



Quality Pursuit: an academic informed, evidence-based approach to Assurance of Learning

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Abstract

Higher education is governed by national quality standards with increasing expectations that teaching staff engage in quality assurance processes, including Assurance of Learning (AoL). AoL recommends a teaching team approach to measure student learning outcomes against specific course goals. Appropriate skills and allocated time are essential to support staff to ensure the curriculum is designed to comprehensively address student learning and develop knowledge, skills and desired graduate capabilities.

The 360 Quality Pursuit (360QP) approach to AoL is underpinned by a social constructivist approach to knowledge development, designed by a University of Tasmania Community of Practice that evolved into an inter-institutional action research team. 360QP is a six-segment, semi-formal quality enhancement program that can be applied to any educational activity or level of organisation (e.g. unit, course or college). Using a regulatory compliance lens for AoL can adversely constrain the focus of professional development (PD) and limit staff engagement. This paper combines the findings from our scoping review with data collected from five national workshops. Workshop participants were invited to explore the 360QP segments, share case studies and offer their top PD wish list items. This culminated in the identification of 15 conditions that academics believe are required to support AoL.

1. Introduction

The higher education sector is under scrutiny from government, industry, and students to ensure a quality product (Billot, 2010; Botham, 2018a, 2018b; Goldingay et al., 2012; Shaw, 2018). Assurance of Learning (AoL) provides one of many useful methods for determining if students are receiving a quality, fit for purpose product. AoL is described as the process by which student learning outcomes are measured against specific course goals (Hall & Kro, 2006).

Increasingly in higher education, the term quality enhancement is used in preference to the regulatory-oriented quality assurance. The definition of quality enhancement, taken from Macquarie University's Quality Enhancement Framework Policy, states that quality enhancement is "a systematic, future-directed, continuous cycle of goal setting, planning, managing and reviewing, within an appropriate governance framework... aimed at transformation" (Macquarie University, 2016).

Most academics would like to spend more time focused on their teaching, supporting AoL and quality enhancement strategies, but are often constrained by their workload, time pressures, skills, research commitments, and the weighting of their research performance indicators (Ball & Crawford, 2020; Billot, 2010; Martin-Sardesai et al., 2017; Nijhuis & Collis, 2005).

Recognising that this challenge was impacting on their values and practice, a group of University of Tasmania (UTAS) academics formed a Community of Practice (CoP) to investigate if their personal experiences were common amongst other academics, internationally and nationally. The CoP completed a scoping review to examine evidence of AoL strategies in the Scholarship of Teaching and Learning literature. These findings from the literature, along with the CoP members' experience, particularly in the area of requirements for professional accreditation, led to the design of a six-segment framework for ensuring AoL: 360 Quality Pursuit (360QP). 360QP is an adaptation of the 2012 Hunters and Gatherers project (Lawson et al., 2013), including: purpose, intended learning outcomes, curriculum mapping, collecting evidence, benchmarking and review, and closing the loop. This framework was designed to enable academics to select segments most relevant to their current quality enhancement needs and context so they might explore and apply the segments to identify an evidence-based solution capable of ensuring AoL with their students.

Informed by the scoping review findings, during 2016/2017 members of the CoP formed a research team and used 360QP to design and deliver five Action Learning Workshops across Australia. The purpose of the workshops was two-fold: to provide professional development for academics, while simultaneously gathering data and insight into Australian academics' experiences of engaging with AoL in their daily practice. Data shared in workshops included case studies, contextualised barriers and solutions to AoL and an academic derived 'top 10 Professional Development wishlist'. These findings usefully informed our design of a set of practical solutions to support AoL in the Higher Education sector, confirmed the value of supportive professional

development opportunities and reinforced the usefulness of the 360QP framework as an academically-informed and evidence-based professional development tool to support AoL.

2. Literature review & theoretical framework

At the time the 360QP was under development, at least two Australian Higher Education institutions had developed broad learning and teaching quality frameworks: Deakin University's Learning Futures (Deakin University, 2013) and the University of Wollongong's Curriculum Transformation (University of Wollongong, 2014). Other institutions and Australian Government-funded projects (e.g., Krause et al., 2013; Lawson et al., 2013) made significant contributions to quality enhancement, but only to specific aspects such as benchmarking (Booth, 2013) and online quality management (Holt et al., 2013). The sector was rated as having an "undeveloped approach to Assurance of Learning" (Lawson et al., 2013, p. 58). A more holistic approach to quality enhancement in higher education was needed in Australia.

