Accreditation – Succinct submissions provide win-win outcomes. Experiences, Observations and Suggestions

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ABSTRACT

CONTEXT

Accreditation with Engineers Australia is the accepted norm within Australian Engineering education with Universities submitting documents seeking re-accreditation every five years. In many cases the role of collecting and collating that information falls to a small group or individual who valiantly pulls information together, at times without the clearest understanding of what that information will be used for, or the depth of answers that the panel is seeking. This paper is primarily reporting on experience gained in leveraging a SharePoint site in conjunction with a bespoke software "AccrediTool", to compile a streamlined review submission, but also echoes personal experiences gained by sitting on several accreditation panels.

Contemporary tools improved and streamlined both the creation and end users experience. Views provided in this paper are personal as guidance for academics new to document preparation aiming to simplify everybody's workloads. The presentation style shown was intended to ease the panel members load throughout accreditation, but also proved useful on the creator's side.

PURPOSE OR GOAL

This paper presents three main aspects from a recent general accreditation review, a use case of SharePoint, an overview of a bespoke mapping tool (AccrediTool), and commentary on the development of a succinct Self Study Report (S-SSR). As academics, we often break our own advice around writing succinct accessible information and targeting the reader when drafting accreditation reports. By not having a clear vision of the requirements from the panel it becomes easy to succumb to a 'more is better' format, leading to more complex editing and review.

APPROACH OR METHODOLOGY/METHODS

A SharePoint site was created as a vehicle to enable a streamlined creation and end user experience with accreditation documentation. The approach presented is not explicitly linked to any specific SharePoint tools or features except for the bespoke "AccrediTool" which was built to leverage the ASP.NET framework.

ACTUAL OR ANTICIPATED OUTCOMES

Applying some contemporary digital tools to the presentation of accreditation documentation and supporting materials can simplify the consolidation of materials for the collating team and result in a superior user experience for the panel. This paper is intended to provide guidance for all staff involved in the accreditation process.

CONCLUSIONS/RECOMMENDATIONS/SUMMARY

This paper presented a mode of building and providing accreditation documentation using a Microsoft SharePoint site in conjunction with a locally built AccrediTool software package, it is however the concept of getting away from large PDF documents, or convoluted electronic folder systems that is the main thrust of this paper.

KEYWORDS

Accreditation, SharePoint

Summary

This paper is intended for academics compiling accreditation documents and is based off personal experience in both creating and reviewing accreditation documentation. To cater to those new to the accreditation process this paper presents salient background information for the accreditation process and aims to equip future Self-Study Report authors with insight of the intent and value of the document they are generating for both accreditation and its potential for internal uses.

Introduction

Accreditation is a term used across many educational professional practice areas. In the University context, an accreditation review translates to a broad review of university and program operations as they apply to the educational programs in question. Engineers Australia employ a five-yearly general review cycle in maintaining a programs accredited status.

The Engineers Australia accreditation process is approved under the International Engineering Alliance (IEA), who are the custodians of the Washington (Prof.Eng. 4 yr), Sydney (Eng. Tech. 3 yr) and Dublin (Eng.Assoc. 2 yr) accords and Engineers Australia was one of the foundation signatories when the IEA was created. Within Australia, the dominant degree for accreditation is the 4 year Bachelor Honours or AQF8 programs.

The accreditation Self Study Report has three main focal areas.

1. Academic programs – What we teach and how we designed it.
2. Operational Environment – Sufficient facilities and resourcing available to assure learning outcomes
3. Quality systems – Systematic mechanisms for continuous improvement

Note: There is no legal obligation for engineering programs to undergo accreditation as it is not a legal requirement for engineering graduates to commence working. Furthermore, the title 'engineer' is NOT legally protected in Australia unlike some other professions.

Australia is perhaps unusual that unaccredited engineering programs are almost non-existent. Graduates from unaccredited degrees can seek individual assessment by submitting a portfolio of their work experience with supporting educational documentation to Engineers Australia. This individual assessment pathway is generally for immigrating engineers with non-accord degrees, though domestic applications are accepted through this channel.

