluations (from a total score of 5)			
Program	Study Preparation	Academic Communication	Mathematics
A	4.4	4.5	4.1
B	4.5	4.5	4.0
C	4.7	4.7	4.4
D*	NA	4.7	4.7
E	4.5	4.4	4.0
F	4.0	4.0	4.3
G	4.7	4.8	4.0
H*	NA	4.6	4.4
I	4.7	4.4	4.9

* No study preparation subject included.

The tabling of student evaluations revealed similar high ratings from students for all three subjects. Ratings in these subjects were often higher than the university average ratings across many programs. These high ratings of student satisfaction with the subjects demonstrate students' appreciation of the value of their learning in these subjects which is comprehensively documented in the literature (Levy & Treacey, 2015; Syme, Roche et al., 2021). Providing quality learning experiences for students that

build their confidence and skills to successfully prepare for undergraduate studies is a key aim of enabling education. These ratings, while only for one semester, are a clear indicator that these objectives are being met from the students' perspective.

Finding 7

Students value the learning they undertake in their enabling education subjects, and positive student evaluations reflect the quality of teaching and learning practices within enabling programs.

Good practices included:

- Student-centred learning and teaching practices that are meaningful and relevant to students' academic futures
- Approachable, knowledgeable and skilled lecturers and tutors
- A pedagogy of care together with a strengths-based curriculum reflected in student evaluations

Benchmarking impacts included:

- Validation of the curriculum and pedagogy
- Recognition of the work of enabling educators
- Impetus to establish national standards and publish these findings supported with student data

Evaluating the benchmarking framework

The purpose of the benchmarking framework used in this project was twofold. First, it aimed to provide a clear and structured strategy to compare key aspects of programs and subjects offered across multiple sites. The focus was on assessment tasks, students' samples, and grading with attendant explanations, aligning with Sadler's (2017, p. 93) "triplet" of artifacts. This means that what is in fact benchmarked is not inputs such as the quality and nature of students' learning experiences but the outcomes of that learning, and what their assessments demonstrate they can do and to what standard (Sadler, 2017; Sharp, 2017).

The second aim of the framework is to foster open and dynamic dialogue between academics involved in these programs. James (2003) argues it is critical that academic staff are directly involved in the establishment and monitoring of standards, and that, while the professional judgement of individuals plays a role in this process, it should occur within the context of dialogue with colleagues. Further, as immersion in regular cross institutional dialogue requires academic staff to make explicit their often-implicit understandings of standards, an effective benchmarking process increases, formalises, structures and provides reporting avenues for this dialogue (James, 2003).

A focus on standards, however, is not without risk. Sadler (2017) argues achieving a reasonable degree of comparability should not come at the expense of undue standardisation and must actively accommodate diversity. Similarly, James (2003) contends that benchmarking of standards should not become prescriptive, homogenising and inhibitive of change. Instead, the open, safe and genuine sharing of information and ideas fosters continuous improvement of practices.

Thus, three criteria for evaluating the effectiveness of the framework are that it:

- provides a realistic and workable structure for the collection, collation and analysis of data and reporting of findings;
- establishes open and fruitful dialogue between institutions to achieve a shared understanding of standards;
- is growth focused rather than limiting and punitive.

The benchmarking framework used in this project provided a clear, step by step structure for participants to follow. The overall timeline established at the outset, and templates with clear descriptions of what data was to be collected and how it would be recorded allowed for work to be undertaken in a steady and cumulative fashion, and facilitated easy analysis of findings. A regular meeting schedule, among the smaller groups, between the three lead institutions and across the whole group embedded a degree of accountability along with validation to ensure confidence in the process. The focus on subject outlines and learning outcomes, and close attention to student assessment samples and marking rubrics ensured work was streamlined but also a valid examination of the standards required by students exiting from enabling programs.

The most powerful outcome of implementing the benchmarking framework was that it fostered the establishment of a community of academics who engaged authentically in a dynamic and consensus driven approach to determine the standards expected of enabling education students. The emergence and examination of discrepancies in marking and variations in understandings of standards gave rise to fruitful dialogue. It also provided for many participants a sense of validation that they were “on the right track” in providing meaningful outcomes for students despite the lack of a formal framework against which to measure these. An outcome of this experience has been the establishment of an Enabling Education Community of Practice (COP), which has been expanded beyond the universities involved in the project and open to all enabling educators through NAEAA. To date, 75 academics from institutions across Australia have engaged in this COP, demonstrating the rippling effect of open and dynamic dialogue.

