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Embedding Graduate Attributes into the Undergraduate Curriculum: Reflection and Actions

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ABSTRACT

Gibbs' (1988) reflective cycle is used as a framework to explore the institutional experience of embedding new graduate attributes (GAs) as part of a major refocus of all the undergraduate courses at Leeds Beckett University. One of the key components of this curricular refocus was the initial conceptualisation and embedding of three new graduate attributes.

The University's three GAs are

- i) having a global outlook
- ii) being enterprising and
- iii) being digitally literate.

This paper focuses on the seven main interventions which were used to embed and foster their delivery in the refocused curriculum. The GAs run through each level of every UG course and prepare students for work and life through a variety of embedded intracurricular module-based, credit-bearing activities.

This reflective paper concentrates on the intra-module *core* curricular activity manifested by the GAs embedded in course and module learning outcomes and not students' extracurricular activity even though this can be regarded as strengthening skills for life and the workplace (Bowden, Hart, King, Trigwell, & Watts, 2000). A combination of personal and colleagues' reflections, evidence from surveys and analysis of actions are highlighted using Gibbs' (1988) cycle as a framework to explore the process in a systematic way and assist in the illustration and analysis of some of our key interventions. This reflective account considers our successes (resources and building the digital literacy GA) and some of the surprising benefits (communities of practice) of this initiative. The paper also uses Hounsell's (2011) and Barrie's (2006) frameworks to deconstruct the curriculum change experience and offers structured reflection on some of the lessons learnt from the challenges, e.g. tight timescales, staff ownership and constructive alignment (Biggs, 1996).

Key future actions are noted; specifically the engagement of staff and students to address application/tailoring to disciplines and their specific course design issues.

Keywords: curriculum; graduate attributes; reflective practice; reflective cycle; undergraduate curriculum

Introduction

Graduate attributes (GA) are defined as "the qualities, skills and understandings a university community agrees its students should develop during their time with the institution" (Bowden et al. in Barrie, 2003 p. 262) Bowden et al. (2000) have described how attributes go beyond the

disciplinary expertise or technical knowledge that traditionally forms the core of most university courses and are qualities that can also prepare graduates to be good citizens and prepare them for an unknown future. In Australian Higher Education, GAs moved from being an aspirational tool to becoming a core curricular tool in the early 1990s. Whilst there remains evidence of 'patchy' embedding and poor alignment which have led to some superficiality in the approach, they continue to be used widely (Barrie, Hughes, & Smith, 2009) and continue to grow and develop to underpin coherent, relevant and academically-sound curricular design. The Australian approach to GAs has been adopted as a curricular tool (albeit in a more piecemeal way) in some UK universities because, similarly, students need to be equipped with life skills and perspectives which are valued by employers and wider society (Lowden, Hall, Elliot, & Lewin, 2011).

Some UK universities use named GAs which encompass generic skills and behaviours to support this process in a visible way. In both Australia and the UK, there has been concern that lack of "conceptual clarity" (Green, Hammer, & Star, 2009) and the fragmented embedding of the GAs (Sumsion & Goodfellow, 2004) impacts negatively on the success of the approach *and* the understanding and experience of staff and students involved. In contrast, where there is a clear recognition that GAs (albeit different ones which reflect each different institution's individual ethos for learning) will be embedded across the *whole* University and are supported by a

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learning and teaching strategy which fosters their development, the outcome is improved and the overall student experience and achievement are better (Green et al., 2009).

This paper explores how staff in the Centre for Learning and Teaching at Leeds Beckett University, charged with embedding the delivery of the GAs, reflected with colleagues at different points in the timeline on some of the factors that impacted on the experience of embedding the GAs across our entire undergraduate (UG) curriculum.

Background to our curriculum refocus and the formulation of the Graduate Attributes

Choosing the Graduate Attributes

Leeds Beckett attributes were chosen after a detailed consultation with University staff and students, governors, alumni and employers. Focus groups and workshops with different stakeholders catalysed a series of skills and qualities regarded as important for a graduate. Content analysis (Silverman, 2000) generated categories and themes from which the attributes were derived. A literature review explored wide-ranging research on citizenship, graduate employability and sustainable education (Lowden et al., 2011) and (Haigh & Clifford, 2010) which contextualised the need to prepare all graduates more effectively for work and life.

