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Designing a better accreditation standard to promote graduates' employability

Conference or Workshop Item

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<https://www.advance-he.ac.uk/programmes-events/conferences/NETCon19>

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The IoC Accreditation Standard

Doing something different

David Bowers

The Open University

Context

- The IoC is an opportunity to do something radical
 - Aimed at bridging the skills gap, increasing participation, making more graduates more employable,
- Bringing together offers from (different) HEIs and industry training
 - Collaboration rather than competition (?)
- May also include MOOCS
 - Futurelearn plus several HEIs
- Underpinned by personal portfolio
 - validated through blockchain

Aims of the standard

- NOT seeking to replicate what exists already
 - E.g., ACM BoK, TP degrees,
- To be designed collaboratively with industry
 - Must ensure that we address the concerns/needs of SMEs
- Degrees must still meet required benchmarks
 - FHEQ
 - QAA subject benchmark
- BUT focus fundamentally different
 - The individual student
 - Employability
 - Competence (evidence)
- Above all else, seeking to avoid offering industry yet another academic-defined set of programmes,
 - with employability just added on around the edges...

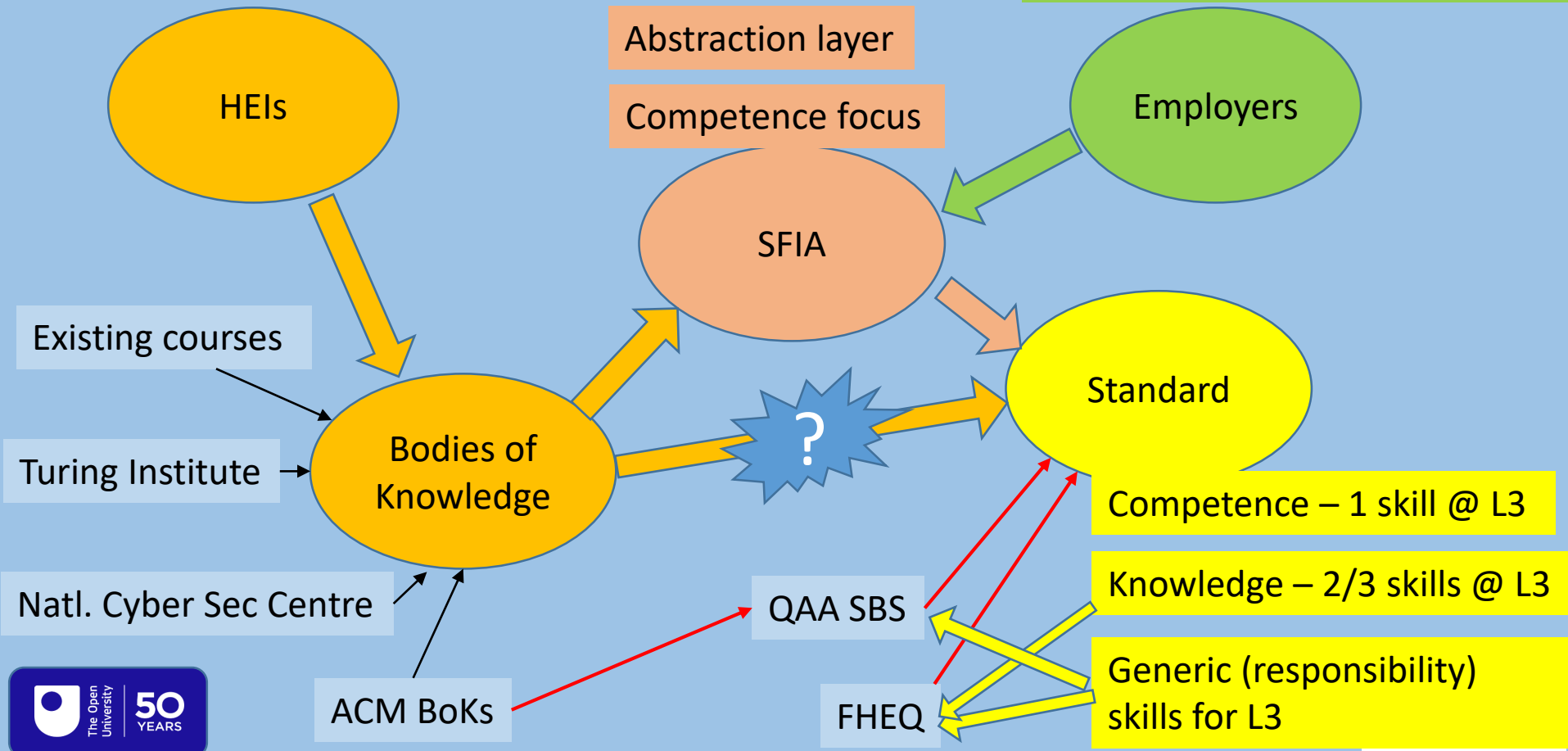
Draft standard

- Meta-standard
 - Subject focus (e.g., “data science”, “cyber sec”) is in instantiations
- Seeking to identify what graduates can **do** on day one, and with what they will be equipped to get “up to speed” quickly
- Rather than looking at BoKs, existing benchmarks etc, seeking to build around Skills framework (SFIA)
 - Focus on **competence** rather than just knowledge
 - Will need **evidence** of competence (portfolio)
 - Skill descriptions in SFIA are **exemplars**, rather than tick-lists

Constructing a standard

Need graduates to be billable

Need graduates to be adaptable



What's in a skills framework?

- Developed by users (employers)
- Often used for matching candidates to roles, building project teams etc.
 - Sometimes for pay and rewards
- Typically describe three facets:
 - **What** people should be able to do (skill)
 - The **complexity** required
 - How **autonomous** they should be
- Competence
 - Being able to do what is needed
 - ... in an appropriately complex context ...
 - ... with minimal routine supervision.
- Competence = “fly solo” for a customer (and be billable)

SFIA – Skills Framework for the Information Age

- Divides the IT domain into 102 skills
 - From strategy through networking and software to data analytics
- Describes skills at up to seven levels of complexity/autonomy
 - Not all skills at all levels
- Characterises generic attributes for each “level”
 1. Follow
 2. Assist
 3. Apply
 4. Enable
 5. Ensure, Advise
 6. Initiate, Influence
 7. Set strategy, inspire, motivate

