Learning and Assessment: Staff Conceptions of Final Projects for an Undergraduate Multimedia Design Degree

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Abstract

This is a qualitative study of teachers' conceptions of learning and assessment in a final year undergraduate degree in multimedia design. In particular, the focus is on the assessment process of final year projects and what these represent in terms of student learning, progression and potential employability. In the context of Art and Design disciplines, objective criteria of assessment are often difficult to define. How and what we assess reflects the value we place on the final artifact. Underlying this study are theories of 'deep' learning that underpin design disciplines. The open-ended interviews with a group of teachers were combined to form a pool of statements about assessing and grading the final project. The data was analyzed using a phenomenographic research approach. A limited number of qualitatively different conceptions of assessment, learning and progression were identified. These conceptions vary with respect to what final year student outcomes represent, and expose some congruence on what to assess and what constitutes learning.

Categories and Subject Descriptors (according to ACM CCS): K.3.1 [COMPUTERS AND EDUCATION]: Learning and Assessment

1. Introduction

Every year the assessment of final year projects for the undergraduate degree in multimedia design at Cumbria Institute of the Arts (CIA) exposes a variety of conceptions among teaching staff on what is student learning. For reasons of reliability, validity, and transparency, the assessment process involves a number of teaching staff. The accumulated grades disguise the extent of the debate among them on what to assess and what the projects represent in terms of learning. Due to recruitment and marketing pressures, the more visually appealing and 'polished' final projects are prominent at the graduate showcase. Projects considered poor or incomplete are rarely on display. Anecdotal evidence over a period suggests that in the view of many visitors to the graduating exhibition, the quality of the degree is ultimately dependent upon and synonymous with the final year showcase. Similarly, management expectation of high quality graduate outcomes is measured against what is on public display.

Some teaching staff recognize the relative progression and achievement in final year students irrespective of the standard of the final project. Others focus predominantly on the standard of the outcome and consider it the articulation and expression of everything the student mastered. What constitutes effective learning and assessment is significant in that it suggests what methods we value as educators, and how we perceive teaching and learning. This can inform revisions with the aim of improvement. '…no lasting curriculum change is possible without a prior change in teachers' behaviours, attitudes and beliefs' [Bennett, Carre, & Dunne 2000, p.122]. This study identifies the varied conceptions of teaching staff when grading final multimedia projects. What do these represent for student learning? What should be assessed, the process or the outcome? Is the learning of students without a successful final project less advanced? What are staff perceptions of the learning objectives and assessment strategies?

The Art and Design Benchmark Statement [Buss, Gretton, 2002] provides general guidelines in teaching, learning and assessment for design disciplines. It states that student learning is conditional on teaching strategies that promote meaningful and autonomous learning activities. There is an implicit recognition in the Benchmark Statement that learning and progression can be varied and relative. Notions of assessment based on grading against objective and measurable criteria may not presuppose but can imply that student learning is uniform and the outcomes of student learning are fixed. Theories that advocate a 'deep' approach to learning, promote strategies that guide students towards underlying concepts and meanings. This is contrasted to 'surface' learning which entails low-level engagement with learning material. A 'deep' approach to learning implies a standard against which the quality of teaching and learning methods are compared. 'Deep' learning combined with appropriate assessment strategies is closer to the generic guidelines for Art and Design; they too, imply variation and interaction between teaching and learning.

It is characteristic of design disciplines to share common emphasis on imagination and creativity, and to combine these with vocational skills for the production of an artifact. The traditional teaching methodology of design has evolved from a mainly transmissive model – 'sitting with Nellie', also known as 'atelier' method, i.e. '…a conception of learning and teaching which relied heavily on one-on-one tutorials' [Davies, 1997a], to more independent and active student engagement in learning activities. This historical evolution reflects a critique of previous teaching strategies and the parallel growth of mass education. 'Sitting with Nellie' is neither educationally sound nor practically viable [Davies, 1997a]. Teaching strategies with emphasis on independent learning, negotiated learning, and Problem-Based Learning (PBL), are common practices.

