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The 3 'C' design model for networked collaborative e-learning: a tool for novice designers

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This paper outlines a model for online course design aimed at the mainstream majority of university academics rather than at the early adopters of technology. It has been developed from work at Coventry Business School where tutors have been called upon to design online modules for the first time. Like many good tools, the model's key strength is its simplicity, but this simplicity springs from an extensive application of current theoretical thinking on the pedagogy of networked collaborative e-learning. The model forces consideration of some of the key features of online design, and steers the designer away from creating the impoverished online learning experience that can result from an undue emphasis on course content alone. The paper builds on the work of Fowler and Mayes (2000) by examining the underpinning theory surrounding three basic ingredients of an online learning experience and the crucial role played by dialogue and discussion within a social constructivist paradigm of learning.

Introduction

A considerable body of literature exists on the theoretical aspects of online learning and online course design (see for instance, Laurillard, 1993, 1995, 1998; Johnson & McCormack, 1996; Conole & Oliver, 1998; Mason, 1998; Collis & Moonen, 2001), but there is little in the way of direct practical advice for the busy university academic on how to design modules for flexible online delivery. Online flexible modules, in the context of this paper, are quasi distance learning modules, in which students meet face-to-face only occasionally at workshops, seminars or learning sets: learning on these modules is facilitated predominantly by the connectivity afforded by computer-mediated conferencing. (The terms 'course design' and 'module design' are used interchangeably in this paper).

For many tutors not familiar with this literature designing an online course can be a daunting task. Inexperienced designers can spend many hours drafting and redrafting online materials

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and still end up with an online course lacking the basic requirements of good design practice. A gap exists between the theoretical considerations and good sound practical advice. Case studies abound (see McConnell, 2000; Stephenson, 2001), and more general pedagogical frameworks and toolkits for multi-media solutions already exist (Staley & MacKenzie, 2000; Conole & Oliver, 2002; Juwah, 2002), however, there is little in the way of basic advice on the process of online course design suitable for hard-pressed academic staff getting to grips with networked collaborative learning for the first time.

Moreover, Bradley and Oliver (2002) clearly illustrate some of the problems involved in applying learning theories to practical course design, and indicate how difficult it can be to persuade academics to apply a consistent approach to pedagogy from first principles. Faced with the task of putting a module online many tutors turn immediately to the task of authoring large chunks of content to create an online textbook, thus encouraging a passive mode of learning. As Bradley and Oliver state:

> The biggest problem was their [the tutors'] lack of vision in utilising the online medium. Most were producing too much text-based material, which was lacking in learner interaction and engagement. There were not enough activities, particularly self-assessment activities, nor activities making use of computer generated feedback. (2002, p. 14)

This is a very natural response to the task. Many see the first step in course design as mapping out the content to be covered. However, online course design, like all educational design, needs to start with an overview of what the student can expect to learn and how that learning can be achieved.

Furthermore, this holistic approach to course design presents difficulties for some academics. Many see themselves, primarily, as subject experts with a strong allegiance to their own discipline. Their roles as teachers and course designers come second, resulting in little attention to pedagogy or other matters concerning student learning. It is not surprising therefore, that content features prominently in their design considerations.

At the same time, the quality assurance movement has had an effect on this situation. For traditional face-to-face course design, the requirements of programme specifications and quality assurance reviews have forced course designers to build in constructive alignment between learning intentions, teaching methods and assessment (Biggs, 1999). However, many have found this difficult.

Furthermore, in the online environment, achieving it is even more difficult. The face-to-face situation allows some modification of the teaching process as the course progresses: if a style of delivery does not work, feedback, in the form of student reaction, is received instantaneously and the tutor can adjust the alignment accordingly. By contrast, in an online situation, where the whole course structure is generally designed in its entirety before the course starts, adjustments are not so easy, and feedback, from normal social cues and student reactions, is not present. Making mid-course corrections to online modules is much more difficult.

Johnson and McCormack (1996) consider this whole situation and emphasise the huge amount of support required for the 'cautious mainstream majority' of academics who do not see themselves as pedagogues. The challenge is to support the transformation of subject specialists into 'crafters of educational processes', rather than allow the perpetuation of course design as 'content scheduling'.