Our attributes – *being enterprising*, *having a global outlook* and *being digitally literate* – were informed by sector need, contextualised literature, and institutional academic and strategic strengths. Global Outlook and Enterprise attributes tapped, in part, into a culture based around communities of practice to facilitate learning and teaching (Wenger, 1998) existing academic expertise, a legacy from our Centre for Excellence in Teaching and Learning for enterprise (Smith & Price, 2011) and a strong history of academic work, research, and curricular activity on cross cultural awareness (Killick, 2012). The Global Outlook attribute specifically emerged from a longstanding, approach to internationalising the curriculum (Jones & Killick, 2007) and embodied a growing concern that our university should have more than just a primarily UK-centric focus but to seek to prepare our students to meet global challenges and be more inclusive in their thinking. In contrast, building digital literacy was ‘brand new’ and work had to be catalysed to draw together new communities of practice from staff in different roles (e.g. learning technologists and librarians). Existing good practice in digital literacy (JISC, 2014) and broader research which indicated the need to move towards digitally competent graduates (Beetham, McGill, & Littlejohn, 2009) informed our thinking.

Using a Gibbs’ cycle to structure reflective thinking

Being reflective builds developmental insight and focuses on the capacity to pay critical attention to the practical values and theories that inform everyday actions and leads to developmental insight (Bolton, 2010). A key rationale for reflective practice is that the experience (in this case our UG curricular refocus) alone does not lead to learning but that the deliberate systematic thinking about the issues that emerged from the experience is essential for learning (Loughran, 2002).

Gibbs’ (1988) reflective cycle was one framework used to help deconstruct the experiences relating to the GA embedding and to structure personal and wider reflective thinking.

Gibbs’ cycle is based on Kolb’s experiential learning model. Gibbs’ own expanded six stage cycle (encompassing Description, Feelings, Evaluation, Analysis, Conclusion and Action Plan) can be used for a variety of purposes from challenging assumptions about practice and thinking, to linking theory to practice and, as in this case, to promote self and wider improvement in terms of project management and the reasoning behind follow-up action (Forrest, 2008). Gibbs’ model acknowledges that personal feelings influence the situation at the time and your reflection on it. That said, Gibbs’ model doesn’t refer to the value of critical thinking or take into account assumptions that the individual reflector may hold about the experience or, indeed, the need to look objectively at different perspectives. It can therefore feel like a model that encourages a rather superficial level of reflection. In light of this, we considered other models to complement the Gibbs’ cycle and inform our thinking. Atkins and Murphy’s (1993) model takes a more critical stance and focuses on the relevance of the knowledge and “uncomfortable” learning which may stem from analysis of a given situation and Johns’ (2000) model emphasises the consideration of internal and external decision making on actions.

The work

Seven key interventions were identified from the project plan as taking place during our curriculum refocus. These milestones for progress began with the original generation of the GAs (Intervention 1) through to the fostering of networks (Intervention 7) to strengthen the understanding and sustainability of the GAs in our curriculum.

Description: what we did and how we did it

Intervention 1: (Generation of the GAs): Our GAs were generated through a range of staff, student and stakeholder meetings and focus groups.

Intervention 2: (Consultation about the GAs): Once agreed, definitions were developed by three working groups informed by sector practice and research.

Intervention 3: (Writing the Course Principles): A working group of academic Teacher Fellows generated evidence-informed course design principles to which the embedding and the delivery of GAs were linked.

Intervention 4: (Developing Digital Literacy from scratch): The embedding of digital literacy was a new collaborative work stream. A Change Academy programme run by the HEA supported the institutional conceptualisation, roll-out and delivery strategies for the GAs.

Intervention 5: (Communities of Practice for each GA): Key academic leads were identified and tasked with strengthening existing 'communities of practice' from interested academic and learning support staff to facilitate the generation of written academic guidance.

Intervention 6: (Embedding the GAs in learning outcomes): The embedding of GAs in the course design and its associated course and module documentation (i.e. in the learning outcomes, aligned assessment and activities).

