Moving Constructive Alignment Beyond The Curriculum: Embedding Mental Health And Wellbeing Into The UK Engineering Student Experience

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ABSTRACT

This paper addresses the tricky question of how the Engineering Curriculum can be better designed so as to nurture and improve the mental health of university engineering students. Since the end of the Pandemic, the UK has seen an increase in the numbers of young people aged 18-25 self-reporting mental health problems (Young Minds, 2023). Taking a wider perspective, there has been a rise of 450% in the numbers of young people informing UCAS that they have a mental health problem over the last decade (NUS, 2022). Yet, Engineering Education has the lowest rate of self-declared mental health problems on application, with 1.4% of engineering

students giving prior notice of mental health challenges compared with 3.7% of all applicants (UCAS, 2023).

In acknowledging that lower pre-reporting rates of mental health challenges are unlikely to reflect lower rates of mental illness or unwellness amongst our students, one of the driving principles of this project is to address the higher-than-average rates of attrition and failure amongst engineering students. Furthermore, in planning how the curriculum might be further enhanced so as to promote mental health, the need to develop 'authentic' engineering education experiences (Chang et. al., 2010) is acknowledged to be central to student success.

In sum, in discussing the importance of embedding mental health into the engineering curriculum, this paper contributes to academic debates around the engineering student experience. In doing so it is argued that there is a real need to extend the concept of constructive alignment beyond the curriculum and across all aspects of the student learning journey.

1. INTRODUCTION AND BACKGROUND

Set within one of the UK's largest engineering and applied science faculties in the UK, the Positive Start Project grew out of a need to address the surge in mental health problems evident in the student body following the pandemic (Smith, 2022). In seeking to enhance wellbeing across the whole faculty, the project aims to build a unique Academic Community Practice that incorporates all students and colleagues.

The first step in the project was to equip our early career academic community with the individual skills and competencies needed to build and maintain their own mental health, and in doing so to better prepare them to meet the ever-changing needs of the student body. Hence a series of face-to-face training and support events were provided for our newer academic and graduate teaching colleagues. These events used the Clifton Strengths Tool (Gallup, 2022) to provide colleagues with an opportunity to identify their individual strengths and to consider how they might best use such strengths to enhance student wellbeing, thereby improving the overall student experience.

2. FROM FOCUSING ON PROFESSIONAL HEALTH TO EMBEDDING CONSTRUCTIVE ALIGNMENT

WMG is a unique department within the University of Warwick in that it represents a leading international role model for successful collaboration between academic and the public and private sectors. Driving innovation in science, technology and engineering, the faculty has long had a strong emphasis on scholarship and constructive alignment across research, teaching and wider society. Yet, like all higher education institutions globally, the Pandemic had a marked impact on how we work. For a period of more than two years colleagues and students alike found themselves in an unprecedented situation. Quickly having to adapt longstanding, usual highly interactive and often work-based pedagogies to a 100% virtual, and then later a hybrid form, resulted in a pressured environment in which colleagues and students quickly

became disconnected from each other and from the institution itself. With the usual 'on-hand' face-to-face academic expertise suddenly being only available virtually, newer colleagues and students alike struggled to adapt. Students doing their 'A' levels also became isolated to the point that those moving into apprenticeships struggled to know how to work as part of a team.

Although the Pandemic has now officially ended, the fact that for over two years life was anything but 'normal' has meant, that for many, individual wellbeing suffered. Professional health was put aside and an emphasis on 'getting through' the curricular became the norm for colleagues and students alike. Indeed, for both groups the mid-to-longer term impact that the Pandemic has had on mental and social wellbeing is only just beginning to become apparent. Media reports suggest a general increase in depression and anxiety across the Academy (Economist, 2021; González-Betancor & Dorta-González, 2020; Evans at al., 2018) including professional support colleagues as well as more senior academics (Morrish, 2019; Loissel, 2020).

Within this complex and complicated picture, the need for constructive alignment to reach well beyond the curriculum and to encompass students' previous experiences, current circumstances and future ambitions and expectations has become paramount. In acknowledging that simply focusing on 'academic achievement' is no longer sufficient to promote a positive student experience, a number of proactive steps have been taken to enhance both the student and staff experience.

3. CONSTRUCTIVELY ALIGNING THE STUDENT LEARNING JOURNEY TO ENHANCE A SENSE OF BELONGING

The need to make sure that the student learning journey encompasses far more than lectures and academic grades has meant a number of initiatives are underway. Five of these are of particular value in terms of enhancing the student experience. These are:

3.1 Evaluation of the Student Learning Journey

With over 2,000 students and just under 1,000 undergraduates (the vast majority of whom are engineering or applied science students), a critical examination of the student learning journey on every single course and programme is underway.