In brief, this paper sets out to help facilitate this transformation by providing a practical design methodology for inexperienced online tutors that is founded on a sound theoretical and pedagogical basis. The aim is to provide an easy-to-follow design process in which the designer is automatically encouraged to consider good practice in online design. The model is aimed at saving the designer time whilst focusing on the most important considerations surrounding the student's learning experience. It provides a template for module or course design in which the learner's cognitive activities (Goodyear, 2000, p. 96), and the connectivity between co-learners and tutors are the most important design inputs. It is founded on sound theoretical principles but its strength lies in its simplicity and ease of use. Using the model gives the tutor choices in the style of delivery whilst ensuring the key design criteria are not overlooked.

Theoretical underpinning to the 3 'C' model

An examination of the underpinning theory requires consideration of three basic ingredients of an online learning experience, namely content or new concepts, knowledge construction, and the consolidation of learning through reflection (Fowler & Mayes, 2000, p. 43). In the context of this model, *content* consists of the basic knowledge required of the course; *knowledge construction* involves the process by which students make sense of the information presented; and *consolidation* refers to the process of reflection or the 'mental fusion' that takes place when learning produces a new intuitive way of understanding the world. As Fowler and Mayes indicate, the crucial role played by dialogue and discussion in all three ingredients is vital.

The theoretical consideration of these three basic ingredients must begin with an understanding of social constructivism, which is central to the model and the process of knowledge construction. Constructivism has its intellectual roots in the research of Piaget and Vygotsky, and in the educational philosophy of John Dewey. The theory emphasises the active role of the learner in building understanding and making sense of information. Students construct their own cognitive structures as they interpret their experiences in particular situations. Learning is an active process in which the learner continually re-orders their mental models of understanding while engaging in supported—or 'scaffolded'—learning activities. Social constructivism suggests that this knowledge construction is the result of the social interactions that take place at the heart of the learning activities, and that by participating in a broad range of activities with others, learners can internalise a personal cognitive map of the subject domain.

Thus, from a social constructivist perspective, collaboration and social interaction are at the heart of learning. By taking part in collaborative activities online, students engage in shared experiences of dialogue and mutual knowledge creation. This emphasis on the social interaction between learners is at the core of the design model, and is in stark contrast to the transmission model of learning, which suggests learning is the passive transmission of knowledge from teacher to student, in a manner similar to filling an empty vessel. Passive reading of large chunks of online text would be consistent with this transmission mode of teaching.

However, a course cannot consist of social interaction alone: it must have social interaction *about something*, i.e. there must be content. Thus, the second theoretical consideration concerns content. Most university academics feel their modules require content in the form of some basic knowledge that students need in order to engage with the subject. Biggs (1999, p. 40) discusses

the nature of this basic knowledge. He defines *declarative knowledge* as 'knowing-about', or 'knowing-what', by which he means it is public knowledge, that is verifiable, replicable and logically consistent. It is the knowledge held in libraries and textbooks, and what lecturers 'declare' to be knowledge in lectures. On the other hand, *functioning knowledge* is the private experience of the learner, constructed whilst putting declarative knowledge into practice. It requires a solid foundation of declarative knowledge, plus an understanding about how to apply it—appropriate skills—and a knowledge of *when* to apply it. An examination of Biggs' classification, from a social constructivist viewpoint, would conclude that functioning knowledge can only result from participation in learning activities in which learners construct their personal mental framework of understanding. In brief, from a social constructivist perspective, content is important in online course design but it must be delivered in an active way involving some social interaction. Reading downloaded text may be necessary, but the reading must have a purpose and should lead to participation in a social learning activity if functioning knowledge is to be developed.

The third theoretical consideration concerns consolidation and reflection. The part played by reflection within the educational process is well documented (Schön, 1983; Kolb, 1984; Boud *et al.*, 1985a; Weir & McGill, 1989). In most accounts, reflection is described as a form of response to the learner's experience. Boud *et al.* (1985b) state:

> After the experience there occurs a processing phase: this is the area of reflection. Reflection is an important human activity in which people recapture their experience, think about it, mull it over and evaluate it. It is this working with experience that is important in learning … It is only when we bring our ideas to our consciousness that we evaluate them and begin to make choices about what we will and will not do.