Meanwhile, internationally, quality enhancement systems were judged similarly and described as fragmented. The Ontario University's Council of Quality Assurance had adopted a formal accreditation approach (Ontario Universities Council on Quality Assurance, 2014), but the level of accreditation was low. In the USA, the American Association of Colleges and Universities (AAC&U) had programs like LEAP (Association of American Colleges & Universities, 2014), but provided resources to support quality enhancement, but the actual process of quality enhancement was left to individual institutions or institutional partnerships (e.g., California State University System). In Europe, the Tuning Project (University of Deusto and University of Groningen, 2020) and AHELO (European Association of Institutions in Higher Education., 2016) emerged in response to the Bologna process. Both aimed to address the European community's desire to harmonise courses to allow greater mobility within and between degree programs across Europe.

Systems based on a cyclical 'reflect, review and renew' process were well-established in the commercial world (e.g. SAI Global). In 2013, UTAS had recognised the importance of quality enhancement cycles and had incorporated a preliminary step of Objective to the Approach > Deployment > Results > Improvement to form the (O)ADRI quality framework (University of Tasmania, 2013).

The (O)ADRI framework provided the foundation, with the work of Lawson (2014) and the Association to Advance Collegiate Schools of Business White Paper 3 (AACSB International., 2013). Each were adapted and extended to form the 360QP quality enhancement learning and teaching framework. The six segments of 360QP (purpose, intended learning outcomes, curriculum mapping, collecting evidence, benchmarking and review, and closing the loop) were purposefully chosen to intuitively guide the process of quality enhancement for learning and teaching, offering a comprehensive approach to AoL. Recognised for its contribution, the 360QP framework was added to the website of Lawson's Assuring Learning national project

(Lawson, 2014).

360QP segments

360QP was designed to function within a complex and dynamic environment that has many stakeholders and sought to be consistent with an institution's policies and procedures.

Fullan and Scott (2009) recommended normalising quality practices in course design and review. To support the transition to being part of the routine business of the university, 360QP was designed so that it could be incorporated into an institution's course management system. UTAS uses the Project Management Methodology (PMM), which is based on the UK PRINCE2 system. An aspect of PMM is a four-step stakeholder management process comprising stakeholder identification, analysis of each stakeholder, execution of the plan, and monitoring the effectiveness of implementation (University of Tasmania, 2020). The CoP purposefully involved the central organisational units responsible for enhancing learning and teaching: the central learning and teaching unit, student data and reporting unit, and Information Technology Services. It should be highlighted, the CoP was organically formed, all members shared similar values and met to advocate for quality enhancement and for stewardship (McRoy & Gibbs, 2009). The six segments of the 360QP are now described:

Purpose. This is an explicit statement of the principal purpose of the quality enhancement activity. For example, improve learning and teaching, construct course learning outcomes, meet professional accreditation or Tertiary Education Quality Standards Agency (TEQSA) requirements.

Intended Learning Outcome. 360QP uses Intended Learning Outcomes to acknowledge that actual learning outcomes may differ from what was intended. Inclusion was motivated by The Learning Futures Programme (Deakin University, 2013) which provided their academics with templates and a process of alignment of course and unit learning outcomes with university policies, the Australian Qualification Framework, and professional registration requirements.

Curriculum Design and Mapping. 360QP recognised the importance of dedicating time to curriculum design and mapping. Curriculum mapping supports academics to understand the students' experience of the course and provides them with a helicopter view of their whole course (program). Lawson et al. (2013) nominated four key features of mapping tools as offering an inclusive and participatory process, providing a program-wide approach, allowing mapping by task, and to assist with raising student awareness of curriculum design/elements (p. 51). Of the three mapping tools favoured having these four features, the C2010 mapping tool is described elsewhere as being based on principles of an aligned curriculum with clear learning outcomes without gaps or needless repetition, carefully chosen learning experiences and directly linked assessment (Oliver et al., 2007). Lawson's Curriculum Design Workbench supersedes C2010, has been used by members of the CoP and has been designed to ensure constructive alignment of

courses is upheld.