Starting with the undergraduate programmes, a series of small focus groups with students and individual interviews with teachers has begun to identify a number of previously hidden pedagogical, social and practical challenges. Such challenges differ from cohort to cohort, course to course and programme to programme. However, looking holistically across our academic portfolio it has become increasingly apparent that student concerns reach far beyond their academic grade; undergraduates in particular are concerned about the sustainability of their course, their future career and place in society.

Additionally, other more immediate issues such as the need for students to be supported in building social groups and helped to work successfully together in groups have been identified as particularly important. As each individual course is evaluated, a number of bespoke recommendations for change are made. Teaching teams are brought together and made aware of their students' perspective. From here plans for transformative educational change are put in place and enacted.

3.2 Revising & Redesigning the Curriculum

At postgraduate level in particular, there has been a long-recognised need to revise how modules are taught. The need to move from 10 credit to 15 credit modules has seen a complete revision and redesign of the curriculum. This is being accompanied by a change in the timetabling. Previously, modules were taught in week-long blocks. This is in the process of being changed, and from September 2023 a four-week long learning 'block' approach to each module will be introduced in half of our postgraduate programmes. The remaining modules are in the process of updating and the new approach will be introduced in September 2024. The effectiveness of this in terms of learning and the student experience has yet to be discovered, although in co-creating the new approach, student feedback thus far is positive.

3.3. Introducing the 'Student Hub'

One of the most impactful changes to WMG is expected to be the introduction of the new 'Student Hub'. With work just starting, a bespoke space, developed and designed for students (and co-created with students), will bring together all aspects of individual and academic support. Additionally, other student social spaces have been introduced in a number of the faculty buildings, providing students with common work-and-rest areas.

3.4 Supporting Diversity Amongst Learners

Changes in how disabled and neuro-diverse students, particularly those enrolled on apprenticeships, have been made to proactively put in place adjustments and make declaring a disability, learning difficulty and / or mental health problems, less complicated.

Supporting individual students and making sure that colleagues are aware of the diverse needs of the student body has resulted in 'flexible constructive alignment'. Rather than expecting students to adapt to the academic requirements of the curriculum, the acknowledgement that the curriculum can be adapted to meet the needs of the students has seen a positive change in how student experience university and thus in academic achievement.

3.5. Promoting Positive Change by Supporting Colleagues

In addition to supporting students, a number of proactive measures and projects are being rolled out to staff. These include:

- **Peer Mentoring**: Using an approach developed by two WMG colleagues, a Peer Mentoring Programme is being piloted across the department. Open to all colleagues to join, either as mentors or mentees, it is anticipated that by constructively aligning the needs of newer colleagues to the skills and insights possessed by more experienced staff, a more positive 'transition' into the organisation will result improved wellbeing for all.

- **Professional Practice in Teaching**: Offered in partnership with WMG'S Education Innovation Group a series of learning and teaching focused workshops are provided to colleagues from across the department. Covering a range of topics from mental health through to teaching difficult subjects, regular interactive meetings provide a safe space for colleagues to exchange thoughts and learn from each other. Additionally, colleagues are given intensive, support to work their way through the Advance HE professional standards. Workshops, writing events and internal networking provide a proactive learning support across the WMG community.

- **Staff Interest & Support Groups:** A number of staff interest-and-support groups have been introduced offering support and advice to those from different demographic groups including Male teaching staff: Female academics: LGBTQUA+ colleagues: Disabled Staff.

- **Promoting Intersectionality in the Staff Body**: An acknowledgement of the benefits that intersectionality brings to the staff body, and hence to the student experience, has seen a number of changes in the recruitment process with colleagues from industry, previously employed on 'sessional contracts' being given permanent contracts. The impact on the 'sense of belonging' and organisational loyalty experienced and exhibited by colleagues as a result of this will hopefully come to fruition over the next few years.

CONCLUSION

In conclusion, this short practice paper has begun to outline some of the actions and activities being brought into effect in WMG, University of Warwick. There is little doubt that we have a long way to go, however, with a focus firmly on embedding constructive alignment to enhance the authentic learning within a positive academic environment an improvement in the wellbeing of colleagues and students is being nurtured. Furthermore, a new academic community of practice is beginning to emerge. One in which students and staff work together to assure continued academic excellence within a strong, mentally healthy, learning community.

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