> In our view, reflection in the context of learning is the generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations. It may take place in isolation or in association with others. (1985b, p. 19)

This description requires deeper consideration. Boud *et al.* (1985b) describe part of the re-evaluation process as relating new data to that which is already known. According to Richmond (1970), Piaget argued that intelligence grows via two processes: *assimilation* and *accommodation*. In the reflective process, re-evaluating the experience causes us to extract from the event those pieces of knowledge that fit with our existing mental structures and we *assimilate* this new consistent knowledge within our existing cognitive framework. On the other hand, a completely new piece of knowledge, which is not obviously consistent with our existing cognitive structures, can be absorbed, but it requires a fundamental change in the existing mindset to *accommodate* it. If the reflective process is under way 'with others', as Boud *et al.* advocate, then the cognitive associations made—either through assimilation or accommodation—will be mediated by the social interaction between the student and the other learners. From this perspective, Reflection is not solely a one-person act; it requires social interaction and dialogue with others or oneself.

In brief then, this examination of the underpinning theory has looked at the three chief ingredients of an online course, namely content, knowledge construction, and reflection or consolidation, and has argued that all three must be facilitated through social interaction. What remains to be considered is the online dialogical process that forms the central part of the social interaction that blends the other ingredients together.

Much of the prominence afforded to dialogue within the online learning process is attributable to the seminal work of Diana Laurillard (1993). Her account of dialogical learning has much to offer the understanding of the 3 'C' model. She suggests that learning occurs when insights and understandings emerge through dialogue with a tutor who presents his/her view of an academic subject. The to and fro modification of the dialogue—between tutor and student—creates a situation where students eventually draw on their own interpretations of the dialogue to explain the concepts and ideas presented. In Laurillard's conversational model teaching focuses on the creation of the dialogue and its modification after successive feedback cycles from the learner. The teacher responds to the student's contribution by reframing the academic view until an acceptable consensus is reached.

Furthermore, Laurillard differentiates 'academic learning' from learning 'in the real world', and argues that academic learning requires students to learn from descriptions of the world produced by others—the tutor—within a formal educational setting, and that such knowledge cannot be acquired in the same way as that acquired through a direct experience of the world. According to Laurillard academic learning requires understanding of a second-order experience of the world—presented by others—and does not have the same characteristics as situated cognition, in which learning outcomes are influenced by the situation and the interaction between learner, activity and environment.

However, as Michaelson (2002, p. 21) points out, her dialogical model, although a powerful and influential one, has proved difficult to apply to online collaborative working. In order to help underpin the 3 'C' model, Laurillard's conversational model needs to be slightly reinterpreted to value peer-to-peer as well as tutor-to-student dialogues, as these allow the exploration of multiple perspectives and the exchange of experiences and ideas vital to the social construction of knowledge, which is at the heart of the model. Fowler and Mayes (2000) support this approach, and, in setting the scene for their work on learning relationships, they describe (p. 43) the importance of peer-to-peer dialogue as the vehicle for online conceptual movement.

Laurillard's conversational model can be reinterpreted in a 'multiple atomistic fashion'. That is, instead of one 'student-to-tutor' dialogue being the sole generator of learning, the process can be considered as multiple conversations between various actors causing the social construction of shared knowledge within a learning community. As multiple peer-to-peer conversations take place, with one party expressing a view or perspective with some personal authority—i.e. acting as 'the tutor'—Laurillard's conditions for learning, via more formal tutor-to-student dialogues, are created at a micro-level. The process is gradual, with small increases in shared knowledge developing with each exchange, until an inter-subjective understanding is developed between learners, tutors and other participants in the community. The fundamentals of the conversational model still apply, but its multiple application, within a series of minor social exchanges, forms the basis of socially constructed knowledge in this online situation. Interpreted in this way—at a multiple micro-level—Laurillard's model forms an integral part of the underpinning of the 3 'C' model.

In summary, the theoretical underpinning to the 3 'C' model indicates that dialogue and discussion form the basis of the social interaction that allows declarative and functional knowledge to be accommodated, knowledge to be constructed, and new understandings and appreciations to develop through reflection and consolidation. With this theoretical underpinning established as a starting point, the design methodology can now be developed.