Finally, the extent to which the benchmarking framework has supported ongoing improvement in the sector rather than entrenching an inhibitive homogeneity is demonstrated by the number of changes and innovations that have been and continue to be implemented in subjects and programs as a result of engagement in the benchmarking process. These changes, outlined in the “impacts” sections throughout this report, have been agentic, driven by individual academics in response to the sharing of good practices. While they reflect a concern with aligning to shared standards, they are also informed by the needs of the varying cohorts of students each program serves.

Discussion

This large-scale external benchmarking project demonstrates that nine apparently diverse enabling education programs share not only common understandings of the curriculum and approaches to assessment that are most appropriate to support students transitioning into university, but also the standard required for students to do so successfully. While the structures of programs varied from three to eight subjects, all shared relatively minimal or no entry requirements and addressed key areas of study including study preparation, academic communication and mathematics. A comparison of these three key curriculum areas revealed a close alignment of topics, learning outcomes and approaches to assessment, revealing that there is broad consensus about the knowledge, skills and attributes students were expected to learn. Further, tasks required students to apply these learnings in similar contexts, with a consistent emphasis on equipping students to navigate university environments, discourses and expectations.

A distinct feature of all benchmarked enabling programs was a focus on making the strange familiar by introducing students to the university context, and while this is evident in all subjects, it is the particular focus of the curriculum and assessment in the study preparation subjects. The mapping of these subjects against the NAEAA’s Common Learning Outcomes is further evidence of this shared focus on embedding university knowledge in the curriculum. Making explicit these often-tacit understandings of what is required in tertiary education environments is critical for diverse student

populations (Devlin et al., 2012; Kift, 2009; Kift, Nelson, & Clarke, 2010; Nelson et al., 2011). The study preparation subjects which were benchmarked focused explicitly on empowering students to feel confident in university contexts, thus ensuring a smooth transition into first year (Syme, Roche et al., 2021). Programs which did not have a specific study preparation subject embedded content relevant to understanding the university context in other subjects, particularly the academic communication subjects. While enabling education may share characteristics with first year experience approaches, the latter focuses upon immersing students in disciplinary content. In contrast, enabling programs focus on equipping students with the capabilities to be successful in higher education and employ assessment practices that are highly scaffolded with feedforward to support students undertaking later disciplinary focused assessment tasks.

A shared approach to teaching academic communication occupied a central place in each program, and the use of thematic studies, scaffolded assessments and feedforward marking regimes were consistent across programs. This demonstrates a shared understanding of the criticality of explicit and contextualised teaching of academic literacy to support successful student transition (Wingate, 2015). When mapped against the NAEAA Common Learning Outcomes, the consistency of this approach is made clear, with elements of academic literacy, such as finding and managing information, and the clear and purposeful communication of ideas within an academic context of particular importance.

All programs also offered mathematics subjects, and while the approaches to assessment varied, key curriculum areas and learning outcomes were shared by all. The degree of alignment evident across these subjects to the NAEAA Common Learning Outcomes reflects the discipline focus of these mathematics subjects. In short, the curriculum consistencies which were revealed across the benchmarked subjects were far more substantial than their differences, and any differences provided a focus for rich discussion and the sharing of ideas.

In addition to evaluating the extent to which programs share similar learning outcomes, curriculum content and approaches to assessment, a further critical element of the project was assessing the degree to which there existed a consensus about the standards required of students to successfully complete the major assessments in key enabling subjects. A standard is defined by Sadler (2017, p. 89) as:

... a definite degree of academic achievement established by some accepted authority and used as a fixed reference point for reporting a student's level of attainment as a particular grade on the scale used.