To initiate the accreditation process, individual Universities invite Engineers Australia to review their programs and negotiate a mutually agreeable date (typically 12 months in advance). Universities create a Self Study Report (SSR) and collate a body of evidence to present to the Engineers Australia accreditation panel for review and consideration. This body of evidence must include a robust selection of assessment materials across the entire degrees coursework and include self-assessment of how the program develops and delivers your specific program learning outcomes drawn from your program specification, and the Engineers Australia Stage 1 general competencies. A flow chart providing process timelines can be found here:-
https://www.engineersaustralia.org.au/sites/default/files/2023-01/AMS%20process.pdf

Succinct SSR DRAFTING:

Authors of accreditation submissions to EA are strongly advised to consider the materials provided through the Accreditation Management System on the Engineers Australia web site. One key document is "AMS-STD-10", which provides clear headings and suggested 'Evidence of Attainment' descriptions that align with the assessment template used by current panel members during review.

All Universities are free to write their own self study reports as they deem appropriate, but from the perspective of the panel members who are looking for evidence against the 15 listed main

criteria of AMS-STD-10, not organising your report to directly answer these questions adds additional load onto the panel members to eke out this information.

Not specifically considering and focusing on the questions in the SSR narrative, seemingly leads to a 'write more – just in case' situation in the hope of covering any possible query. This generally bloats the report and unintentionally obscures the answers to the question that the panel are striving to assess. For succinct submissions read the questions carefully, frequently and continue to reflect if the written response remains 'on theme', and question if any additional words 'add value' to the narrative.

Please note that the language used in the AMS-STD-10 headings and indicators of attainment are, in places highly nuanced and thus easy to superficially interpret. A superficial interpretation generally leads to a failure to adequately address the true question in the self-study report.

Panel Composition and Considerations

The panel itself is drawn from both academia and industry representatives. Doing so provides the panel with an academic understanding of restrictions and limitations imposed by typical University systems and an industry perspective on application, needs and future directions.

NOTE: Academic leaders can register an interest in panel participation by contacting the accreditation team at Engineers Australia or via the web, currently here:- https://engineersaustralia.wufoo.com/forms/r1vfo9mq1dox4ns/

Once assembled, the panel is split into sub panels who assess 'like' programs in consultation with the submitting university. Remaining cognisant of the sub panel groupings during drafting of the SSR, allows that documentation to be crafted towards the sub panel groups enabling them to read and collect evidence for their sub panel reports with relative ease.

Each sub panel member compiles notes throughout the visit and these form the basis of the final report. The sub panel reports generally contains a strong overlap in the quality systems and operational environment sections, but have a very distinct academic program section(s). Principle authors are advised to maintain appropriate delineation of documents for their differing sub panels to reduce extraneous material of low value.

Panel Processes

The submission for accreditation is required some 6-8 weeks prior to the scheduled visit. The panel members review the submission and identify areas lacking clarity or where the SSR inadequately demonstrates the AMS-STD-10 outlined criteria. Individual panellist reviews are discussed in a teleconference environment approximately 3-4 weeks prior to the site visit in a closed panel session, resulting in a set of questions being sent back to the campus for response.

Typically, a general review panel will be split into sub panels aligned to sensible groupings of students and programs. To a large extent these sub panels work autonomously throughout the visit and whilst the schedule will show an abundance of private panel time, the reality is that time is both precious and in short supply for most panels. The exception to this is for special reviews which might focus on a single program and therefore the entire panel would remain focused on that one program throughout the visit.

From the Universities perspective, once the panel leaves having provided a brief summary of findings, the accreditation process is largely complete for that cycle. However, the panel members continue to consolidate findings and refine their report to provide the best feedback possible over the ensuing weeks. The University representative will be provided with a document for fact checking some weeks after the visit, and prior to the final report being finalised.

Prior to review panels report being released, the visit manager is required to present the report to the accreditation board for approval, and once approved the report is released to the University for consideration.

Benefits for Academics/Universities for panel participation

There are many benefits in participating in panels for academics and the Universities they originate from. The deep insight into the needs and processes of accreditation panels gained through participation makes creating a future succinct SSR more straightforward and a less stressful process. Understanding the panel needs, enables the accreditation leader to streamline many aspects of the visit.

Accreditation requires each campus/faculty/college/school to perform a deep and systematic review of their operations in the preparation of their self-study report. This report provides an institutionally important reflection on both campus and program health and should be considered as such. Whilst written to support the accreditation review, there is a significant amount of information and data that is of potential value to many of the academic and operational staff if appropriately promulgated.

A University level benefit from panel participation is the deeper level of benchmarking that is offered to the panel members. The SSR is a deep dive into most facets of program operation in a single reference document and provides academic panellists a comprehensive insight into degree operations. Academic members have an opportunity to reflect on this information and compare this to their home campus to elevate their own campus's operations. It should be noted that confidentiality agreements bind each panel member not to directly share information from any panel and/or review.

