Consultation on higher education/awarding body engagement

An Institute of Physics response to Cambridge Assessment.

A full list of the Institute’s responses and submissions to consultations can be found at http://www.iop.org

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The Institute of Physics is a scientific charity devoted to increasing the practice, understanding and application of physics. It has a worldwide membership of over 40,000 and is a leading communicator of physics-related science to all audiences, from specialists through to government and the general public. Its publishing company, IOP Publishing, is a world leader in scientific publishing and the electronic dissemination of physics.

The Institute welcomes the opportunity to submit a response to Cambridge Assessment on how best to engage higher education with Awarding Organisations in the development of post-16 qualifications.

In our response, we have highlighted what we see as a number of weaknesses in the model that relies on communities of practice and have suggested an alternative that involves professional bodies.

Prof. Peter Main
Director of Education and Science
General Remarks

1. The Institute welcomes the publication of this paper as a first step towards improving the involvement of higher education (HE) in the development of post-16 qualifications.

2. Like Cambridge Assessment, we support the sentiment in the White Paper that HE should be more involved in the development of post-16 qualifications. However, we note and are disappointed that the authors have not taken on board the whole phrase from the white paper and made no mention of professional bodies:

   we are working with Ofqual, the awarding organisations and higher education institutions to ensure universities and learned bodies can be fully involved in their development. (our emboldening)

3. There are some real weaknesses of the model proposed in this consultation. These are outlined below. Some of these weaknesses could be addressed by recruiting professional bodies to play a role similar to the proposed communities of practice.

Remarks on Sections

2. Why there is a problem

4. We would like to see the inclusion of students in the consideration of users. After all, the specifications and assessments at A-level determine their learning experience for two crucial years of their education.

5. We agree that producers have become separated from higher education (and other ‘users’); this is partly through concentrating on the specifics of the assessment mechanisms, reporting and data analysis – in which the awarding organisations have immense expertise.

6. However, there are other factors that have contributed to ‘the problem’. For example, awarding organisations are companies and have to take account of commercial concerns: they are selling a service to schools. This has led to some decisions (on content or how it is assessed) being made on commercial grounds rather than educational ones.

7. For example, content for the recent GCSEs was sometimes chosen on the basis that it would be easy to assess – this led to the specification having a lot of knowledge-based statements. A specific example is energy – which is a subtle idea but was often presented as a set of types of energy that students had to know and identify. The descriptions were of little educational value but were clearly easy to assess with recall items.
8. The poor quality of assessment items also degrades the curriculum through wash-back. Increasingly, assessments tend to be in the form of written exams with items that test what is easy to assess. They concentrate on the lower level domains in Bloom’s taxonomy: recall, comprehension and application. Consequently, there is an over-emphasis on these skills in the way the subject is taught.

9. The higher levels in the taxonomy (analysis, synthesis and evaluation) are hardly assessed. Neither are attributes like curiosity, enthusiasm, imagination, persistence and teamwork; so they are less likely to be taught.

10. It is possible for assessment to exert a positive influence on the curriculum through the ethos engendered by its assessment methods. The best innovations in curriculum development have begun with considering what it is that students should experience, understand, do and know; the curriculum developers have then worked with awarding organisations to develop assessment methods to encourage teachers to provide the desired learning experiences. A good example is Nuffield A-level physics for which the practical exam and the investigation gave a sense of what was important.

11. The pressures and priorities of awarding organisations has, understandably, led to less of an emphasis on the ethos and a passive acceptance that assessment drives the teaching through wash-back.

12. We would like there to be a voice that ensures that assessments have a positive influence on the curriculum and that the character and ethos of a subject is not lost in the practicalities of setting and marking assessments.

3. A possible Model

13. We agree that there is a vital role for a regulator. This arises, in part, from the competitively commercial nature of the exams business, which means that there are pressures on awarding organisations:

   - not to unilaterally increase the demand of their assessment items;
   - to maintain or increase the number of high grades that they give.

14. The need for criteria arises from the fact that there are multiple awarding organisations and there is a need for parity between them. The regulator is needed to ensure that each awarding organisation interprets the criteria fairly and that their qualifications are of an equivalent standard.

15. The first statement in the ordered list refers to HE being enabled to ‘set the standards’. This does not follow. Specifying the content of qualifications does not in itself set the standards for that qualification, particularly in STEM subjects. The relationship between the criteria and assessment is vital in determining the standard of the qualification.
16. For example, the marked increase in the tendency to break down examination questions to smaller blocks, known pejoratively as spoon feeding, can make a paper much easier than one that asks for an extended answer and yet both may conform to the specified content.