The educational objectives of the final multimedia project are integrative. They combine general transferable knowledge and specific vocational skills with the development of critical awareness and creativity. The assessment tasks attempt to address the development of these objectives within the framework of institutional guidelines for assessment and grading. The tasks and the corresponding teaching strategies aim for constructivist learning, but the summative nature of the final project makes this high-stakes assessment. This raises questions about the reliability of the grading process. How reliable is it to break down complex process into measurable segments of assessment, and what of the integrative nature of the project?

This study explores the conceptions of learning and assessment associated with the final project. The data comprise interviews and the phenomenographic approach attempts to unveil the varied and qualitatively different conceptions of the staff who grade.

2. Philosophy and the research process

The Art and Design Benchmark Statement [Buss, Gretton, 2002, p.8] states as the purpose of assessment to promote '[student]…understanding of their learning processes and [assessment strategies] are designed to foster a deep approach to learning. They… promote autonomous learning and self-evaluation as vital elements within the overall learning process… Assessment criteria accommodate the speculative enquiry common to most disciplines in Art and Design…' There are two obvious inferences from this. Firstly, the emphasis shifted away from 'sitting with Nellie' to enabling the 'apprentice' to engage with the learning process so that he/she develops their own learning. The learner is not a passive apprentice that follows in the steps of an expert master, but rather an active participant who co-constructs knowledge often tailored to his/her own educational objectives. This assumes pluralism in what students perceive learning experiences to be. Secondly, and closely connected to the first point, assessment criteria need to cater for the evaluation of approximate, varied and inexact student outputs that do not always fit commonly agreed measures of performance and grading.

A positivist approach to assessment assumes that measurements of objectivity are possible, and that student learning ability is fixed, constant, and bears no relation to context, to the personal approach of the teacher or the orientation of the student towards his/her learning [Johnston, 2001, p.37]. In contrast, the literature on interpretivist assessment shares the common characteristic that reality, especially social reality is a mental construction and the result of interpretation, rather than an absolute [Johnston, 2001, p.40]. Between these two broad approaches to assessment is that of post-positivism; assessment tests the learner's ability to undertake tasks that resemble authentic situations. These tasks are complex socially and intellectually, and cannot be measured by objective criteria; teachers and learners are engaged in a dialogue to interpret and evaluate outcomes [Johnston, 2001, p.40].

For Biggs [2003] learning depends upon the student's activities; they should promote a 'deep' approach to learning as opposed to 'surface' learning. 'Constructive alignment' consists of appropriate instruction and assessment aligned with learning activities that encourage constructivist learning. Biggs [2003, p.13] places the emphasis on what students have to do through the instructional process, rather than how they represent knowledge. Meaning can be personal and learning depends upon their motives and intention. The acquisition of information in itself is not sufficient for change, but the way it is structured and processed can bring about 'conceptual change'. Good teaching consists of promoting activities that support 'deep' learning. When students take on a 'deep' approach, they focus on underlying meanings, themes and principles, and they approach the learning task with positive feelings, interest, and even exhilaration. This contrasts with instructional activities that promote 'surface' learning and result in low-level engagement, 'cutting corners', and some forms of rote learning.

Prosser and Trigwell [2000] extend Biggs' [2003] model and argue for a more integrative approach. Teaching and learning are closely related and the required alignment is between the teacher's and the student's perception of teaching and learning. Appropriate instructional activities alone will not suffice, for students bring to the process their own conceptions and prior experiences. Students do not always engage with learning in the same way. Different students will employ different strategies or 'approaches' at different times, and this requires teachers with awareness and open to adaptation. One size does not fit all. This perspective stresses a dynamic and inter-actional relationship between the prior experiences and conceptions of the student, their approach to learning, the learning outcomes and the teaching and learning context; these are considered simultaneously. There are similarities with Ramsden's [2003] phenomenographic research on teaching in Higher Education (HE), where the focus is on teaching methods and awareness of the different conceptions that students have of the learning experience. These conceptions are amenable to change. Student approaches to learning and instructional practices are inter-related. There is no 'golden rule' but

there are inferior or better ways of teaching dependent upon teacher awareness of how students learn.