Collecting Evidence. The principal focus of 360QP is learning and teaching; consequently, evidence of learning must be systematically gathered, with an objective assessment of student learning against intended learning outcomes, whether that be mastery of content or retention of data or application of knowledge to an unfamiliar context. Much of collecting robust evidence is essentially good assessment practice, and the Learning Futures Programme (Deakin University, 2013) has proposed a Course Evidence Portfolio using a multitude of evidence gathering approaches that addresses many of these issues. Evidence-based teaching is widely promoted in the literature amid calls that academics "apply the same scholarly standards to their teaching as they would to research in their disciplines" (Quinnell et al., 2010, p. 21). Student feedback, such as through the University of Tasmania's student survey (eVALUate) system provides evidence of student sentiments, as does the Australian Graduate Survey. Academics may wish to collect other evidence or use e-portfolio to provide evidence against specific course learning outcomes (Chen, 2015; Chen et al., 2016).

Benchmarking / Review. Academics at UTAS have actively researched benchmarking (Booth, 2013) and in collaboration with other institutions, developed an electronic Benchmarking tool. At the unit-level, Krause et al. (2013), used a three-part blind peer review process that provides feedback on a unit, grading guidelines, and assessment tasks, that are extended to inter-institutional moderation. The process considers all systematically gathered evidence, including student feedback, learning analytics against intended learning outcomes, benchmarking, data from formal surveys, and feedback from employer and professional regulators and other stakeholders.

Closing the Loop is the documented process by which the actions arising from review processes are used for tangible improvement to units and courses. This is a broader definition of some higher education providers whose objective is to principally respond to student feedback. Lawson et al., (2013) identifies good practice principles as including stakeholders, fostering staff engagement, documenting the process, and keeping change manageable. The importance of authentic relationships amongst teaching staff who share a goal of delivering AoL in their courses should not be underestimated.

3. Methodology

This research is founded on a social constructivist approach to knowledge development (Adams, 2006; Prawat, 1996), designed by a UTAS Community of Practice that later evolved into an inter-institutional action research team.

Constructivism acknowledges that "reality" is socially constructed (Creswell, 2013; Liamputtong, 2013). In higher education, there are many factors and actors that influence this reality. It has been widely accepted that there are four social constructivist approaches that can be employed to support knowledge development or idea sharing amongst

actors (Adams, 2006; Prawat, 1996). Whilst symbolic interactionist constructivism as outlined by Blumer (1969) could be one way of describing the individual's learning and the social dynamics of the community of practice, it is incomplete. Importantly, the authors wish to highlight the meaning assigned to the object (360QP framework) which was cultivated and affirmed through the social interactions each member had with their fellow CoP members. Members jointly produced language and actions which then became the basis for their shared meaning, they regularly came together with a common goal and shared their own expertise and views to develop a collective understanding through a joint activity. Developing knowledge whilst immersed within a community, allowed the actors to voice their reality which was used to develop a way forward (Pickard & Dixon, 2004). The creation of a safe learning space with authentic relationships was key to the success and sustainability of the CoP. Based on this, the approach is more consistent with an idea based (Dewayan) social constructivism. The advantage of this approach is that it assigns a prominent role to the social and to the individual, in the development of meaning (Prawat, 1996). This allows the community of practice to treat the individual, and the social equally and acknowledges how the actors share ideas to address their shared goal of enhancing the quality of higher education. The product is an object (360QP framework) which can be shared in future workshops with other academics who may possess the same values and goals. At each workshop the cultivation and affirmation process are repeated, the social constructivism approach is re-employed which supports individuals and groups to share their understanding.

The research followed a sequential mixed methods design, whereby phase one, the scoping review informed phase two, the action learning workshop content and delivery (Creswell, 2013). Ethics approval was granted by the University of Tasmania Social Sciences HREC (10/8/2014 - 8/8/2018), approval number H0014302.

The scoping review findings were used to critically answer the following two questions:

1. What resources, expertise, and practices related to quality enhancement of teaching and learning are in the public domain?
2. What barriers and enablers exist that would help inform strategies to implement a quality enhancement system?

The findings from the scoping review informed the development of the 360QP Framework as well as the associated AoL action learning workshop content and interactive and context responsive delivery methods. Recruitment of workshop participants is best described as convenience sampling (Liamputtong, 2013). The workshops provided an opportunity to test and refine the 360 Quality Pursuit framework (Bill et al., 2015; Nash et al., 2016); determine the barriers and enablers to AoL in the higher education sector and; identify what professional development is required to support educators working in the higher education sector so they may uphold AoL in their daily practice.

