53 Powerful Ideas All Teachers Should Know About

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Courses work as integrated systems

Courses are made up of a number of components. They consist of classroom teaching (usually), assessment (almost always), students undertaking independent study (always, though often not as much as is intended), the provision of, or access to, resources of one kind or another that students read or work with, feedback on students' progress and understanding, opportunities for students to collaborate with each other (more rarely), opportunities for students to make choices and take responsibility for their learning (again, sometimes rarely), opportunities to discuss, some practical or work experiences, help for students to develop the learning capacities necessary to make the most of all the above learning opportunities, and so on.

In an ideal world all of these components would have been designed to pull in the same direction and all contribute in a cohesive way to what was intended. If a student on a course where all these components had been designed and implemented as a coherent whole were to be asked about what was best about the course, they might say "Well, the whole thing really, it all helped me and it all seemed to fit together. If you took any part away it would have worked less well."

The title of this item uses the term 'integrated systems', but the reality is that many courses, while they work as systems, are not integrated. Teachers prioritise some aspects over others and do not necessarily pay attention to other aspects much, or at all. And it is rare for courses to align, in the sense that John Biggs means in his use of the term 'constructive alignment', in that that all components foster and support the same kind of learning as was intended. For example seminars may be experienced as emphasising the development of students' thinking, but the exam questions perceived as demanding a reproduction of the content of the lectures. Students often experience courses as hardly integrated at all, especially if different staff design the course, give lectures, lead seminars and mark their work. They may say "It's all over the shop. You never know what is really important, what you are supposed to do, or what is worth doing. Everyone tells you different things. There are so many contradictory messages."

Sometimes teachers put much of their effort into writing their lectures, and assessment is an afterthought. Sometimes it is the exam question or the assignments that receive most attention. Often it is small class teaching that takes more of teachers' time than lectures, especially in large classes, and so dominates their feelings and thoughts about what the course consists of. And in terms of how much time teachers spend, altogether, on a course, it is usually marking and feedback on

assignments that is far ahead of all other demands on their time.

In contrast, in terms of how much time students spend actually going about some kind of learning activity, it is nearly always time out of class that makes most demands, and yet what that learning is intended to consist of, or what it is for, may receive least attention of all from their teachers. As they design a course, or as they think about how well it is going, teachers tend to look at some components but not others. Their course evaluation questionnaire may list all the classroom teaching sessions, and perhaps students' attendance at them, but none of the things students were supposed to have done out of class, or how much effort they put in. They may ask about how useful the lectures were, but not how useful the reading list was. They may not even ask if the stated outcomes were achieved.

Item 31 about learning by doing emphasised the importance of sequences of learning activity: action, reflection, conceptualisation, planning, and round again in a cycle, probably repeated a number of times. This is unlikely to be achieved during a single class, or during independent study alone, or even during practical work or a work placement. To achieve such structured cycles different components of the course all have to be brought into play in a planned sequence. Where different staff are responsible for theoretical and practical components, for example lecturers and lab demonstrators, or seminar leaders and work place supervisors, the problems of integration are obvious, and may only be ameliorated by regular meetings between the different categories of staff. I was once involved in an exciting experiment in open ended problem solving in a science department, where the labs had over the years all turned into recipe-following exercises of paralyzing dullness, not remotely involving 'scientific enquiry'. 'Dry' labs were invented, designed to teach scientific thinking without having to worry about equipment and lab reports. The innovation was killed stone dead by the Graduate Teaching Assistants (GTAs) who ran these sessions under the misapprehension that the most important thing was that every student ended up with the 'right' answer and a neat report. Nobody had thought to brief the GTAs about the purpose of these problem sessions or what kinds of educational process within them would best achieve this purpose.

Theories and advice about course design often stress the importance of clear educational objectives, or 'learning outcomes' that all components of the course are intended to contribute towards. Without clear goals, it is argued, it is impossible to design a coherent course. But my experience is that nearly all courses nowadays have stated learning outcomes and they are still often incoherent in terms of the educational processes involved. The theorists might reply that this is because the outcomes have not been stated properly. But I believe that you need a sense of what students are supposed to be doing, not just where they are heading. In an integrated course what students do, and what they are

learning to do, are often the same thing. Integrated courses work because all the activities students engage in work together and make sense to the students, whether or not the outcomes are stated clearly. In my own research, students at Oxford University were found to be very clear about what they were supposed to be doing and learning, and yet most courses at Oxford hardly had any formally stated objectives or learning outcomes at all. The educational system, the demands that were made, the consistent nature of the discourse they were engaged in, made sense to them and were all perceived as aligned, and that was enough.

Suggested reading

John Biggs 'Constructive alignment': http://www.johnbiggs.com.au/academic/constructive-alignment/

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