Some Universities offset the need for their own TEQSA regulated external reviews for programs that undergo accreditation cycles which can provide a win-win outcome for the SSR authors.

Program Plans – An essential element of the puzzle

In general, you and your academics know how your program fits together, what is assumed knowledge and what is requisite knowledge. For panel members they have very little understanding in your programs structure and needs. This can become difficult as course content can occasionally drift away from the course name. Indeed, at the University of Newcastle for many years a course "Dynamics 2" existed as a standalone entity, as Dynamics 1 had been removed and the paperwork required to update the name was a sufficient barrier that the name was never updated! It was also true that Dynamics 2 included vibrations and control theory through a mechanical engineering lens that was not intrinsically evident in the course name.

As a result of this, it is strongly suggested that a graphical 'program map' be considered as an essential item for each program under review. Figure 1 presents an example of a program map with the program broken into cognate streams across the semesters. It is virtually impossible to include all the interdependencies, but in this case the major knowledge paths are shown within 'cognate stream' areas. It is not inconceivable to also indicate where specific program learning outcomes are built upon in this style of image, though caution is advised in adding to an already busy graphic.
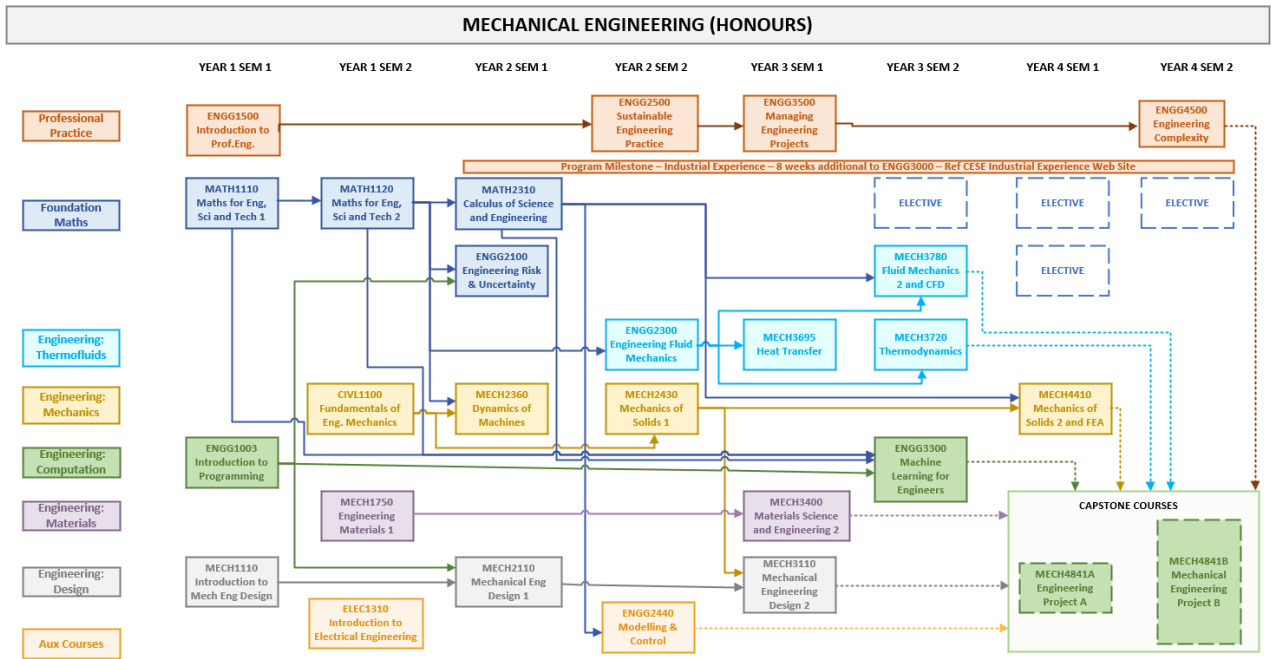
Figure 1 – One form of program progression illustration

The **next suggestion** for Succinct Submissions is to provide the panel with something (graphical) that explains how the courses clearly interconnect to form a program. A simple semester and year layout of course names are unlikely to provide this level of clarity.