Data collection: Phase one. Scoping review

The scoping review was conducted in two stages. Stage one used a preliminary search to determine a practicable review scope and to identify themes for a targeted search. In stage two, a review template was developed based on stage one reading and discussion within the CoP and with academics working in quality improvement of learning and teaching at the time. Reviewers (members of the CoP) used the template to assess the resources against three criteria: the resource was sustainable, portable and provided objective measures of learning. Enablers and barriers were noted, along with advice or lessons learnt. The template is available at <http://tinyurl.com/ovw2wl8>. Emphasis was placed on the reports of Office for Learning and Teaching (OLT) projects and the current practices of other universities, where that information was publicly available.

Fifty-two papers or websites were reviewed. Each reviewer was allocated approximately five items. Each item was reviewed by a member of the review team and by the research assistant independently, and the reviews were recorded in a shared Google document.

Phase two. Action Learning workshops

The workshop facilitators purposefully blended didactic and interactive learning strategies in the development of the action learning workshops. Workshop details, participant numbers, and completed activities are provided in Table 1.

Table 1. Action learning workshop participants details

	Date	Conference/Event Institution	Location	Number of Participants	Case study	Barriers & Solutions	Wish List
1	4/7/2016	HERDSA	Fremantle, Perth	8			
2	29/8/2016	UTAS Research Week Conference	Hobart, Tasmania	7			
3	9/11/2016	TEQSA & HES	Melbourne, VIC	20*			
4	7/12/2016	UTAS (TSBE)	Hobart, Tasmania	30*			
5	20/7/2017	CAPHIA	Sydney, NSW	17			

*Estimated number of participants, grey shading – participant's completed templates were shared with facilitators and data is available, white shading – completed templates were not shared/data unavailable. HERDSA – Higher Education Research and Development Society of Australasia, TEQSA & HES – Tertiary Education Quality Standards Agency and Higher Education Standards, UTAS – The University of Tasmania, TSBE - The School of Business and Economics, CAPHIA – Council of Academic Public Health Institutions Australasia.

Workshop participants were provided with an information sheet and a verbal explanation of the research prior to workshop commencement. Participants were invited to indicate their consent by leaving their completed templates in a box as they left the workshop session. At each workshop, participants were provided with pre-reading and an example case study, during the workshop they completed activities in pairs or small groups and then joined the larger group facilitated discussion for information exchange and sharing. Each activity encouraged participants to consider their own context. Participants were invited to document, using a

template, a real or imagined case study that either upheld or challenged AoL. This was shared in pairs. Participants were then invited to independently complete the 'barriers and solutions' template. This was to gain insight into the current 'barriers' that existed by adopting AoL practices amongst participating academics. At the same time, academics were encouraged to identify solutions to each barrier posed. Once completed, they were asked to share with a peer and discuss. The peer was also invited to offer additional solutions. Using the Quality Pursuit six-segment floor mat, participants were then invited to identify the segment that offered the best alignment for each barrier/solution. These were then placed on colour coded sticky notes and placed on the corresponding floor mat (Figure 1).



Figure 1. Action learning workshop activity: Quality pursuit floor mat with colour coded sticky notes.

Finally, following further discussion and exploration of AoL, participants were invited to document 10 professional development wish list items that would support them to uphold AoL in their daily practice. This list was collated and shared with participants after each workshop. The individual lists from all five national workshops were later combined to identify 15 conditions that academics believe are required to support AoL.

4. Analysis and discussion

Data analysis: Phase one. Scoping review

Five key themes were identified in the scoping review: (1) the higher education environment, (2) quality assurance systems, (3) enablers and barriers, (4) cataloguing quality resources, and (5) implementation strategies. These were further developed with key observations and recommendations from the literature (see Table 2). The findings were mapped to the six segments within the 360QP Framework, supporting its relevance and the need for providing professional development for academics in the higher education sector. The findings were used to inform the content and delivery of action learning workshops.