Intervention 7: (Strengthening staff development): In addition, internal and external networks were fostered through new and existing GA related projects to strengthen the roll-out and provide enhanced credibility with the underpinning of the attributes within the sector. For example, i) internal staff development events: drop-in sessions and facilitated workshops, ii) external dissemination via conference presentations and journals and iii) new staff fora (e.g. the learning technologists' forum, and the new Enterprise and Innovation Academy).

Figure 1: Outline of Interventions for GA embedding

Feelings: how did the process and experience feel?

To a certain extent, much of the activity relating to the curriculum refocus was beyond the control of the Centre for Learning and Teaching as the timeline for the intervention and the curriculum framework itself had been instigated before the Centre was established. However, individuals and course teams began to use the Centre as a hub for academic support and resource particularly in relation to course design. The year-long timescale for the GA embedding meant staff had many questions which were anxiety-provoking and needed full consideration. Once communities of practice had formed and the written staff guidance including the new course design principles had been completed, then dissemination was easier. Stimulating discussions about the relevance and delivery of the attributes, spawned a cycle of innovative ideas and dissemination.

Later in the process (a year into the new curriculum delivery) it was revealed via an independent report of staff and students (HEA, 2013) that there was poor visibility of the GAs in the assessments and in the writing of the module learning outcomes. This also exposed a poor understanding from students *and* staff about the GA meaning and their relevance and their discipline applicability. There was a sense we had failed these staff in not supporting them more effectively to contextualise each GA for their own courses and made us reflect on how we could enhance the quality of our Centre's work with staff in terms of supporting their teaching, delivery and promotion of the GAs to their students.

Evaluation: how well did it go?

The range of reflective frameworks informed our team discussion about the positive and more troubling issues that emerged from the interventions explicitly asking 'how is it going?' and recognising that many benefits and changes had occurred, of which some were surprising.

A reflective evaluation of the interventions is outlined below.

Evaluating the less successful elements of the process (interventions 1, 2, 6 and 7)

Some interventions were regarded by students and staff as only partially successful. The independent review of the GA embedding and its associated activity of staff and students (via interviews and focus groups) (HEA, 2012; HEA 2013; HEA 2014) after a year revealed patchy delivery and poor visibility of the GAs. Understandably, staff had been focused on the *process* of approval rather than internalising the meaning and value of the GAs and thinking deeply about how they could be delivered. This was symptomatic of the tight timescale. There were also issues with the initial generation and definitions of the GAs. Some staff felt the GAs had been 'parachuted in' and, there remained some poor understanding of the GAs in some areas: i) mainly in their application in different disciplines and ii) in the sort of activities and assessment methods that could be facilitated within the courses to help build and support their development with the students. Some staff development which enhanced discussion through course-specific sharing of practice, fostering ownership and clarity of the conceptualisation of specific GAs for modules and courses were very successful. Part of the core work to embed the GAs into the summative assessments ensuring that that all courses submitted for approval had course and module learning outcomes which included key wording to elucidate each GA.

University guidance stated that each GA had to be embedded at least once at every academic level. In practice, most staff were able to embed the GAs more frequently than this in multiple modules at each level. However, it became clear as formative developmental feedback on course documents progressed, that staff understanding that the module and course learning outcomes had to explicitly include the GAs was poorly understood and only patchily being implemented. Tailored training was then implemented in the faculties and was structured around specific application of the GAs to courses and this was welcomed, and regarded as the most successful.

Despite some earlier, detailed institutional work on embedding ideas about internationalisation and global perspectives in course and module learning outcomes (Jones & Killick, 2013), academic staff struggled with embedding the breadth of the enterprise and digital literacy GAs into the wording for the learning outcomes. The actual embedding of digital literacy (a new concept for staff) was particularly difficult and we strengthened our staff development (Intervention 7) by increasing the staff support workshops on digital

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literacy, offering tailored support to courses and augmenting the written guidance for all the GAs. Latterly, our written guidance has been praised, internal staff development has expanded, external and internal networks to strengthen our GA delivery have been fostered and related publications have increased.

Evaluating the successful elements of the process (interventions 3, 4, 5)

A positive by-product of the rather mechanistic process of writing the GAs into the learning outcomes and the course documents, was the identification of the need to counteract this by strengthening staff guidance and catalysing a more vibrant approach to staff development. As a result, a series of short-life working groups with existing communities of practice (Wenger, 1998) were established (Intervention 5) with named leads to write guidance documents, course principles (Intervention 3) and specific staff and student guidance (e.g. *A Little Book of Graduate Attributes*). While these guidance documents took longer to write, edit and produce than expected, lively knowledgeable groupings were set up which ultimately generated well-used, evidence-informed resources to enhance the consistency of practice across the University and which facilitated an environment for discussion about GAs.