The 3 'C' model for online course design

The theoretical underpinning of the 3 'C' model just described, places equal emphasis on the three ingredients of online learning, namely Content, Construction and Consolidation. Each component is delivered via discussion and dialogue, both peer-to-peer and peer-to-tutor. This social interaction revolves around learning activities that are focused on the learning outcomes of the module and are fully integrated within the assessment strategy.

The 3 'C' model is represented by Figure 1: the **Content** consists of the declarative knowledge associated with the course, **Construction** refers to the social construction of knowledge that occurs whilst students are engaged on authentic learning activities and **Consolidation** encompasses the reflective process by which learners develop new understandings and appreciations of the learning they have just realised.

The diagram in Figure 1 illustrates the central role played by dialogue and discussion in each component of the model. The type of dialogue surrounding each 'C' is likely to be different in each case. The discussion surrounding the content is likely to be between learners as they determine what knowledge is required for the learning activities and where this can be found. The knowledge construction phase requires a dialogical interchange between learners and/or tutors as they consider different interpretations of the issues being discussed and modify their views accordingly. Consolidation, on the other hand, can be facilitated by private and public reflection via conversations both with oneself and with other learners or tutors.

The development of skills in Figure 1 spans all three areas. Skills require: declarative and functioning knowledge; practice and reinforcement gained through participation in the authentic tasks in the construction phase; and intuitive knowledge resulting from reflection and consolidation.

In addition, as mentioned previously, assessment strategies play a major role in the 3 'C' model. According to Biggs (1999, p. 60) assessment is a key motivator for learning and the level
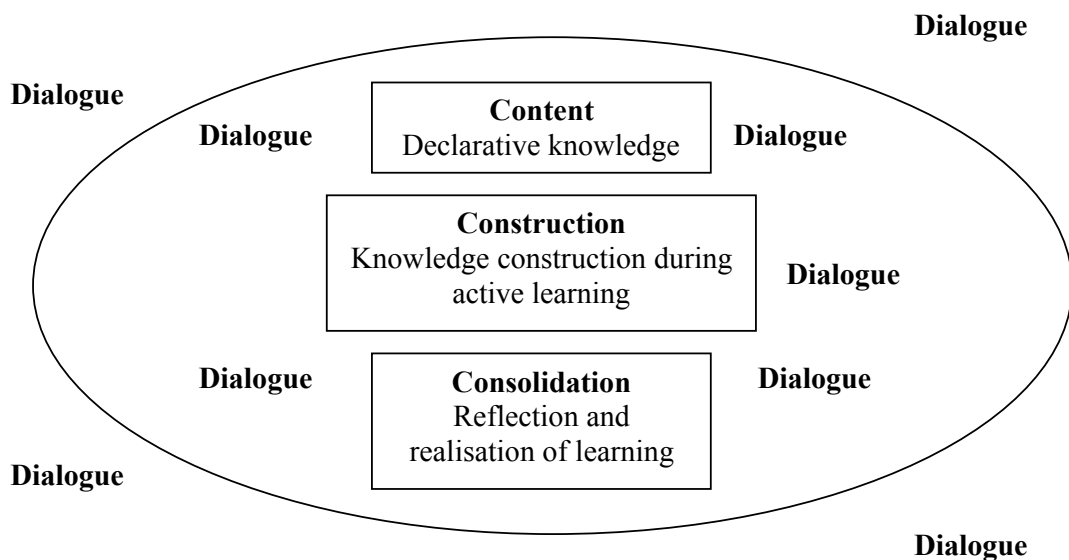

Figure 1.   The 3 'C' model of online course design

of integration between the learning activities and the assessment tasks contribute to the level of student engagement in an online course. If the learning activities—around which the course's curriculum is based—have no relevance or connection with the assessment tasks then students are unlikely to engage, however, if the learning activities *are* the assessment tasks, then reasonable students can be expected to engage fully with the online process. Realistically, most online designs achieve somewhere in between these two extremes (see Figure 2).

To paraphrase Biggs on this point (1999, p. 26), the design must entrap the student so that he/she cannot escape without learning what is intended. Assessment is one of the key motivating forces; it must be leveraged as much as possible to promote student engagement in the online dialogical process.