Criterion based assessment is used throughout enabling programs, particularly in the study preparation and academic communication subjects. It includes a description of standards organised in a marking rubric. However, without a fixed external reference point, each university arrived individually at what was considered an appropriate standard of achievement for students at their institution and articulated these in their own rubrics. Without discussion of these standards before blind marking was undertaken, the relative consistency of the marks is notable. Of the 98 scripts which were graded, 56% were given identical marks by all three markers, and another 34% varied by only one grade. Similarly, of the total, only seven scripts (7%) reflected disagreement about the threshold standard required for a pass grade, and for most of these this variance was marginal. Furthermore, after discussion and in the context of other marking, agreement about standards was reached. Rather than viewing this as a challenge to the concept of a national standard for enabling education, these variations prompted much fruitful debate about what an appropriate standard entailed, and agreement followed. This supports Sharp's (2017) argument that knowledge comes not from individuals but from collective social activity or the social construction of knowledge, which varies over

place and time. In an academic context, what constitutes legitimate knowledge emerges through a dynamic process of consensus building (Sadler, 2017; Sharp, 2017). Given the broad national representation of programs included in this project, there is strong evidence therefore to support the argument that there already exists a widely shared understanding of an appropriate academic standard for enabling education and more specifically a shared understanding of the success threshold.

Considering the dynamic nature of academic standards, establishing and maintaining consistent standards across the sector necessarily requires ongoing work. While there is an increasing emphasis on quality assurance processes (Booth et al., 2016), these often focus on inputs rather than the quality of student outputs (James, 2003). Benchmarking at a subject and program level provides a means of assessing whether there is a shared understanding of standards across different sites, and whether students are meeting these standards. The framework adapted for this project has proved workable and provides a means by which collaboration can continue. This is critical for continuing to improve academic practices and students' outcomes across the sector.

Conclusion

Enabling educators have traditionally worked in isolation and this benchmarking project provided the first national opportunity to come together on a project of this scale. The process clearly demonstrated the power of external cross-institutional benchmarking in establishing common learning outcomes, and standards of achievement in three subject areas as well as providing the opportunity to share examples of good practices.

The benchmarking project clearly establishes that these nine programs:

- share learning outcomes that are strongly aligned with the NAEAA Common Learning Outcomes and each other
- have similar assessment and moderation practices
- have comparable standards in three key subjects

All four aims of the project were met as follows.

1. Test and expand upon the benchmarking framework from the previous study to see if it is applicable in the wider context of nine Australian university enabling programs

The benchmarking framework proved to be a valuable tool in facilitating the transparent and collegial collection and analysis of documents for easy access and comparison across the nine programs. The framework was instrumental in demonstrating that the programs have comparable learning outcomes and that students meet comparable standards of achievement in the three key subjects. It was clear that while the programs shared common objectives, they did not always share the same approach in meeting NAEAA's Common Learning Outcomes as evidenced for example in the range of assessments students were required to undertake. Acknowledged too is the need for a shared understanding of context and clear assessment criteria as outlined in the literature. Nevertheless, the key outcome of demonstrated comparable learning outcomes and standards of achievement across the nine programs lays the foundation for the establishment of national standards of enabling programs in Australia and for inclusion in the AQF.

2. Compare the standards and outcomes for enabling programs

The benchmarking project demonstrated the comparability of standards and outcomes for enabling programs, which is significant. It makes visible the value and integrity of enabling programs on a

national scale, and provides compelling evidence for inclusion in the AQF, thus safeguarding these programs for generations of students to come. A further benefit of inclusion in the AQF will be the portability of qualifications for students.

3. Improve performance, academic practice, and student outcomes across the enabling education sector

A key aim of benchmarking is to support the continuous improvement of performance, academic practices and student outcomes. The project fostered the development of a safe and nurturing environment to openly discuss improvements and challenges to enabling programs stemming from shared examples of best practices. Establishing a national Community of Practice in which over 75 enabling educators have already participated, was another key outcome of this project. Enabling educators across Australia shared, and continue to share, ongoing examples of improved practices and the beneficial outcomes for student performance and outcomes, some of which are included in this report. These examples of the impacts of the benchmarking process are clear demonstrations of the positive impact of the benchmarking project on the nine enabling programs, their students and staff.

4. Recommend to NAEAA the establishment of national standards and provide input for inclusion into the AQF – see below.

A major outcome of this project was to demonstrate the comparability of standards across nine enabling programs with a specific aim of informing the establishment of national standards. The size and scope of the study supports the comparability of standards across the sector.