In terms of the digital literacy GA specifically, many universities have successfully used digital literacy development models (Sharpe & Beetham, 2010) to raise awareness at strategic level, engage stakeholders in rolling out digital literacies and to develop a vision which promotes an institutional 'digital' culture (Beetham et al., 2009; Bent & Stubbings, 2011). Collaboration and ownership from staff and students have been indicated as key to this (JISC, 2014). After further discussion, about progressing the digital literacy roll-out more rapidly and coherently, we registered for a Higher Education Academy Change project (Intervention 4). This scheme provided facilitators to support a staff group (some with strategic responsibility) who were pivotal for the vision and subsequent delivery of digital literacy for the students. Strategies were developed to encourage the conceptualisation of the definitions and begin to generate shared understanding about how digital literacy could be tailored for students in different courses. This was a successful intervention which enhanced understanding of what digital literacy meant for students, strengthened ownership at strategic level and generated new networks and resources for staff and students in the faculties (e.g. a forum for learning technologists and a network of student digital champions).

Analysis (what sense can you make?)

We continued to review the impact of the GA embedding via surveys to staff and students and, as a result, devised a series of interventions to address emergent concerns. These focused around strengthening practice sharing and dealing directly with the individual academic staff based in the faculties and teaching on the courses. We strengthened our staff communities of practice (clustered around the academics' pedagogic and research interests for each GA and began actively targeting the faculty structures more. Tailored help with course development supported staff to i) write honed learning outcomes, ii) constructively align formative and summative assessments and iii) build on their understandings of the applicability of the attributes for their own disciplines.

To a certain extent, even two years later, the 'official' course approval documentation often bears little resemblance to practice where variable student experiences revealed in module evaluations and patchy understanding from students about the purpose and relevance of the GAs still exist.

There is still much work to be done to make the GAs more visible and comprehensible. Engaging students in understanding the relevance of their course activities to their future employment has an impact on their retention and satisfaction levels (Kuh, Kinzie, Schuh, & Whitt, 2005). Students can refine their GA-related life skills and behaviours in a range of different learning and social settings (Barrie, 2006) and this allows them to prepare more effectively for job interviews and placements and articulate their GA-related life skills more confidently.

Staff confidence about the GAs is better (queries have dropped in number) particularly when they can link GAs specifically to their disciplines and their own students' potential career pathways. An increase in student numbers has meant an increase in part-time staff and this has made it a challenge to ensure all staff have a shared understanding of GA integration within and between modules at different levels. Multiple staff on limited hours make embedding more challenging (Kimber, 2003; Kift, 2003) and unless there is a strong communication plan from the course leader to module teams there is a danger that the students perceive their course is badly organised, fragmented and not coherent.

Further reflection on the research and discussions with colleagues have crystallised an understanding of the complexities of the project and its outcomes. Research shows that interventions of this nature take time to embed and can be slow to get off the ground (Green et al., 2009). Conceptual clarity, discipline adaptation and staff and student understanding of each attribute is essential, as Sewell and Dacre Pool (2010) demonstrated in their exploration of the institutional embedding of enterprise and employability in HE curricula. In addition, embedding GAs can be extremely hard if institutional strategies and their associated learning and teaching policies don't work hand in hand to support institutional cultural change and to counteract the effect of the espoused curricula in the documentation bearing no relation to the reality of the teaching and learning activity in the classroom (Bath, Smith, Stein, & Swann, 2004). Consideration of these issues are addressed as part of the actions.