In summary, the key features of this pedagogical model can be stated as:

- A social constructivist approach.
- Active learning rather than a passive reception of knowledge.
- Equal attention given to all three areas of Content, Construction and Consolidation.
- Dialogue and discussion as the key learning process, and present in all three areas.
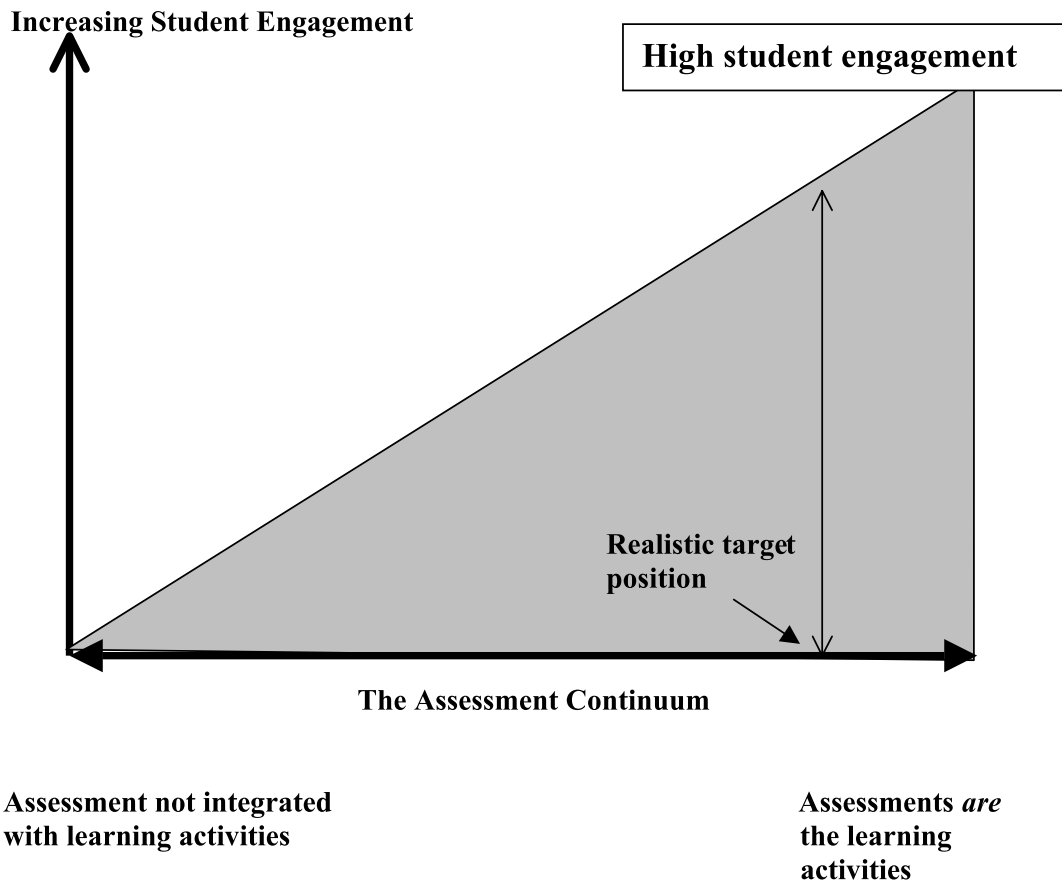

Figure 2.   The relationship between assessment strategies and student engagement

- Motivation through the integration of collaborative learning activities with the assessment process.
- Appropriate and proactive online e-moderating (Salmon, 2000), to promote dialogue and discussion.
- Adequate 'scaffolding' and/or student support, appropriate to the level and subject of the module/course being designed.
- A resource-rich virtual learning environment.

An application of this model ensures the key design criteria are not overlooked. In addition, the relative weightings of the 3 'C's can be varied to suit the subject matter and the required learning outcomes of the module. If the basic requirement of the module is to deliver large amounts of declarative knowledge, then the 'Content' element of the design can be enlarged at the expense of the other two. The key issue is to retain all the components of the *process* indicated by the 3 'C' model, with each 'C' equally valued but appropriately apportioned, depending on the level and/or the subject involved.

