

Engagement of academic staff with UK-SPEC

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Subject Area: Programme design in Aeronautical and Automotive Engineering

This case study has been developed from data gathered through interviews with the tutor and departmental colleagues.

Background

Motivated by a forthcoming accreditation visit, Jane Horner, Departmental Teaching Co-ordinator in the Department of Aeronautical and Automotive Engineering at Loughborough University, introduced a series of structured departmental meetings to develop the module mappings to the UK Standard for Professional Engineering Competence (UK-SPEC) [1] and in turn encourage colleagues to review module content.

Jane introduced the ideas by *“speaking to people in a staff meeting and explaining to them very briefly what UK-SPEC was and what we wanted them to do.”* All academic staff were sent a summarised version of UK-SPEC with each output statement reduced to a brief sentence. They were asked to map their modules to UK-SPEC and return the mapping to Jane who put them all together using the material given. Staff were then asked to attend an away afternoon where they saw the whole programme mapped out for the first time. There was then a general discussion about the interpretation of UK-SPEC and how the department’s degree programmes should be structured in order for all of the programme learning outcomes to be covered. Staff then separated into thematic teaching groups and reviewed both the mapping and the material covered in their modules. This resulted in revised module mapping and revision of module content to ensure full coverage of the programme learning outcomes.

Rationale

Getting all staff within the department to engage with programme design and the UK-SPEC required both an efficient way of capturing the module mapping information (to satisfy the accreditation panel) and an approach which supported staff in reviewing module content. Jane felt that asking programme directors to map their own programmes would result in minimal engagement across the team as most staff would not be involved: *“what we’re trying to get is shared ownership.”* Jane had previously run other activities with department staff along the *“lock everyone in a room”* line and a similar approach was adopted again, with an away afternoon being used as a focal point for activities and tasks: *“they don’t see that as a strange way of working, we’ve done several things that way, we tell them what they’re supposed to do, sit them in a room, someone wanders round and helps them and they can go when they’ve finished.”*

As an experienced member of accreditation panels, Jane had seen programme maps which *“didn’t make sense”* put together by individuals who had not *“looked at it and said is this a good plan?”* The desired impact was for all staff to critically review their module specifications in terms of both the UK-SPEC outcomes and the language used to describe the intended learning outcomes. Jane also saw this as an opportunity to raise the awareness of level descriptors and the need to distinguish between MSc/MEng and BEng outcomes.

By getting all staff involved in the mapping of the outcomes, it was hoped that staff teams would be able to identify areas of strength in the programmes and opportunities to improve the balance of activities and assessments within them: *“the student experience is enhanced if the programme has a better balance of activities.”*

Tutor perspective

There was a lot of preparation needed in advance of the away afternoon so that colleagues could make the most of the time allocated. Structured activities and tasks were devised and allocated to individuals both in advance of and during the session. In particular, Jane worked with course directors prior to the session so that they *“could tell other people what it [UK-SPEC] meant.”*

Jane saw this approach as an opportunity to try to *“give people ownership of the whole programme.”* Also, by seeing the programme map, it was hoped that teaching staff would appreciate that their modules are part of a whole: *“This was really the first time we confronted anybody with the fact that they’re contributing to a whole.”* With all colleagues together at the away afternoon the opportunity arose for dialogue between people teaching the same materials to discuss how preparatory and follow-on activities could *“all came together.”* The management team was also keen to provide space for reflection on activities and an atmosphere where colleagues felt *“it’s fine to change things.”* Colleagues were encouraged to participate in a safe environment with *“no confrontation, not judgmental, no concept that anybody was right or wrong”*, motivated by a need to increase staff confidence that they actually know what they’re doing: *“I think there’s at times a danger for staff to see language like UK-SPEC and think that isn’t for me. I’m a researcher, I’m not expected to be able to understand or cope with it.”*

Jane was *“pleased we got the message across to take it seriously and the people did take it seriously. And when we were making changes and revising it people were coming back in and talking about it”*. Engagement with the approaches was seen as being linked to a shared departmental belief and pride in the capabilities of its graduates: *“staff here have a strong belief in the competencies a student ought to have, they just wouldn’t perhaps articulate them in UK-SPEC language, but I think if you ask people what they would want an undergraduate in this department to be able to do they would say somebody who is independent, can think on their feet, is capable in many technical areas.”*