Conclusion and Actions

GAs are now fully embedded across our UG curriculum documentation and there is an improving trajectory of visibility and clarity around this GA agenda (Leeds Beckett University, 2015). A collection of clearly branded, accessible resources for staff (booklets, a

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webpage, videos and case studies) about the GAs is now available. Student guidance has been strengthened via the *Little Book of Graduate Attributes* (Leeds Beckett University, 2015). There is also a thriving forum of learning technologists and academic librarians involved in pan-University groups for digital and information literacy. In addition, new links with external stakeholders and projects have been established and conference presentations have promoted our institutional curricular activity. The reflective review of successes and action planning are integral to Gibbs' cycle (1988) underpinning our consideration of challenges and the required interventions taking into account the necessity for internal and external decisions and processes (Johns, 2000) that had to be implemented by a deadline and considering the how 'uncomfortable' reflection can be (Atkins & Murphy, 1993).

Challenges

There have been a range of different challenges but currently they primarily focus around i) the need to contextualise GAs to disciplines and ii) to enhance the sense that they were core to a holistic view of learning.

The embedding of the GAs took place over 12-18 months which, in reality, meant there was little time for the academic staff to fully understand the GAs, contextualise *and* apply what each meant for them and their discipline, *and* really get to grips with embedding suitable student activities and levelled assessment tasks for each GA. This was manifested in the writing of levelled course and module learning outcomes which did not always explicitly highlight the GAs and poorly aligned assessment methods which were not always realistic or appropriate. This mismatch between official framework documentation requirements and the activities in module handbooks, assessment types has also been noted as an issue in the sector (Fleming, Donovan, Beer, & Clark 2011).

In addition, there was an ongoing need to think of ways, to maintain the awareness of students and staff that the GAs underpin broad undergraduate education and contribute to the students' preparation for life and employability and were not just part of a mechanistic, course approval exercise. The introduction of staff development sessions went some way to discussing the realisation that there can be both a perceived tension and natural affinity between the GAs for education and life skills, a broad holistic higher education and the skills and attributes for successful graduate employability. At this stage, the focus on more problem-based learning to build GA-related skills was highlighted as this has been shown to be an effective way to strengthen real-life learning (Brew, 2003; Moalosi, Tunde Oladarin, & Uziak, 2012).

This approach was informed by students through independently-facilitated focus groups (Leeds Metropolitan University, 2013) that in some courses, although the activities they did were interesting and subject appropriate, they did not always appreciate the relevance of them for building skills-for-life.

Action plan

How do we deal effectively with these challenges? Just because the GAs are fully embedded in our UG course documents does not mean that work should stop. While it is clear from the research that holistic, strategic embedding of GAs is the best model to enhance institutional change (Green et al., 2009) and consistent practice, it is obvious that, despite best efforts at full-scale embedding, there still remains considerable work to do.

Curricular design is cyclical. It is dependent, not just on deadlines for Periodic Review for quality assurance purposes, but on enhancement, reflection and evaluation of the reality, what works and how we can change provision for the better (Gibbs, 1988). It is necessary to recognise, as did Green et al (2009) that embedding and strengthening the GAs can be hard and takes time to become part of the 'normal' teaching and learning culture.

There are three key actions for the future in relation to strengthening our work in this area. These can be themed around a focus on i) learning and teaching activity ii) disciplinary challenges iii) increasing the involvement and engagement of the students in curriculum change.

Barrie's (2004) four categories for understanding how academics target GAs in their courses was a starting point for considering how to address our institutional challenges.

Hounsell (2011) suggested that Barrie's model for embedding GAs (*precursory, complementary, enabling and translating GAs*) can be used to differentiate between GAs in terms of: (i) whether they are developed in or parallel to the formal curricula; (ii) whether they evolve through immersion or need to be directly taught; (iii) whether some GAs can/cannot or should/should not be formally assessed; and (iv) what the respective responsibilities of learners and their teachers are, for each GA espoused? This model was useful for us and catalysed some reflective thinking about what we *had done* and *hadn't done* and complements the personal reflection exposed by consideration of our activity in relation to Gibbs' cycle. The GAs were embedded into our UG curricula and were integral to the learning process and the experience of doing an undergraduate degree at the University. But Barrie's model (2004) made us specifically ask questions, as part of our ongoing reflection, about what has not *explicitly been* considered during discussion.

- i) whether they are also sufficiently visible in our extracurricular/'hidden' curricular activities,
- ii) whether our approach of directly fostering them explicitly could be counterbalanced by examination of different immersive approaches through our staff development programme,
- iii) whether more specific approaches to learning and teaching in classroom activities and in our summative assessment of the GAs should be addressed,
- iv) how students perceive GAs as they progress through their course and how reflecting critically on their own development could enhance their reflective and metacognitive learning strategies.