Table 2. Scoping review: Key observations and recommendations by theme

Theme	Key observations and recommendations	References
1. The Higher Education Environment	<ul style="list-style-type: none"> Complex and dynamic regulatory environment Many stakeholders: TEQSA, professional accrediting bodies, employers, institution Institutional competition for prestige, students and funding 	(Australian Government, 2014; Australian Pharmacy Council, 2012; International Pharmaceutical Federation Pharmacy Education Taskforce, 2012; Lawson et al., 2013, p. 29; Tertiary Education Quality and Standards Assurance, 2011)
2. Quality Assurance Systems	<ul style="list-style-type: none"> Range from formal regulatory approach to informal provision of resources and tools Quality systems fragmented Many elements of quality assurance exist, e.g. benchmarking 360QP based on UTAS OADRI and AACSB International 	(Booth, 2013; Deakin University, 2013; Holt et al., 2013; Krause et al., 2013; Lawson et al., 2013; University of Wollongong, 2014)
3. Enablers and Barriers	<ul style="list-style-type: none"> Enablers: collegial approach, top-down, bottom-up, effective and efficient processes Barriers: limited time, resources and buy-in, cultural change, reluctance to share 	(AACSB International, 2013; Association of American Colleges & Universities, 2014; Bolden et al., 2009; Bryman, 2007; Jones, 2014; Lawson, 2014; Ontario Universities Council on Quality Assurance, 2014; University of Deusto and University of Groningen, 2020; University of Tasmania, 2013)
4. Cataloguing Quality Resources	<ul style="list-style-type: none"> Vet resources through evidence-based processes and independent audit 	(Booth, 2013; Deakin University, 2013; Krause et al., 2013; Lawson et al., 2013; Oliver et al., 2007; Quinnell et al., 2010)
5. Implementation Strategies	<ul style="list-style-type: none"> Broad definition of stakeholder and purposeful stakeholder management "Just-in-time, just for me" Combined top-down, bottom-up approach 	(Bryman, 2007; Fullan & Scott, 2009; Krause et al., 2013; Tertiary Education Quality and Standards Assurance, 2013; University of Tasmania, 2020)

Theme 1 (The Higher Education Environment) considered the complex environment in which Australian HE institutions and therefore 360QP operates. The Higher Education Standards Panel (HESP) and TEQSA set quality management standards and, if relevant, professional accreditation bodies may determine profession-specific requirements. Universities have developed policies and strategic plans that guide quality enhancement, but it does not follow that these have been comprehensively implemented or reviewed following implementation. TEQSA and other regulatory bodies, the university, academics, students and professional accreditation bodies and, by extension, employers are identified as key stakeholders.

Theme 2 (Quality Assurance Systems) considered the quality systems used elsewhere as a basis for the development of a quality enhancement framework. Internationally and in Australia, a variety of systems are used (including the regulatory-oriented Ontario system, a less formal approach from the USA of universities often acting in concert), but the quality assurance is fragmented. In Australia, Deakin University and the University of Wollongong had quality assurance systems, but neither provide the comprehensive approach designed to address the needs of the broad range of stakeholders envisaged by 360QP. 360QP adapts the UTAS OADRI process to create a six-element learning and teaching quality framework of Purpose, Intended

Learning Outcomes, Curriculum Mapping, Collecting Evidence, Benchmarking and Review, and Closing the Loop. 360QP is designed to enhance graduate capabilities through a systematic evidence-based approach to quality enhancement of learning and teaching.

Theme 3 (Enablers and Barriers) considered the enablers and barriers associated with quality enhancement in higher education, this highlighted the need for a quality enhancement system and as a shared repository of quality resources. The challenges of cultural change in higher education are substantial: steered engagement and developing leadership capacity are advocated. Innovation in higher education will be reliant on cultural change and appropriate styles of leadership. The distributed leadership model applied by the CoP for the Quality Pursuit project has been critically analysed for the context of higher education (Bolden et al., 2009; Jones, 2014) concluding that it has rhetorical value in influencing perceptions but fails to deal with the actual power dynamics operating (Bolden et al., 2009), and that, "for a distributed leadership approach to be applicable and effective in higher education it needs institutional commitment, support from formal institutional leaders, tailoring to the specific institutional context and culture, and underpinning by an action research process" (Jones, 2014, p. 139). Alternative leadership models need to be investigated that can respond to local contexts and culture, and critically, enact institutional leader support if the 360QP is to be successfully implemented in higher education contexts. In particular, we take note of a finding of Bryman's literature review on effective leadership in higher education: "leadership that undermines collegiality, autonomy and the opportunity to participate in decisions, that creates a sense of unfairness, that is not proactive on the department's behalf, and so on, is likely to be ineffective because it damages the commitment of academics" (Bryman, 2007, p. 707).