17. It is vital that, whatever criteria are put into place, they include statements about the level to which the material has to be understood and also the type of skills that a candidate would need to exhibit in order to achieve the required standard.

18. We agree that there is a problem with frequency of qualification cycles. Apart from the continual disruption, it means that there is not time to properly collect evidence from one cycle to feed into the next one. It is usual that the criteria are revised after only one cohort has sat the exams. We would like to see revisions being made based on evidence and experience from a number of cycles; this ambition is currently impossible.

19. We agree that some revisions (of criteria and specifications) have been carried out with little reference to ‘expertise in subject knowledge and pedagogy’. We would like to see a much greater engagement with the subject community. Once again, this can most easily be done through the professional bodies.

4.1 Role of Higher Education

20. We agree that the users of the qualifications should be primarily responsible for the qualifications and that the users of A-level include HEIs. Further, HE does have a responsibility to play a larger role in defining the qualifications.

21. It is important to note that students do not arrive at A-level from nowhere and it will be counterproductive, for example, to make A-levels harder if GCSEs are left unchanged. There may also be issues concerning content. As an example, there are many admissions tutors who would like A-level physics to contain calculus, but this would not be possible as calculus does not appear in GCSE mathematics.

4.2 Role of Awarding Bodies

22. We agree that the awarding organisations are best placed to produce assessments and have significant expertise unmatched elsewhere. However, we do have some reservations about the proposals.

23. First, there is an assertion that the awarding organisations will be ‘incentivised to be more accountable to HE’. It is not clear how the proposed structure will produce such incentives. The primary measure of a specification’s success for an awarding organisation will remain the numbers of students taking it.

24. The only way that awarding organisations will become accountable to HE is if there is some means for HE to influence the choice of schools or students. Given the commercial sensitivities, it is unlikely that universities will express preferences
for particular specifications – except in extreme situations where a particular qualification was unfit for purpose.

25. We are very concerned that the proposal wishes to remove inter-subject comparability in terms of standards. While we agree strongly that assessment should be fit for purpose and that individual subjects should have assessments matched to their needs, that is quite different from absolving the awarding organisations of the need to ensure a reasonable comparability between subjects in terms of grade severity.

26. Several studies have shown considerable differences in grade severity of different A-level subjects (Relative Difficulty of Subjects, 2008; Coe, Searle et al) and we have many reports of schools and colleges encouraging students to take so-called easier subjects in order to maintain a healthy position in league tables. Students, of course, are also keen to maximise their UCAS points tariff; and HEIs like to admit students with high grades. While maintaining a rough parity between standards in different subjects is not easy, we oppose strongly the suggestion to remove the obligation to attempt to do so.

4.3 Role of Communities of Practice

27. There is a lack of clarity about the status of the HE input. Throughout the paper, there are a number of vague references to HE, as if higher education were a single entity. This is far from being the case and makes it hard to see how the proposals will work.

28. The emphasis is on communities of practice to play the key role but these bodies are only loosely defined, appear to have no formally agreed responsibility and have no legal status.

29. There needs to be a body that convenes the community of practice. Clearly, in subjects where a professional body exists, the professional body is ideally placed to do the convening. They are legal entities, they have the appropriate networks and often they have considerable experience working in this type of area. In effect they are communities of practice with extra benefits (see response to question 4 at the end of this document).

30. There are high levels of inefficiency in the proposed model as, presumably, whatever mechanism that is used to consult with HE, employers etc. will need to be replicated for each awarding body. This approach would constitute a throwback to the days of London, JMB etc. However, it is worth noting that, even then, the active engagement of subject professionals was minimal.

31. The way the community of practice exists to protect the standard suggests a conservative force at work. While this is no bad thing in itself, it would be wrong to dismiss all pedagogical research as not having something important to say about teaching, learning and assessment.
32. The first paragraph contains a reference to standards being set by the user group. This is the first mention of such a group and it seems that it is not defined. It is not clear how this group is different from the community of practice.

33. The second bullet introduces another new group: HE. It is not clear why HE would be responsible for agreeing the design criteria with the regulator and AOs. Again, should this responsibility not lie with the communities of practice?

4.4 Role of the Regulator

34. It is not clear at all why a regulator is not needed to accredit individual qualifications based on the criteria. This would seem to be an essential part of the process of ensuring quality and parity. And it has to be carried out by an independent regulator.

35. There is no direct mention of the regulator monitoring the demand and quality of exams and other assessments. We assume that they would still have this role.

36. It is not clear how the regulator would ‘actively manage’ the communities of practice. The communities of practice have no formal existence so it is unclear how they would or could be governed by the regulator.