Application of the model

As outlined above, designing an online course for the first time is a daunting task. Designers need to know where to start and how to assemble their ideas. To make the task easier the 3 'C' model can be applied in three stages: stage 1 involves the generation of a 'module analysis grid'; stage 2 requires the design of a 'module activity map'; and in stage 3 a 'week-by-week work programme' is developed.

As a designer moves through the three stages the process moves away gradually from the theoretical considerations of content, construction and consolidation, towards the more practical considerations concerning what the student will actually be doing and learning. The aim is to turn the theoretical educational rhetoric into practical, down-to-earth course design issues. Although it is easier to describe the process here in three stages, in practice a number of iterations take place between stages 1 and 2 as the final design is formulated.

Stage 1: the module analysis grid

The first step is to analyse the module across the two dimensions of: (1) the 3 'C' components and (2) the desired module elements. The desired module elements consist of the building blocks of the learning experience and are expressed in units of 'hours of student effort'. In considering these elements, designers are forced to consider the make-up of the module and the broad nature of the learning activities that students will engage in. Whilst doing this, and mapping the elements across the 3 'C's, tutors must consider whether their proposed learning activities focus on content, construction or consolidation. The resulting module analysis grid reflects the intended 3 'C' weighting (see example in Figure 3).

The task in this stage is not to balance the 3 'C's exactly, but to consider the module elements in turn, and build a coherent learning experience that is capable of delivering the required learning outcomes in a way that is consistent with the underlying 3 'C' pedagogy. Moving through this stage makes it difficult to fall into the trap of focusing entirely on content at the expense of process.

Module Analysis → 3 'C's ↓ Module Elements	Content Receiving info. Seeking info. Discussing info.	Construction Knowledge construction via collaborative active learning	Consolidation Reflection and consolidation of learning—individually and with others. Discussion on learning	Total Hours
Pre-induction	2		2	**4**
Face-to-face induction	2	2	2	**6**
Online induction	1	3	1	**5**
Researching content	10	10	10	**30**
Guided reading	10	5	5	**20**
Workshops	3	6	3	**12**
Group problem-based activities	10	15	10	**35**
Collaborative group assessment	5	15	5	**25**
Individual reflective assessment	2		8	**10**
Examination			3	**3**
Total Hours	**45**	**56**	**49**	**150**

Figure 3.   Example of a module analysis grid

Stage 2: the module activity map

The second step leaves the concepts of content, construction and consolidation behind, and starts to translate the module elements of stage 1 into firm and more detailed learning activities. The 'Total hours' figure given for each module element of the module analysis grid—extreme right-hand column of Figure 3—acts as the starting point for developing the module activity map (see Figure 4).

   As the details are thought through, constant reference must be made back to the module analysis grid in order to stay true to the distribution of hours across the 3 'C's. An iterative process

Module Element	Total Hours	Details
Pre-induction	4	Pre-induction pack sent in the post prior to commencement of course, including: student handbook, WebCT induction tutorial, invitation to email pen picture to tutor for circulation, preliminary orientation for initial face-to-face induction day.
Face-to-face induction	6	One-day induction programme, 0900–1600 hrs. Tutors to outline course philosophy and deal with student and staff expectations. Groups to be formed and ice-breaking activities used to start the process of creating a learning community. Online access problems resolved. Group sharing of worries and concerns.
Online induction	5	Formation of learning community continued online in the first week through socialisation activities with little or no specific subject content. E-moderation used to nurture involvement and encourage contributions.
Researching content	30	Early collaborative activities online require cooperative research activities that help foster the learning community. Further research required as part of the problem-based activities.
Guided reading	20	Core readings identified on a week-by-week basis and signposting used to guide students to appropriate core texts that inform particular problem-based activities. Discussion required within groups to select appropriate concepts/theories for application to problems. Formative feedback given by online tutors. Essential reading from the core text or selected academic papers.
Workshops	12	4 no. 3-hour workshops spread throughout the semester/year. Tutors involved in group activities to facilitate and guide learning. Problems revisited and key learning points emphasised. Last workshop to focus on exam preparation.
Group problem-based activities	35	Collaborative problems, tasks and/or case studies released throughout the study period. Students to formulate solutions and answers online through collective effort and discussion. Consensus answers posted for summative assessment. Formative feedback given to early drafts.
Collaborative group assessment	25	An integrating assessment with a group report. Task requires extensive collaboration online. Assessment criteria to include self and peer assessment accounts.
Individual reflective assessment	10	A reflective account of the group work identifying the individual's contribution to the effort and reflecting on the learning achieved. New content may be researched at this stage to complete the learning, and extracts from the online discussions used to illustrate knowledge construction and group work.
Examination	3	A 3-hour open-book examination focused on problem-based tasks similar to the online coursework.
Total Hours	**150**	