An effective leadership model will be necessary if innovative quality enhancement strategies are to be widely and successfully adopted across the sector. Innovation in higher education will be reliant on cultural change and distributive styles of leadership. An emergent distributive leadership model acknowledges that everyone is a powerful contributor (Bolden et al., 2009), this is essential if innovative quality enhancement strategies are to be widely and successfully adopted across the sector. Barriers to change raised by our participants include academics considering whether or not the cost of involvement outweighed the benefits, as well as the burden on their time, a sense of vulnerability and threat to their roles, and a lack of understanding of the process. Barriers to the use of a shared repository were found to be centred on the confidence associated with the value of the material and feelings of vulnerability in a highly competitive environment. Capable of responding to these concerns, Krause et al. (2014) and Lawson et al. (2013) previously advocated for a collegial approach to embedding AoL, they suggested that teaching staff be the principal change-agents and noted the pivotal role of program leaders. In addition, on multiple occasions Scott and colleagues challenged higher education to be change capable and build leadership capacity (Scott et al., 2008; Scott et al., 2012). Lawson (2013) recommended working actively with discipline scholars to include a "top-down" approach to ensure executive buy-

in, and a "bottom-up" approach to ensure grass-roots support. Further, in 2016, Lawson boldly contextualised Kotter's 8-step change model (Kotter & Cohen, 2012) to support AoL in everyday academic practice. The AoL specific change model highlighted the need for: Executive Support, Vision, Communicate for Buy In, Empowerment, Reward and Recognition and Building a Guiding Team (Nash et al., 2016). Attention to all six elements will be essential to driving the cultural change required for sector wide adoption of AoL.

Theme 4 (Cataloguing Quality Resources) considered the resources to enact 360QP. Academics need access to a set of resources to support them to uphold AoL and participate in quality enhancement. Lawson et al. (2013) developed an evidence-based assessment of the resources that could be extended to all 360QP segments. Resources that are part of the repository are vetted and assessed before release. The suitability of a tool depends on its utility. The approach adopted here is the flexibility to choose separate resources; the suitability of a tool depends on its application.

Theme 5 (Implementation Strategies) considered the implementation of a quality enhancement system by adopting principles of cultural change in higher education, OLT projects that may provide a model, and the institutional structures and systems within which a project should be implemented. Two OLT projects from Lawson et al. (2013) and Krause et al. (2014) advocated a collegial approach of discussion, with a combined top-down approach of compliance encouraging accountability and a bottom-up CoP approach that encourages engagement. An approach consistent with TEQSA's 'light-touch' philosophy of self-regulation and a low administrative burden is adopted. Sustainability is promoted by building leadership capacity, normalising quality as an integral institutional activity, and providing a basis to incorporate 360QP into the institution's course management system.

The scoping review provided a broad context to inform developers and users of the 360QP quality enhancement framework. This is expressed along with five themes. The themes guide users of 360QP to consider environmental factors, the current status of quality assurance systems, enablers and barriers to engaging in quality enhancement, supporting resources, and strategies for implementing 360QP. It was important to determine the framework with academics.

Phase two. Action Learning workshops

There were three Action Learning workshop activities completed by participants: (1) Case studies, (2) Barriers and Solutions, (3) PD Wish List. While data from each of the three activities were derived from the participant engaging with each workshop activity in turn (and data exists for each), the focus of the analysis that follows is the participant-identified Barriers to AoL practices and the professional development wish list items (participant identified Solutions). Both can provide realistic and actionable recommendations to support the higher education sector to meaningfully engage with quality enhancement practices.

Thematic analysis (participant identified barriers)

The specific focus for the workshop data analysis was on theme three from the scoping review, 'Barriers'. Participants in the workshops were asked to identify the barriers to AoL. The first step in the thematic analysis was data reduction (Huberman & Miles, 2002). The process involved reviewing the comments from the participants and collapsing them into smaller phrases. For example, 'AoL requires a change of practice' – a comment from the case study – became 'change of practice'. The second step of the data analysis involved several iterations in producing open codes. For example, 'change of practice' became 'change required'. Each iteration allowed for the meaning behind the phrases to be retained through the process to produce the open code. The open codes were then clustered together to produce themes. For example, the theme 'change and conflicts' was derived from the open codes of 'change required, conflicts, resistance, and risk'. The final themes produced from the data analysis focused on 'Barriers' are:

- A. change and conflicts,
- B. curriculum and components,
- C. feedback and review,
- D. implementation,
- E. strategic direction and fit.

