**Breaking the coding barrier: transition from Level 1 to Level 2 programming**

**Frances Chetwynd:**

I’m leading an eSTEeM project that came out of a discussion at a programme committee meeting. The point of contention was the poor attention on the Level 2 programming module and this was blamed on the students either not being adequately engaged in their Level 1 studies or not being adequately prepared by their Level 1 studies.

At the same time as we started the investigation the faculty introduced a bridging course for those students. So what did we do?

Three things. Firstly, a survey of those students just completing their first Level 2 programming module. Secondly, a quantitative analysis to establish whether there was any correlation between Level 1 and Level 2 performance. And thirdly, we looked at the students who completed the bridging course and more importantly those students that didn’t.

So that all sounds well and good but the main problem was getting the right data. Who to ask? Who had the time? Who had the skills and expertise to extract the data? My colleague, Helen Jefferis did the bulk of the data analysis.

So Helen, let’s reveal the quantitative analysis. What did we find out from the student survey?

**Helen Jefferis:**

Well from the survey we found that visual programming was very effective for Level 1 for university programming.

**Frances Chetwynd:**

OK, so the impact then is that the faculty’s decision to continue to use visual programming seems to be the right one?

**Helen Jefferis:**

Definitely.

**Frances Chetwynd:**

Excellent. And what then did we go on to find out about the student performance at Level 1 compared to Level 2?

**Helen Jefferis:**

Right. Well the situation here is complicated. If you did well at Level 2 then it’s quite likely you’ve already done well at Level 1. However, students that did poorly at Level 1 there’s no correlation with how they perform at Level 2.

**Frances Chetwynd:**

Ah, so the impact of that then it is a very complex picture and we really need to know our students well?

**Helen Jefferis:**

Yeah, I think so. I think therefore the relationship between the tutor and the student is quite important here.

**Frances Chetwynd:**

Yes.

**Helen Jefferis:**

Particularly for students that don’t do so well.

**Frances Chetwynd:**

OK. And finally then what did we find out about the students who took the bridging course?

**Helen Jefferis:**

The students that took the bridging course had already done well at Level 1 so therefore we would have predicted that they were going to do well at Level 2. However, students that did poorly at Level 1 just didn’t sign up for the bridging course so we couldn’t help them.

**Frances Chetwynd:**

Ah. So the impact here for the university is that we really need to make sure that the right students are doing bridging courses and that we have to identify and target those students?

**Helen Jefferis:**

Yes. And tutors are generally the people that are able to do that.

**Frances Chetwynd:**

Absolutely.