37. We would like the regulator to take a role in improving the comparability between subjects.

5. How to ensure HE/awarding body interaction

38. As the paper implicitly recognises, a major drawback to the proposed model is that there is no structure to ensure interaction between HE and awarding organisations. Hence the need to introduce new incentives to engage. None of the suggested measures is entirely convincing.

39. Item (1) is already good practice.

40. None of the proposed measures should be necessary provided the role of the academic staff is well defined and they have sufficient independence from the awarding organisations that their voice can be heard clearly.

41. At the Institute, we have little or no problem in engaging our members in schools, universities or business, on educational issues and we do not see the engagement of people from HEIs as a significant issue provided that the staff can recognise the ability to make a difference. We do not believe that the proposed Communities would offer that degree of independent authority and that, as proposed, it would be difficult to involve the academics.

6. What next

There follows our answers to the specific questions summarising the comments in the previous sections.
Q1. To what extent should HE specify the content criteria of post-16 qualifications?

42. They should have an input and, as one of the ‘users’ of the qualifications should be able to influence the content and assessment of the specification. However, they are not the only user and there is more to consider in, for example, an A-level, than the needs of HE.

43. If we return to a purely top down approach to the development of exams, there is a danger that they will become less accessible and have a knock on effect to the previous stage (GCSEs). There needs to be a view (and review) of the whole system not just an overhaul (from above) of the A-level exams.

44. It is important to use the experience of the last forty years of teaching and curriculum development to ensure that students have a positive, challenging, developmental and planned learning experience. There is more to developing a specification than defining all its content.

45. There is an issue here of what subjects should be involved.

- Not all subjects feed directly into HE equivalents. So, for example, who from HE would be on the community of practice for psychology or law A-levels?
- Some subjects feed into many courses. For example, physics feeds into many engineering courses, medicine, architecture and finance; as well as physics. So who will be on the physics community of practice. The situation is even more diverse for the development of design criteria for maths?

Q2. The Institute’s view of the proposed communities of practice

46. The community of practice is not well defined and does not exist as a legal entity with any governance, accountability or authority. It is a nebulous idea rather than an actual entity; so there is no-one or nothing who can do 'own' the standards.

47. It is not clear under what terms people would be a part of the community of practice.

48. Is their role an advisory one? Or do they have responsibility for the quality of assessments?

Q3. Will the suggested mechanisms for long-term engagement work?

49. There is a risk that the communities of practice could become rubber-stamping bodies. In which case, their members could lose interest and their long term influence will be lost.

50. We feel that the suggested mechanism gives too much freedom to awarding organisations and, given the pressures to which they are subjected, there will be a detrimental effect on standards, quality of assessments and quality of curricula.

51. This will be most noticeable in the loss of innovative curriculum development.
Q4. Alternative mechanisms

Professional Bodies as communities of practice

52. Professional bodies (PBs), where they exist, are very well placed to take on a role similar to the community of practice.

53. There are a number of advantages to their involvement. Specifically:

i. Uniquely, PBs already bring together teachers, academics, employers and educational specialists. As an example, the Institute of Physics has

- Direct links and excellent relations with every university physics department in the UK;
- 40,000 members from industry, academia and schools who have a background and interest in physics;
- 1,600 affiliated schools, each with a named teacher contact;

ii. Many PBs are directly involved in degree accreditation and, in fact, form the most reliable repository of the requirements of the undergraduate courses in terms of both skills and knowledge. Again, taking the Institute as an example, we have explicit and detailed records of the curriculum for every UK physics degree.

iii. PBs often have extensive in-house expertise in school educational issues;

iv. They have a primary responsibility to the subject, which qualifies them to offer independent and critical advice.

54. PBs are independent organisations that have an official legal status. This status is helpful for three principal reasons.

- it allows them to have genuine independence in offering input;
- they are able to undertake formal contractual obligations if required;
- Unlike the community of practice, they can ‘own’ the criteria.

A single awarding organisation for each subject

55. There are a number of problems introduced by having multiple awarding organisations working on the same subject. Currently these are addressed through incentives. However, another solution would to remove the direct competition between specifications.

56. Given that it is likely that the Government will retain several awarding bodies, it would be possible to franchise certain subjects or subject areas to particular awarding organisations. The element of competition between awarding organisations would remain; however, the franchise would be awarded on the quality of the awarding organisations’ proposals for the subject specification.
57. PBs and HE (possibly through PBs) would participate in the selection of the franchise holder thereby providing real accountability to HE.

58. It would be possible and encouraged for the franchise holder to offer more than one specification – thereby encouraging innovation and curriculum development.