These themes were then considered against Theme 3 (Barriers) findings from the scoping review, specifically: limited time, resources and buy-in, cultural change and reluctance to share.

Interpretation of results

The theme 'change and conflicts' (A) includes participants identifying that AoL required 'change' in a number of areas. Change in current practice is required would align well with the cultural change finding from the scoping review (phase one). Included in this theme is the realisation by participants that to focus on AoL requires a change from being focussed just on content. It was also recognised that AoL requires structural change and the inclusion of digital pedagogy. Participants identified 'conflicts' in two ways, conflicting interests, and conflicting priorities. These conflicts both inhibit a focus on AoL.

'Resistance' in the themes relating to academic staff came in many forms, AoL gets in the way of the job of teaching, direct opposition to AoL. Interestingly the scoping review (phase one) provided no insight into the significance of resistance when trying to undertake AoL.

'Staff resistance' was a strong code for this theme. Participants identified angst, cynicism, non-attendance of staff at professional development, staff being risk-averse or siloed, current practice, uncertainty, and that AoL gets in the way. Also included here were staff resistance and opposition. Resistance was implied in phase one through 'buy-in and reluctance to share'. Theme 5 (Implementation)

from the scoping review suggests the need to take a top-down bottom-up approach to AoL (engaging leaders as well as staff on the ground), therefore the literature may offer strategies that are useful to consider where resistance exists. Participant derived wish list items may also provide local and context specific solutions.

A minor aspect of this theme 'risk', came from a specific case study looking at minority groups and the ability to handle unique demographic 'risk' factors in consultation with minority groups, for whom the consideration of demographics may itself be offensive. Interestingly, this did not appear to align with findings from the scoping review.

The theme 'curriculum and components' (B) relate to the need for 'consistency' – such as consistent terms and diversity of learning styles. While the code of 'resources' incorporates the need for expertise and support, literature, language and terms to be clearly aligned with the codes of 'time and money', all of which align to the 'resources and buy-in' theme from the scoping review (phase one). The code of 'quality' included content relevance, uncertainty of skills of staff, assessing recognition of prior learning (RPL) and staff questioning the what value their institution places on AoL. The code of 'training' identifies that generic training can also be a barrier. None of these themes were evident in phase one outcomes.

'Curriculum complexity' is a barrier to AoL that was not present in the literature; however, it was a barrier to AoL as identified by the participants. Complexity included issues such as the first-year curriculum trying to meet the conflicting needs of many disciplines and including service teaching. Curriculum may need to include graduate attributes or competencies while at the same time focusing on content knowledge, thereby increasing the complexity. Participants shared that working on curriculum can also be isolating. Participants identified that curriculum requires ownership to ensure governance and structural review to ensure content quality. Whilst the literature highlighted that the higher education environment itself is a complex and dynamic regulatory environment, the complexities of curriculum itself were not evident in the scoping review findings.

The theme 'feedback and review' (C) relates to managing the different perspectives of what is a strength and what is a weakness, lack of feedback from students and siloed feedback when industry is the only stakeholder providing that feedback. 'Review' was identified as a theme relating to the need for review after one year.

The theme 'implementation' (D) relates to one code, 'pilot'. Participants identified the need to pilot a new idea by identifying one course with a team that is willing to change before embarking on a whole of Faculty/University rollout. We can equate this theme with the theme of 'limited time' from phase one.

The final theme is 'strategic direction and fit' (E). The code of 'alignment' relates to the strategic alignment and alignment of unit intended learning outcomes (ILOs) to course learning outcomes (CLOs) or competencies. 'Context' relates to contextualisation of AoL to professional courses. 'Policies

and regulations' relate to university policies and regulations that may impede the practice of AoL. 'Strategy' both as having an agenda and no vision for a strategy are barriers to AoL. This theme was also not an outcome of phase one.