Recommendations

There are several recommendations that arise from this report, as follows:

1. Adopt the NAEEA program learning outcomes as the national standard for enabling programs across Australia.
2. Continue to engage with the AQF review process, informed by the outcomes of this benchmarking report, to embed enabling education in a revised AQF.
3. Broaden a Community of Practice through NAEEA to support ongoing development and refinement of enabling education nationally.
4. Promote and support a culture of ongoing peer review amongst enabling programs using the benchmarking framework and templates developed for this project.
5. Support enabling educators to build upon cross institutional, collaborative scholarly projects and publish findings in scholarly journals.
6. Increase advocacy of enabling programs in scholarly and other publications to make visible the critical role they play in Australian higher education to governments, institutions and communities to ensure the ongoing provision of enabling education for future generations of students.
7. Undertake a sector level study of enabling education student outcomes to determine the correlation between success in enabling study and success in further undergraduate study.

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Appendix

Benchmarking Australian Enabling Education Programs: A Comprehensive Framework Templates

Data gathered through this project are described in the framework below. Data include:

- Selecting courses for benchmarking
- Commencing questions for participants
- Project Completion Structured Discussion
- Curriculum Documents – Subject Descriptors/ Subject Specifications
- Assessment Tasks
- Curriculum Comparison Template
- Common Learning Outcomes Comparison Template
- Moderation Practices Template
- De-identified Student Scripts
- Blind Marking Outcomes Template
- Student Evaluation Template
- Student Retention and Success in Enabling Subjects Template
- Student Progression in Undergraduate Study Template

Details of each of these data is provided below, along with instructions, definitions, specifications proposed timeframes to ensure comparability of data across institutions and teams.

Selecting courses for benchmarking

Provide details of each of the three university programs undertaking this benchmarking process:

	Name of university	Project leader	Name of enabling program	Program headcount/EFTSL for Session 1, 2021	Program entry requirements/ processes	Subject Enrolments		Is the subject a Core or /Elective
						Subject	Enrolment	
University A						Study Preparation		
						Academic Communication		
						Mathematics		
University B						Study Preparation		
						Academic Communication		
						Mathematics		
University C						Study Preparation		
						Academic Communication		
						Mathematics		

Commencing Discussion questions for participants:

To be distributed during the first Benchmarking meeting.

1. What is your understanding of the role of benchmarking?
2. What are the benchmarking expectations at your university?
3. What are your goals and motivations for participating in the benchmarking project?
4. What opportunities do you anticipate this benchmarking project will present to you and your organisational unit?
5. What do you see as concerns, challenges or barriers to your effective participation in this benchmarking project?
6. How helpful or useful do you anticipate the benchmarking project will be?

Project Completion Structured Discussion

Undertake a structured discussion with each of the three participating groups to address the following:

1. How has your understanding of benchmarking changed?
2. Did you have a clear understanding of the processes, outcomes, goals, clarity of purpose?
3. Was there a common understanding among the participating universities?
4. What outcomes were achieved through benchmarking? The following prompts will direct discussion:
 - calibration/comparison of standards and learning outcomes.
 - enhancing quality and best practice by informing continuous improvement (Padró & Sankey, 2018). Provide details of changes that will be made in response to benchmarking outcomes.
 - network and community building.
 - Determining areas for development or growth (gap or opportunity identification (Padró & Sankey, 2018).
 - Enhancing organisational learning and improving organisational sense-making (Padró & Sankey, 2018).
5. What was most valuable?
6. Describe your experiences during the benchmarking process. For example, were they collegial, positive? Has it been beneficial?
7. How useful were the templates?
8. How much time did you spend on this benchmarking process – refer to diaries as a record of time. (Sefcik et al. 2018)
9. Was the process efficient and is it sustainable on a 'business as usual' basis?
10. How did you disseminate findings in your institution? What was the response?
11. In what ways has participation in benchmarking contributed to changes in your practices?
12. How useful was framework?

Curriculum Documents – Subject Descriptors/Subject Specifications

For each of the three subjects for each university, gather the following documents:

Published subject specifications documents that provide:

- course name and code
- rationale
- synopsis
- learning outcomes/objectives
- content/topics
- workload and volume of learning, and
- assessment requirements including due dates, assessment types and weightings.

Assessment Tasks

For each of the three subjects for each university, gather details of all assessment tasks, including task descriptions, any additional instructions provided to students, and assessment rubrics.