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Key action one: learning and teaching activity: particularly assessment

Our recent survey (Leeds Beckett University, 2015) indicated there is still work to do on improving how staff build a really 'living curriculum' (Bath et al., 2004) and how they use innovative activities to build the GAs to create relevant activities and constructively aligned, real world, summative assessment tasks. Lian's (2012) work explains how a more reflective dialogic process helps us understand that GAs concern themselves with educating students to live effectively in a knowledge society and that focusing on the *process* of education rather than content naturally build the skills and behaviours aligned to the successful acquisition of the GAs. For example, whole-course problem based learning, critical reflection, group working etc.

Barrie (2003) has shown that academic staff do not always have a shared understanding of the teaching and learning processes and how they link to the effective delivery of GAs and meeting the learning outcomes for assessed work in an aligned curriculum (Biggs, 1996). This has relevance for us, allowing staff to be better supported to make their curricula more relevant for the students – perhaps in extending the adoption of educational approaches such as problem based learning (Brew, 2003) and experiential learning (Rae, 2006) to help to improve the delivery visibility and articulation of the GAs. In addition, Bath et al (2004) discuss the value of using action learning using staff *and* students to facilitate discussion, solve curricular problems and build living relevant curricula.

Further actions are still required to address this which will illuminate which GAs pose the greatest assessment challenges for staff and the best methods to support them.

Key action two: addressing our disciplinary and professional challenges

It is clear that each disciplinary/subject group needs to have ownership of the GAs and know best how to apply them in their courses. Barrie (2004) considered the variability in contribution of discipline backgrounds to conceptions of GAs and their implications.

Intuitively, and indeed reflected in an early report on our institutional activity (HEA, 2012), it appears our professionally linked courses have had less difficulty embedding GAs in the curricula and in the modules (perhaps because they are used to writing specific levelled learning outcomes to fit professional criteria and skill requirements) and it is important to learn what adaptations might be necessary in fields which are not directly linked to a particular profession or vocational grouping and how they can best be supported to enhance ownership, shared understanding and innovative learning and teaching activities in their courses. Further discussion needs to be undertaken to explore if some disciplines at Leeds Beckett have more difficulty embedding and achieving the GAs than others. This will enable the provision of tailored support.

Key action three: working collaboratively with students and staff

Graduates need to be prepared for practice in increasingly diverse workplaces and a fast changing society and be prepared to take on responsibility as befits work and life roles. To support this, Hounsell (2011) asked for greater exploration of the different staff and student responsibilities for each GA espoused, clearly indicating that responsibility weighting at different levels and in different disciplines will vary. Staff must be able to support employers to offer realistic and relevant experiences that demand the integration and practice of these attributes. Summative assessment must mirror what is likely to be required in the workplace and what assumptions can reasonably be made about transferability of such GAs from academic to workplace settings.

Crosthwaite, Cameron, Lant, and Litster (2006) describe how student satisfaction increases with meaningful consultation prior to and during the embedding of GAs in a programme. Collaborating actively to engage the students with the development and embedding of the GAs is essential and allows them to internalise and, more importantly, articulate them to future employers. Our *Little Book of Graduate Attributes* (Leeds Beckett University, 2015) containing i) case studies, ii) current student and graduates' stories and iii) specific advice for students on how to articulate the GAs to future employers, helps inform how our students can shape their futures. We consulted with the students about the GAs and the skills and behaviours they felt they needed to build to contribute as a graduate in wider society (Leeds Metropolitan University, 2013) but need to ensure we continue to engage with students at course level (particularly in the non-professional courses) in the future to inform both their and our understanding of their delivery.

The future

These personal reflections were informed by evidence and shared with colleagues to triangulate our approach to curricular change. Themes for our action in the next year have been identified based on our emergent challenges particularly in strengthening assessment relevance and specificity and continuing to increase GA visibility through new resources, tracking the GAs as a pathway through student and staff facing course documentation and a more structured introduction to them in induction. There is still work to be done based on the lessons learnt, and we are looking to the start of the new Gibbs' cycle to reflect again on our practice and continue our commitment to strengthen our institutional GAs.

Biography

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