Bringing the findings from the two phases together

As shown, some of the findings from the scoping review were confirmed by the data collected from academic participants in the AoL action learning workshops. Examples include cultural change (phase 1) and change in practice (phase 2), limited time and resources (phase 1) consistent with time and money (phase 2). The final themes produced from the workshop data analysis that were not previously identified in the literature were (A) change and conflicts, (B) curriculum and components and (E) strategic direction and fit. Specifically, the individual codes within each of the themes that were derived from the participants that had not been raised previously by the literature in the scoping review phase included resistance, curriculum complexity, annual review and inconsistent use of terminology. Fortunately, academic staff were willing to generate and share solutions to each of the barriers posed. Logically, this led to the development of the wish lists items (generated by the end-user) to support the achievement of AoL in the higher education context.

Top 10 professional development wish list (participant identified solutions)

At each workshop (see Table 2), participants were invited to prepare a professional development wish list. At the conclusion of each workshop, each individual's professional development wish list items were collated and synthesised and shared with all the workshop participants. As the culminating activity in each action workshop, it provided a useful summary for workshop participants and some practical actions for the participants to take into their future practice or back to their institution. The records were kept from each of the five national action learning workshops and later combined to identify the essential elements that the academics from all five workshops most commonly shared and believed must be considered for AoL to be upheld. The final compiled list is provided below;

1. AoL Professional Development Workshops,
2. Clear/Shared understanding of AoL in teaching team,
3. Teaching Assistance,
4. Consistent ILOs,
5. Curriculum mapping & design support,
6. Peer review of ILOs and assessment,
7. Time,
8. Resources,
9. Clear information about the AoL process provided to ALL staff,
10. Technology to support Curriculum design,
11. Dedicated AoL support staff,

12. AoL online course in online platform/ learning management system,
13. Simple and systematic approach to AoL (who, when, what, how),
14. Include AoL associated tasks in workload models,
15. Include employability attributes into CLO.

NB: While not included as formal research (ethics was closed prior), the 15 wish list items (derived by workshop participants in 2015/2016) were tested for relevance with a group of academics at UTAS on 26 November 2019. At this workshop, the UTAS academics were able to confirm the relevance of the suggestions raised in 2016/2017 to the 2019/2020 higher education context.

A comparison of the observations and recommendations from the scoping review (phase 1) with the themes that emerged from the workshop participant barriers and their wish list items (both phase 2) shows there is repetition across all three data sources. Combined, they provide our university leaders and learning and teaching units with thoughtful insights and useful strategies for embedding quality enhancement practice in their institutions.

Limitations

Most academics who attended the AoL workshops may have already had an interest or valued the importance of upholding the quality of learning and teaching in higher education. Therefore, the workshop data may be representative of a group of academics who already place a higher value on AoL. The research should be repeated with more academics to confirm if the findings are relevant to the wider higher education sector. It would also be advisable to explore the AoL and quality enhancement professional development needs of individuals at different stages of their academic career.

5. Conclusions and recommendations

This paper describes how a scoping review, in conjunction with discussion and reflection between the members of a CoP and exploration with educators in action workshops, has informed 360QP's philosophical stance and evolution. The paper's significance is two-fold as it provides the 360QP tool, as well as a research method that can be utilised to recreate or strengthen the tool. At its heart, 360QP is a grassroots approach to quality enhancement aimed at improving learning and teaching at the critical intersection of learner and teacher. It originated from an organically formed CoP of academic teachers and professional staff with the mutual goal of improving their teaching practice through sharing quality enhancement tools and resources. A collegial approach of dialogue and discussion (stewardship), building leadership capacity and purposefully acting to support cultural change is emphasised by the data and supported by the literature. Workshop participants benefited from AoL professional development and shared 15 recommendations for upholding AoL in the higher

education sector. This research confirms that 360QP is an innovative, practical evidence-based systematic approach to AoL that may be applied from unit to course level. It could be refined, adapted and extended and ultimately incorporated into an institutions' course management system. As with all innovation, a focus on advocacy, cultural change and distributed leadership will assist with implementation efforts. Specifically, the professional development of academics to support implementation would be highly recommended.

Author Contributions

Conceptualisation, RN, JK, AMW; Methodology, RN, JK; formal analysis, RN, LE; data curation RN, LE; writing—original draft preparation, RN, AMW, JK, LE; writing—review and editing RN, AMW, JK, LE; project administration, RN; funding acquisition, RN, JK.

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