Figure 4.   Example of a module activity map

develops between the first two stages as modifications are made to and fro between stages 1 and 2, and the final details are fleshed out. In addition, the integration of the learning activities with the assessment strategy must be considered at this stage. Wherever possible, the assessment criteria for the activities/assessments must be used to foster online engagement, and appropriate scaffolding and student guidance must be built into the design.

Stage 3: the week-by-week programme

The final stage involves breaking down the module activity map into appropriate-sized packages of work. How this is presented will depend on the level/subject of the course in question and the degree of independence afforded the students. For postgraduate work for instance, with mature well-motivated students, the level of prescription and structure built into the course might be minimal. On the other hand, for level 1 undergraduates a far tighter structure might be imposed with weekly readings, online activities, private study targets and frequent formative feedback.

At this stage of the design process tutor preferences come into play. In line with the learning outcomes of the module, tutors can use this final stage to design-in their favoured method of working. For instance, standard templates can be used to convey the weekly learning tasks to students, or milestone dates can be set for assignments, allowing students the freedom to decide when and how they should go about the tasks. The important thing is to use the module activity map as the guiding document in packaging up the work. Illustrative examples of week-by-week programmes for undergraduate and postgraduate modules are given in Figures 5 and 6, respectively.

Discussion and conclusions

A number of course teams within Coventry Business School have used the 3 'C' model to prepare online flexible modules and have reported that they have found the tool very useful. As Teaching Fellow for the Business School the author has worked with development teams as an internal consultant, taking them through the model, stage by stage, up to final course design. In the course of this work tutors have responded favourably to the model, stating that it has given them a sound framework in which to structure their ideas. They have particularly liked its straightforward structure and ease of application, making the adoption of the underpinning pedagogical theory both simple and automatic.

Furthermore, substantial advantages have been gained from being able to articulate the rationale behind the course design process. Tutors have been able to spell out to students exactly what participation is expected of them in both activities and in online discussions. This has allowed the matching of expectations between tutors and students and helped the efficient management of the learning experience.

In addition, where the tutor running the course has not been the course designer, it has allowed a very detailed briefing to take place. The course tutors have been able to examine the 3 'C' design process and align themselves with the learning ethos underpinning the design. This has permitted a far more enthusiastic and committed delivery of the course, compared with say, the hollow experience involved in teaching a course to somebody else's overhead slides.

Module—Current Issues in HRM

Topic of the Week	Managing Diversity
Learning Outcomes	This week's activities are related to Learning outcomes (1) and (2) i.e. critically evaluating HRM issues and considering alternative perspectives.
Online Activity 1.1	
Title	Pitney Bowes Case Study. An example of a strategic plan on managing diversity.
Purpose	To critically evaluate this HRM issue and consider its implementation from alternative perspectives.
Task	You are to read the case study on the web and then study the support materials in detail. From the readings you must choose five key words to summarise what diversity means and post these to the discussion board under the thread labelled 'Activity 1.1 Managing Diversity'. Then you should consider what you believe to be the actual benefits of managing diversity to both employer and the employee and summarise these benefits in no more than 200 words. Then post your 200 words in the thread labelled 'Activity 1.1 Benefits of Managing Diversity'.
Interaction	View all the groups of five words posted by your fellow students and then repost your own list making changes if you find better words than you originally identified. Explain in your second posting why you made changes or why you didnít. Respond to at least three postings of the benefits of managing change and say why you agree or disagree with their analysis.
Timescale	All parts of the task to be completed by Friday.
Support Materials	Essential Reading—Redman & Wilkinson (2001), Contemporary HRM Chapter 13, pp404–421.
	Torrington , Hall & Taylor (2002) HRM Chapter 22, pp362 onwards.
	Supporting notes on WebCT—A General Overview of Managing Diversity.
Links to Assessments	Coursework 3 consists of a portfolio of evidence of engagement with the weekly learning activities. Include the following items from this week's activity in your portfolio: 1. Printout of your final list of five words. 2. Printout of your 200 words on the benefits of managing diversity. 3. Printout of your three responses to other students' view on the benefits of managing diversity. In addition, Managing Diversity will be one of the key themes in the list of issues for a more in-depth treatment in coursework (1).