Demonstration of EA Stage 1 Competency Attainment

A fundamental question for the panel is will the program under review assure all graduates will meet EA Stage 1 Competencies now, and for future offerings. A systematic mapping indicating the building of Stage 1 competencies and specific program learning outcomes throughout the degree is a critical element of the accreditation review. However, it is also critical that the staff collectively understand how their students gain these competencies. As for mapping styles there is no specific or prescribed format, rather each campus should evaluate what provides clarity for the panel but equally aids internal processes and their student bodies program comprehension.

At the University of Newcastle, a bespoke program "AccrediTool" has been developed and used to both illustrate the development of EA Stage 1 Competencies, but also to streamline the panels review of associated assessment samples. Figure 2 provides a snapshot of year 1 semester 1 and the start of semester 2 courses. The number within each box is an indication of the taxonomy level that the individual academic assesses their course as delivering. As the program progresses the learning level increases to a level 4 which we have designated as a graduate level learning outcome. In all cases these levels are based on the individual academic's self-assessment of their material and is not artificially imposed on the basis of course year level etc.

Figure 2 – AccrediTool formatted Stage 1 aggregation table.

In Figure 2, hovering the cursor over the column numbers reveals the associated Stage 1 competency text, and clicking onto the course code takes the user directly to course details section.

Assurance of the learning outcomes is via assessment items provided to the panel. It is typical for two representative samples at each grade level for each major assessment work to be provided to the panel for review. Panel members are expected to review these to ensure, within the limits of their experience, that the breadth and depth of assessment is appropriate for the award of the degree under review. Figure 3 is the home page within AccrediTool to access the work samples.

Figure 3 – AccrediTool assessment home page.

Selecting a 'View Course' in this application leads deeper into the specifics of each course and provides access to the assessment samples as per Figure 4. If the source formatting of the assessment items is correct, AccrediTool will automatically format them as illustrated in Figure 4.

In our 2023 submission, these work samples were not de-identified taking a reliance on the confidentiality agreement that all panel members undertake to maintain the confidentiality of all students. We placed a disclaimer on all course outlines that assignment would be collected in the reference year and invited students with concern about their identity in the accreditation process to indicate 'not for EA collection'.

Figure 4 – Typical assessment samples auto-formatted in AccrediTool

Once data is collected into any database system, it provides an opportunity to holistically reflect on the program in the way that the assessment regime supports and assures student learning. Figure 5 presents an overview of one programs assessment as mapped with AccrediTool. This map illustrates a broad range of assessment techniques being used throughout this degree.
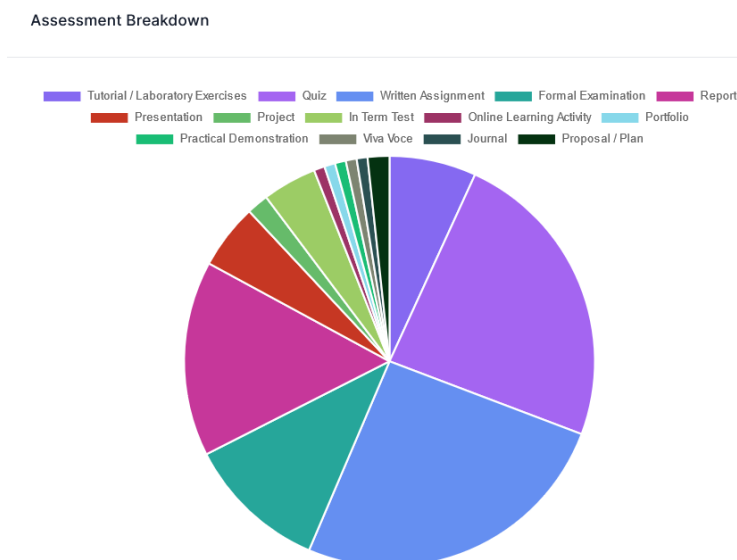

Figure 5 – Overarching perspective of assessment

AccrediTool is built and uses a '.aspx' framework set that is fundamentally Microsoft and as such intrinsically works with SharePoint. The AccrediTool app aggregates information and creates a .aspx package that is deployed into a SharePoint site for use. To provide a SharePoint landing page and link to all aspects of documentation, a simple page was created using an MS EXCEL template. Whilst lacking the aesthetic of our 2018 AccrediTool deployment, this 2023 edition provided a robust, functional, and easy to modify interface. Figure 6 presents the main landing page for the panel, with each main colour linking off to the sub panels page containing all the relevant documentation for their review. Note: as a side issue, these colours were carried through the entire accreditation visit, with staff, students and industry provided with appropriately coloured name tags, and the various assigned rooms fitted with large colour swatches to provide clear visual indicators to all participants giving assurance that they were in the right place.

