

Minutes of Industrial Advisory Board Meeting – April 2022

Date: 6/4/2022

Time: 14:30 – 16.05

Location: Graduate Centre 2.01 and Teams

Link to recording: https://qmulprod-my.sharepoint.com/:v/g/personal/exx523_qmul_ac_uk/EdsBylCSdZ1HtNZ8f69q5C0BQy3kfs7Pp2TSLQbOvSIGNw

In-person attendees:

Maria Romero-Gonzalez	SEMS
Rob Krams	SEMS
Liz Tanner	SEMS
Jens-Domink Mueller	SEMS
Huasheng Wang	SEMS
Oliver Fenwick	SEMS
Paul Balcombe	SEMS
Vassili Toropov	SEMS
Pash Selopal	QMUL
Danielle de Villiers	MatOrtho
Martin Muir	Airbus
Carolyn Small	Arconic
Chris Stevens	NGF
Phil Jackson	Lucideon
Su Varma	NSG + SEMS
Tom Dowden	FormFormForm Ltd
Matthew Tickle	TICKLE Technical

Online Attendees:

Zulshan Mahmood	Ford
Phil Kennedy	SEMS + Nanoforce Ltd.
Joe Hallett	Birla Carbon
Markys Cain	Electrosciences Ltd.
Douglas Watson	Weir
Paolo Bianco	Airbus
Thomas Poon	Rolls-Royce
Yasmin Farhatnia	Platinum Medical Ltd
Roly Whear	Jaguar Land Rover
Royston Jones	Altair

Part 1

MRG presented on Framework for the Implementation of Graduate Attributes in SEMS

Summarised Graduate Attributes Framework. Recognised that some Graduate Attributes (GAs) are

not very tangible/visible to students. There is a need for students to identify when they are acquiring GAs.

Grad attributes: Resilience, Creativity, Communication, Prof. Practice, Technical

Delivery modes: programme content for technical, workshop & self-learning e.g. for communication linked to AHEP4 LOs

Evidence collected in a portfolio of skills/lifelong learning

Electronic learning environment: upload reports/writing, prompts to reflect on skills gained.

Some parts can be embedded with credit/score within a module, are linked to the portfolio

Other parts are formative, pass/fail.

95% of students in 1st year started collecting evidence of GAs acquired.

3 questions posed to the Board:

1. Have the most important attributes been covered
2. How can we make the delivery more effective
3. How can we make this more valuable to future employers

Chris Stevens: Has core knowledge been covered by the framework?

MRG: This is covered under the Technical knowledge score is typically recorded from coursework submissions in the module-based components.

Paolo Bianco: It would be good to introduce ideas of IP, ethics and export control. Ethical frameworks exist, how are they used/referred to?

MRG: This is partly included in the ethics workshop, will be reviewed further.

Su Varma: How is communication training done?

MRG: Written comm in module/reports, peer-to-peer, 360 peer review, storytelling engineering (3 min elevator pitch with use of a phone), presentations, vivas

LT: group work starts in y1, with peer review. 4th year MEng students do medical ethical approval.

Su: Commented on the large variability between students in confidence/ability to present their posters.

MRG: Gave some examples of how students will be taught communications skills in new modules e.g. writing professional emails.

Phil Kennedy: Observed that all elements proposed in past IABs seem to have been picked up, except Resilience.

OF: Some of this is covered in small group interactions with academic mentors, but may need better capturing in the Graduate Attributes Portfolio.

Su Varma: Graduates are often lacking communication ability to non-specialists. Could we include presentation in 'science in a minute' style events?

Part 2: PB on Skills and Employability week (SkEmp)

Has been organised in week 7 of Semester A and B this year.

We used to embed skills in particular modules, which was hard to track/quality assure.

Rebadging of our non-lecture reading week into SkEmp.

Freshen up with mixing in externally-led activities. Some activities are assessed and others voluntary.

Semester A: One topic for one day of the week for each year group, plus all year groups on the Wednesday. Total two days of activity for each group

E.g. Dallas Campbell (BBC) led the Yr1 storytelling event. Student contributions on TikTok with impressive student submissions

Sem B: e.g. presentation by LinkedIn: how to make yourself visible online professionally; IBM design thinking challenge.