Colleague perspective

“Jane’s approach of ‘we’re going to go away and do these things, all of us together’, means that there’s some interaction between staff and they become engaged with it in a way that they simply wouldn’t if you just sent them an email.” The use of away afternoons was also seen as important because *“when people are in that kind of environment, when people sit down as a group, they recognise it as something a bit more important than just doing some paperwork.”* The structure also provided *“some guidance as to what we should be trying to achieve”* and not just *“making sure that we cover UK-SPEC for accreditation purposes.”* For one colleague it was *“really useful to have all the information provided and time allocated to get on and do it.”* The guidance and support provided helped everyone to engage: *“there’s quite a lot under the surface in things like UK-SPEC and [you] need someone to explain what it is that you’re trying to do.”* The efficiency of the structured activities was also helpful to colleagues: *“you can walk away after the away day and you haven’t accumulated lots of work to do, you’ve done it. You’ve managed to do it as a team.”*

The programme director who was interviewed hoped that for *“some people one of the consequences is that they actually think about what they’re teaching slightly differently.”* Having everyone together provided an opportunity to consider a theme like sustainability *“properly”*, colleagues felt less *“isolated”* and were able to reach shared understandings: *“some people have a very different perception of what some of these terms mean and it helps you calibrate.”*

As a result of participating in the activities colleagues reviewed provision within a range of modules to be *“much more thematic and much more explicit in what we do”* in terms of sustainability. For example, a collection of power train modules which are considered to be *“about teaching people how to design engines and how to make measurements with engines and always have been, but if they don’t cover sustainability they are basically hopeless. And what really has come out of it is first of all people looked at what they were doing and said, okay, we need to make sure that we fit what we’re doing to UK-SPEC properly and that we cover sustainability, but then a year or so down the line what we’ve ended up doing, which I’ve led as the programme director, is we’ve done a proper review of our power trains teaching and changed it.”*

Another change highlighted by a programme director was to the assessment of students’ final projects. The outcome of the reflections and revisions was felt to have *“a lot more clarity about what the difference is supposed to be between [BEng and MEng] students.”* Key elements of the approach, including directly linking mark sheets to UK-SPEC outcome statements and providing staff *“prompts”* under each, has been picked up by other programme directors within the department *“because they saw it was useful.”*

Benefits

Following the initial work on the UK-SPEC a rolling programme of reviewing subject areas has been introduced. In one example colleagues *“embraced it very thoroughly, ripped up more or less what they were doing, started again from scratch, and were pleasantly surprised that the students find them better modules, enjoy them more, perform better, and the staff are enjoying more what they’re doing.”*

The discussions were not restricted to learning outcomes and, more widely, considered different levels (*“particularly what’s the difference between BEng in 3rd year and MEng in 4th year”*), giving staff an opportunity to consider *“what are you looking for, what’s your expectations”* and assessment: *“if these are the learning outcomes you’re trying to assess from UK-SPEC how does your piece of coursework meet that?”* The programme team is *“certainly more informed about what they’ve got to do”* and engagement with UK-SPEC is now seen as an ongoing process, a *“living document, it doesn’t just die and come back to life”* every five years.

Reflections

The process was seen as working well within this department *“because you have a small group of people”*, around 30 members of staff. The commitment of senior staff was also seen as important to the success of the approach *“And the fact that you have, for example, Jane, who’s clearly committed to making sure the process works.”* On reflection, Jane commented that *“the staff in charge bought into it from day 1, I think if they had been resistant it would have been impossible [...] I think you could have problems if you have people saying I’m not taking part in that, I’m too busy.”*

The whole approach was seen as successful because colleagues were *“familiar with”* the UK-SPEC *“and were prepared to argue it, to challenge it.”* The whole team was involved in the revisions made to the overall programmes and *“all have ownership of it.”* The initial mapping presented at the away afternoon showed *“holes, one thing that came out of it was we were clearly extremely strong on the technical knowledge underpinning maths and science, underpinning engineering science, which was extremely strong on the map, yet if you moved across into the more practical skills, sustainability in particular, you began to see that we weren’t so good at that.”* This raised questions about the balance of activities across the programmes and modules: *“did we really as staff need to put more engineering science into the programmes?”* and *“where we saw that there were gaps in our benchmarking, we actually asked staff to go away and we did change the content of modules and then remap to reflect it.”*

References

- [1] Engineering Council UK (2008) *UK Standard for Professional Engineering Competence: The Accreditation of Higher Education Programmes*. London: Engineering Council UK.

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