Figure 6 – Simple SharePoint Landing page to streamline supporting documentation access.

Benchmarking

Benchmarking is a topic that is often raised in the lead up to an accreditation submission. Benchmarking should be seen as business as usual rather than an accreditation activity, in fact many elements that the accreditation SSR reflects are meant to be business as usual.

In the supporting documents from Engineers Australia, there is a recommendation to demonstrate benchmarking without specifics around said benchmarking. In an idealised world, the intent of benchmarking is to ensure that an honours graduate from University X is comparable to one from University Y. Dig deeper, and without any suggestion to homogenise curriculars, benchmarking enables staff to celebrate their differences and program strengths whilst gaining confidence that an appropriate outcome for entry to practice is achieved.

Whilst benchmarking in many academics minds is centred around final year projects and individual course content/assessment, there are significant learnings available at institutional levels around student management and support in all its forms that fundamentally enable continuous process improvement.

Using contemporary tools to simplify submissions

Compiling and reviewing traditional large and coherent documents is a challenge for all involved.

Access to University corporate systems is increasingly difficult for external people (cybersecurity) and access to unfamiliar LMS systems for both academic and industrial panel members creates unnecessary stress for them. Asking panel members to navigate through multiple unfamiliar systems is unlikely to lead to a particularly streamlined experience.

The creation of a SharePoint landing page/portal enabled documentation to be broken down into more manageable sub-sections and enabled panel members to keep salient information in an open browser tab as pertinent to their review work. Figure 6 presents a very simple SharePoint landing page, created as an EXCEL document with embedded hyperlinks to the SharePoint locations of the respective files. As files are added, the EXCEL sheet can be updated, converted to a PDF, and re-uploaded to SharePoint. By keeping hyperlinked file names identical on SharePoint the 'path' remained unchanged and therefore the landing page automatically reflected changes on the next opening. This resulted in an ability to perform 'live' updates to material throughout the compilation process and enabled responsive panel updates as needed.

Figure 6 indicates a 'Post Telecon extra content' link, which connected through to a directory in the SharePoint file system. As responses to the Teleconference request were collected, this enabled automatic sharing of that content to the panellists.

Whilst a more atheistically pleasing landing page could be created in a HTML framework, the method depicted here can be created and updated using standard MS office tools and provides a very low entry barrier tool.

The use of AccrediTool, or an equivalent, is the second key element in providing an easy to navigate system for the panellists. AccrediTool collates all program and course information and links the collected assessment items into a complete navigable SharePoint system. Whilst originally primarily designed to illustrate Stage 1 competencies, it is perhaps the linking of assessments that adds greater value to the panellist.

Together, Sharepoint and AccrediTool formed a 'one stop' single sign on, accreditation site for the panel to review all documentation, student assessments, and course mapping creating the lowest cognate load on the panel members enabling them to focus on the accreditation work. Simultaneously for content creators, all materials collate into the one system making management of this information much easier.

Consolidated Succinct SSR Tips

- Read each question deeply and frequently and reflect on the responses critically
- Include a considered graphical program plan
- Write for the subpanel groupings as much as possible as stand-alone documents
- Write to the headings that the panel are seeking to affirm.
- Hyperlink sections
- Answer all questions
- Make finding the assessment samples easy and easy to navigate (What systems can be used)
- Ask each sub section author to place themselves in the recipient role, asking them what would they like to know and see if reviewing another campus' program
- Boast about what is working well
- Reveal what is not working well *

* During the multi staged interview process, a surprising amount of things are provided to the panel members. If issues are 'owned' in the self-study report this lets the panel members know you are aware of it.

Conclusions

Engineers Australia program accreditation is effectively a minimum requirement for Australian graduate engineers. Whilst many will see the process of accreditation as a burden it should be considered for the many positives it brings in both self reflection and the feedback provided by a set of 'fresh eyes'.

The creation of a self study report and the collection of supporting materials is not insignificant and should be leveraged to speed ongoing continuous improvement wherever possible.

Providing the accreditation panellists with an easily navigable and interactive online system with tools such as SharePoint, PowerBI and UoN's Accreditool can provide panellists an environment for greater accessibility, and an ability to follow lines of enquiry with great ease and time efficiency. But education providers should remain mindful that Engineers Australia will require a record of submission material for its own quality control purposes in the accreditation process and as such any bespoke system must enable a package of material for Engineers Australia.