Curriculum Comparisons Template

Select three subjects from each program that include:

- study preparation
- academic communication
- mathematics

For each subject for each university, complete the following, drawing on published subject specification documents:

Curriculum Comparisons				
University	Subject	Learning outcomes	Topics	Assessment types, timing, weightings, hours
A.	1.(Study preparation)			
	2.(Academic writing)			
	3.(Mathematics)			
B.	1.(Study preparation)			
	2.(Academic writing)			
	3.(Mathematics)			
C.	1.(Study preparation)			
	2.(Academic writing)			
	3.(Mathematics)			

Common Learning Outcomes Comparison Template

By reference to the learning outcomes as described in each subject's curriculum documents, indicate where the NAEAA common learning outcomes are met. Copy the relevant learning outcomes from each university's subjects into the appropriate cell. (eg. Does the common learning outcome of "university environments and expectations" match learning outcomes from study preparation subjects from each university?)

Common Learning Outcomes Comparison										
NAEEA Enabling Education Common Learning Outcomes		University A			University B			University C		
Field	Outcome	Study Prep	Academic Writing	Maths	Study Prep	Academic Writing	Maths	Study Prep	Academic Writing	Maths
Knowledge: students completing an Enabling course will have a knowledge of:	university environments and expectations, requirements, academic conventions and ethical practice including academic integrity; knowledge of academic literacies; and may include some discipline specific and/or technical knowledge.									
Skills: On completion of an Enabling course, a student will demonstrate:	cognitive skills to understand, analyse, synthesise and critically evaluate information;									
	information skills to find, retrieve and analyse information for use in academic contexts;									
	communication practices to foster the exchange of knowledge and ideas within an academic context;									

	academic literacy skills fostering the written communication of ideas, theories and analysis; and									
	independent learning skills									
Application of knowledge and skills: A student completing an Enabling course will demonstrate the application of knowledge and skills by:	engaging with the university learning and teaching environment in an ethically and contextually aware manner;									
	applying independent learning techniques to achieve their learning outcomes;									
	using their developing critical thinking skills and broadening knowledge in particular contexts; and									
	adopting student practices that meet their institutions' academic expectations									

Moderation Practices Template

Bloxham, Hughes and Adie (2016) suggest that while the practice of moderation is generally “considered as a taken-for-granted approach to agreeing, assuring and checking standards” (p. 638) there are a range of moderation activities that can occur at different stages of the assessment process. These can include peer scrutiny of assessment design, second marking, moderation discussion (consensus/social moderation), consideration of grade distribution and external peer review. These practices can serve, to varying degrees of effectiveness, different purposes, including ensuring equity, justification and accountability of grade decision-making, and community building through the collaborative reviewing of standards.

Identify the moderation practices that occur for each subject and university by noting down key activities and identify the purpose of these.

Moderation Practices			
University	Subject	Moderation Activities	Purpose
A.	1.(Study preparation)		
	2.(Academic writing)		
	3.(Mathematics)		
B.	1.(Study preparation)		
	2.(Academic writing)		
	3.(Mathematics)		
C.	1.(Study preparation)		
	2.(Academic writing)		
	3.(Mathematics)		

De-identified Student Scripts

For each of the three subjects for each university, select four de-identified student scripts from **four** different marking levels, selected from High Distinction, Distinction, Credit, Pass, and Fail. Must include one fail and a pass. Distribute these scripts to project member for blind marking, using the rubric provided to the students in each subject. Complete the rubric, noting comments about student performance/grading as appropriate.

Blind Marking Outcomes Template

Record the blind marked grade for each of the student scripts in the table below:

Study Preparation Subject Blind Marking

University A: Study Preparation Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

University B: Study Preparation Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

University C: Study Preparation Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

Academic Writing Subject Blind Marking

University A: Academic Writing Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

University B: Academic Writing Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

University C: Academic Writing Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

Mathematics Subject Blind Marking

University A: Mathematics Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

University B: Mathematics Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

University C: Mathematics Subject				
Subject name and code:		Assessment description:		
Marked by	Student 1	Student 2	Student 3	Student 4
University A				
University B				
University C				

Student Evaluation Template

Record student evaluations for each subject, completed at the end of the session/semester.

Student evaluations (from a total score of 5)			
	Study Preparation Subject	Academic Writing Subject	Mathematics Subject
University A			
University B			
University C			