Skills frameworks in other disciplines

- Tend to focus at “technician” level
 - Institute of Biomedical Sciences Certificate of Competence
- Sometimes specified as National Occupational Standards
 - NOS suites maintained by SEMTA
- Also appear in specifications for work-based learning
 - Nat. School of Healthcare Science – Scientist Training Programme
- Often just 3 levels
 - Novice – Competent – Expert (Nursing)
- Higher levels subsumed into Engineering/Science Council standards for registrants
 - Registered [technician], incorporated, chartered
- Note also international activities
 - CDIO, Singapore, Japan....

The draft meta-standard

- For a single honours degree:
 - Graduates must demonstrate **competence** in at least one relevant SFIA skill at level 3;
 - Graduates must have the **underpinning knowledge** for at least <three> other skills at level 3/4
 - Graduates must demonstrate all of the **generic skills** defined for level 3
- Variations for joint degrees, degree apprenticeships, Masters, etc.

“Competence”?

- **Novice**

Cannot perform this activity satisfactorily to the level required in order to participate in the clinical environment

1. Can perform this activity but not without constant supervision and assistance
2. Can perform this activity with a basic understanding of theory and practice principles, but requires some supervision and assistance

- **Competent Practitioner**

3. Can perform this activity with understanding of theory and practice principles without assistance and/or direct supervision
4. Can perform this activity with understanding of theory and practice principles without assistance and/or direct supervision, at an appropriate pace and adhering to evidence based practice
5. *As 4, plus*, able to adapt knowledge and skill to special/ novel situations where there maybe increased levels of complexity and/or risk

- **Expert**

6. *As 5, plus*, able to co-ordinate, lead and assess others who are assessing competence.

Adapted from: Herman GD, Kenyon RJ (1987) Competency-Based Vocational Education. A Case Study, Shaftsbury, FEU, Blackmore Press, cited in Fearon, M. (1998) Assessment and measurement of competence in practice, Nursing Standard 12(22), pp43-47.

Today's task

- Base on SFIA v7
 - Or use a framework from your own sector (with appropriate equivalences below)
- Select ONE skill, defined at Level 3 or 4
 - Samples provided on tables, or see full reference guide
- Outline a curriculum that would deliver **competence** in that skill
 - Don't include stuff just because "we always teach that...."
- Comment on challenges, issues, benefits etc.
- Capture on flip-charts, feed back and end of session

Links

- <https://instituteofcoding.org/>
- www.sfia-online.org.uk
- <https://www.ibms.org/home/>
- <https://semta.org.uk/standards>
- <http://www.cdio.org/>
- <https://www.engc.org.uk/professional-registration/>
- <https://sciencecouncil.org/registrants/>
- <https://rcni.com/nursing-standard>