

BCS: Northern Ireland Computing Education Committee

Minutes of meeting of the BCS: Northern Ireland Computing Education Committee held on **3rd September 2021** at 10.00am via Microsoft Teams.

PRESENT

Irene Bell, Michaela Black, Eammon Brankin, Bill Connor, Andrew Douglas, Ruth Foster, Michael Gould (MG), Tom Gray, Philip Hanna (PH, Vice-Chair), Jonathan Heggarty, Alastair Irons (AI), Ian McChesney (IM, Chair), Michael McEnery, Grainne McGowan, Paul Moorhead, Roisin Rice, Rachel Steenson (RS), Colin Turner, Jonathan Wallace, Graeme Wilkinson.

1. APOLOGIES

Paul Moorhead

2. INTRODUCTIONS

3. SETTING THE SCENE

- a. COMMITTEE OVERVIEW**
- b. TERMS OF REFERENCE**

IM outlined the origins of the committee and its relationship to the BCS Academy of Computing, the School Curriculum and Assessment Committee (SCAC) and the Scottish Computing Education Committee. AI provided further detail on SCAC and the current working groups thereof.

This committee's Terms of Reference (previously circulated) were approved by the Academy of Computing Board in July. It was AGREED these would be reviewed by this committee after twelve months.

The Committee was made aware of its public online presence via the BCS website at <https://www.bcs.org/more/about-us/people-and-governance/our-boards-and-committees/northern-ireland-computing-education-committee/>

4. MEMBERSHIP

Current membership was noted. All members would have access to the committee online work area via Basecamp. In a discussion regarding membership it was further noted:

- there is scope to improve the diversity of the committee (Action: IM)
- industry representation is vital and it was AGREED that TG, MG and RS were able to fulfil this role at this time.
- there is presently no representation from (a) students (b) primary sector (c) special educational needs and (d) Department of Education. It was AGREED

that each of these would be followed up. (Action: IM)

5. PRESENTATION AND DISCUSSION – “The Leaky Pipe”

RS introduced a presentation (previously circulated) on how to maximize the flow of students from primary and secondary education through to computing in higher education. The main point presented was the possibility of making the study of computing mandatory at GCSE.

A wide ranging discussion followed. Key points made and noted by the committee were:

- the work already underway elsewhere in researching and quantifying the current problem within NI.
- the currently low uptake of GCSE and A-level computing within NI schools.
- the risks associated with a mandatory approach (e.g. a poor student experience) before addressing current barriers to uptake such as infrastructure, leadership, digital poverty, teacher capability and teacher confidence.
- the complex and multifaced nature of the problem – the experience and circumstances of each school is unique. This would suggest a need for this committee to adopt a highly focused approach in the first instance. Understanding what is achievable in the short, medium and longer term, as well as recognizing the need for pace.
- the trend towards more vocational and industry relevant qualifications within the school curriculum but no corresponding increase in their wider uptake by schools themselves.
- the decline in the uptake of STEM subjects generally as well as computing and hence the possibility of a collaborative approach in tackling the problem with other subject areas.
- the value of hearing directly from students regarding their reasons for not studying computing.
- a recognition that other countries are considering a mandatory approach and the need to keep pace with these developments in the most appropriate way.
- the potential benefit of making computing compulsory at Key Stage 3, to help ensure consistent delivery across the sector and to enthuse student choice for GCSE computing. A mandatory approach at some level might be the only way to ensure all children have access to the subject.
- the Department for the Economy Skills Strategy for NI and the Digital Spine component of this. In this context, the potential for this committee to recommend a mandatory route which is achievable and resourced for delivery in the medium to longer term.
- the benefits of resourcing teachers with quality resources for pupils from primary sector onwards, focusing on fun, engaging and skills-based activities from the outset.

- recognizing the other sector attractiveness groups within NI, the value of a harmonized approach to promoting sector and subject attractiveness which is in step with computing curriculum availability within schools.
- the existing Digiskills NI report (2019, Northern Ireland Screen and the Department for Communities) and its focus on the computing subject in the primary sector.
- the CSforALL (USA) approach to retraining teachers to teach computing.

6. INITIAL PRIORITIES

See below.

7. WORKING GROUPS

On the basis of the above discussion, two working groups were proposed and AGREED:

WG1. Barriers To Uptake Of Computing In Schools

In order to build on the recent work of other committee members, it was also AGREED that the WG membership could extend to individuals representing other relevant parties as appropriate such as teacher education, primary, secondary, school leadership, teachers, further education, higher education, government and industry.

WG2. The Student Voice In Computing Education

The committee noted the complementarity of the two groups.

It was AGREED membership of the two groups would be considered after the meeting. Committee members interested in joining one or other were invited to contact the Chair. (Action: IM, PH).

8. ANY OTHER BUSINESS

Publicity: there was some discussion regarding how best to publicize the work of the committee. It was AGREED to defer on a formal publicity activity. However, the work of the committee could be freely shared amongst colleagues and networks, including the public web presence.

Informatics for All consultation document: members of the committee were invited to send comments to AI by Friday 10th September 2021. Document to be circulated after the meeting (Action: IM).

9. DATE OF NEXT MEETING

The next meeting would likely be in December 2021. Date/time to be confirmed.