Moving forward:

- Increase externally led activities as they had better student engagement.
- Improve links to assessment, as assessed activities were better attended.
- Better integrate with the Grad Attributes Portfolio platform

Q to IAB:

- *what content would be useful?*
- *How can we improve on delivery?*
- *Is the focus on skills correct, are the right skills targeted?*

M Muir: Is the focus on technical or soft skills in SKEMP?

PB: The focus is on the 'hard to reach' attributes, not normally taught/trained in a module, eg self-reflection, creativity, resilience.

Pash: Pointed out that content will be tailored by year group so that it is relevant to the challenges faced at different stages of the degree programmes.

M Muir: It seems tailored towards assessment centres and large employers with graduate schemes. Is anything tailored towards careers in SMEs?

PB: Focus should be to exhibit a wide range of career opportunities to the students.

OF: Agreed on the need to cover SME careers. However, the larger employers offer off-the-shelf training days that we can make use of. The students like these. For SMEs we would have to tailor something ourselves – which is possible.

Su Varma: Pointed out that students should be encouraged to be flexible in their approach to the job market and what is required in specific roles.

Matthew Tickle: Focus is on employability, but a lot of students today expressed a desire to start their own business. What are we doing for them? Also, should we be talking to them about becoming self-employed contractors.

MM: Airbus would employ freelancers/self-employed, but only with strong experience/track record. (i.e. not recent graduates)

Pash: QMUL has an enterprise arm. Offers student training, but difficult to get a good level of student engagement

Zulshan Mahmood, Ford: how are students with skills gaps supported?

PB: e.g. linked-in learning, and individual support

Part 3 - OF on LinkedIn Learning

QMUL subscribed to LinkedIn Learning

UG and PG students (and staff) have free access to all courses – a large database.

Certificates of completion can be obtained.

How could we use it in SEMS? Possibly recommendation of courses, suggested list, mandatory collection that is required, or not use at all. Completion of courses could be a requirement or optional.

Spreadsheet has been uploaded with courses in various areas, IAB members please suggest useful courses.

MM: Can it be linked to SkEmp Week?

OF: thinking about requiring students to pick a course, complete during the week, upload certificate.

MM: rather thinking about link to employability, employers

Phil Jackson: how are the skills visualised to employers, e.g. table as in EC MC-ITN proposals?

OF: this is first year, but key is self-reflection. One learning outcome is that students learn to present it themselves and include it in their cv.

OF: it appears online participants can't see the uploaded materials for the meeting, will be sent after the event, comments collated.

MM: What is the quality of linkedin courses? Have the academics taken the courses?

MRG: some futurelearn and linkedin courses are low level intro (and typically advertised as that).

Advanced courses often are many hours, offer certificates, require homework. MRG has taken a course, but suggests that more academics should.

Su Varma: Skills get you through the door, but then further development is needed.

MRG: Some things will be do through SKEMP and some through linkedIn. Authentic assessment is the way forward.: case studies, actual engineering project work

MM: How are we ensuring horizon scanning? How do track what skills employers want? Technology trends, what will be needed in a few years?

OF: this IAB is one key forum, discussions with project sponsors

MRG: Staff engagement with Professional Bodies where trends are discussed

MM: e.g. NASA technology roadmaps list emerging skills, tech developments. Use of high performance computing erodes discipline boundaries, is moving very much closer to industrial importance.

General agreement that SEMS should compile trends identified by external organisations rather than try to identify them ourselves.

MM: How are skills linked to recruiters' requirements?

Pash: Covered by the QMUL career office who canvas recruiters. Training offered to students. E.g. analysis of job adverts, what skills are being sought, how to acquire, evidence those?

MM: resident entrepreneur? Certainly expand these discussions beyond the main corporate

partners

Carolyn Small: are QMUL students ready to move out of London, e.g. for a placement? No QMUL applicants for open placements at Arconic. Could a 'mobility training' be included?

MRG: One way to do this would be field trips outside of London

OF: we ran residential field trips pre-covid for materials students. This should return next year and be expanded to other divisions. It will be a huge challenge to roll this out to a large cohort of students.

MM: World is moving towards cloud computing. Students should be exposed to Python, other software and cloud computing.

OF: Python, at least, is now embedded in our programmes for the students who started this year.

Comment: Not everybody will be 'employed' by an organisation, so how do we cater for that and encourage does opportunities?

MM: Suggested videos of 15min in the life of.. somebody from the IAB and how do they work and which courses will be useful to take from the type of work/area

Part 4 – Close

OF will circulate materials presented and collate responses.