Figure 5.   Example of week-by-week programme (undergraduate module)

Module—Designing and Delivering Training

Week Two: The readings, activities and discussion topic listed below are all designed to support your successful completion of the first assignment.

Relevant Learning Outcomes	LO1	Analyse and interpret organisational context and business environment to ensure that training needs meet business needs and stakeholder requirements.
This week's topic	T1	Organisational context and business environment; structure and roles of training.
Workshop	None	No workshop this week.
Reading	R1	Harrison, R. (2002), Learning and Development Chapter 3, pp54–74 (focus—Strategic HRM).
	R2	Harrison, R. (2002), Learning and Development Chapter 6, pp117–134 (focus—Power, politics, culture).
	R3	Harrison, R. (2002), Learning and Development Chapter 8, pp155–160 (focus—L&D roles).
Activity	A1	Use the table on page 80 of Harrison (2002) to plot the training and development role and contribution in your own organisation.
	A2	Use Harrison's (2000) model of the organisation as a system (see separate note sheet) to identify and analyse the key elements impacting within and upon your own organisation. External environmental issues can be addressed by activity A3.
	A3	Complete a PEST analysis for your organisation (if you require more guidance please ask the tutor for help).
	A4	If possible obtain copies of your organisation's Training Policy or strategy documents and review these in terms of identified priorities and approaches.
Self-Assessment	SA2	Complete the self-assessment quiz to check your understanding at the end of week 2.
Discussion Topic	DT1	As part of the planning process for Assignment 1 you need to post a powerpoint presentation of no more than 6 slides on the discussion board reflecting your findings/work in progress; you should provide constructive feedback/comments to at least two other students. This topic will run until the assignment hand-in date.

Figure 6.   Example of week-by-week programme (postgraduate module)

In the same way, the use of the model has acted as a staff development tool. Being able to take staff, who are not familiar with online learning techniques, through the model, stage by stage, allows for reflection on the issues and a detailed examination of the pedagogy and learning intentions. As discussed in the introduction, it has moved them towards becoming 'crafters of educational processes' and away from being merely 'content schedulers'.

Equally important, post-delivery evaluation of the resulting online modules has suggested that a high level of student engagement has been achieved. On one online course, made up of a mixture of online and traditional modules, exit interviews were carried out with participants to assess the nature of the student learning experience. Students confirmed a higher level of activity on the online modules than on traditional face-to-face modules. One respondent described her study pattern for a face-to-face lecture-based module as consisting of attendance at all lectures, but with no further reading or study in between: she only put in additional effort when assignments were set. In contrast, the student stated that the online modules forced her to engage continuously with the activities, and the collaborative nature of the learning sustained her interest and involvement throughout.

Further evaluation of the model is under way, but what can be concluded at this stage is that the use of the 3 'C' model has improved the thoughtfulness given to online course design, and, in the absence of any alternative tried and tested tool, it has given busy academics a methodology for mapping out online educational experiences which are pedagogically sound, constructively aligned and maximise the learning opportunity afforded by electronic connectivity. The model provides a useful tool that can easily be used by non-technical academics to design online flexible modules that contain all the essential ingredients of a high-quality networked collaborative e-learning experience.

Note on contributor

Len Bird originally trained as a Chartered Engineer, obtaining his first degree from University College, London in 1970. Subsequently, while a director of a national engineering company, he gained an MBA from the Bristol Business School and then in 1996 switched to lecturing on Strategic Management following a PGCE at the South Bank University. In recent years Len has taken a keen interest in teaching critical thinking, reflective practice and managerial effectiveness. His main research work concerns the use of technology to support learners on work-based learning programmes.

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