On assessment, Biggs [2003, p.140] argues that learning depends not on the educational objectives and the curriculum, but what students perceive will be assessed. This is known as 'backwash' i.e., the way students are assessed has an effect on how they approach their learning. Another challenge for teachers is how to assess. Norm-Referenced Assessment (NRA) entails the grading of student outcomes not to learning objectives but against the achievements of other students. This comparison provides a ranking order and the distribution of grades reflects where students are in this order. NRA is comparative, telling us that one student is better than another student. '[With NRA]… the distribution of grades is kept fairly constant, reflecting underlying beliefs about how achievements ought to be truly distributed…'[Knight, 2001, p.16]. Criterion - Referenced Assessment (CRA) is the opposite; it is possible for all students to be graded very high or very low. With CRA, the range of grades is not determined by ranking order. Each level of achievement has its own criteria against which student performance is evaluated. In theory all students could pass the assessment or alternatively all students could fail the assessment. Biggs [2003, p.146] states his preference for CRA for it can assesses authentic performance, involves formative assessment, is student-centred, and involves grading categories that are distribution free. NRA makes judgments about people and CRA about performance.

Similarly, Ramsden [2003, pp.204-205] links assessment to learning, but places learning first and grading last. Teachers with awareness learn from the mistakes of the students, discover their misunderstandings, and modify their strategies appropriately. This may entail a variety of assessment methods. Where possible, learning tasks should reflect realistic scenarios, and assessment should happen during the learning experience as well as at the end. What is assessed is not superficial knowledge, but integration of concepts, ideas, and their application, in other words 'deep' learning.

The aim of this study is to explore the range of conceptions in how and what teachers grade in the final year multimedia project. This is pursued through semi-structured interviews – the main tool of phenomenography. The fundamental assumption of this method of analysis is the existence of a finite number of qualitatively different ways of perceiving a particular phenomenon. Recent phenomenographic studies [Pang, 2002] focus not only on what are the different ways of experiencing a phenomenon, but also on what is a way of experiencing a phenomenon. The former is referred to as the 'structural' aspect (what) of the variations of perception, and the latter as the 'referential' (how). The results of phenomenographic research are categories of description of the various conceptions of a phenomenon, and these can be related and hierarchically arranged. The identification, description and categorization of perceptions and practices creates a hypothetical 'outcome space' or a 'topology' of inter-related categories or groupings, described by Åkerlind [2002, p.2] as a 'space of variation'.

The critique of phenomenography vis-à-vis validity comes from both quantitative and qualitative perspectives. The former question the role of the interviewee, the subjectivity of establishing categories of description and the credibility of findings. '[Phenomenographers fail] …to account for their own 'prejudices' and the part these play in the 'discovery' (construction) of people's conceptions... An observation is always preceded by... something theoretical' [Webb, 1997b, p.225]. The qualitative critique consists of arguments in support of other longer established methodologies, of which phenomenography is an 'errant branch'. [Entwistle, 1997, p.128]

In response to these critiques, phenomenographers developed a set of guiding principles for the contact of research, and draw from these to address issues of reliability and validity. These are summarized well by Entwistle [1997, p.132-3]: 'It is essential that the questions are posed in a way which allows the …[participants] to account for their actions within their own frame of reference, rather than one imposed by the researcher... The categories of description, which are the outcomes of phenomenographic analysis, need to be presented with sufficient extracts to delimit the meaning of the category fully… The meaning resides in the essence of the comments from which the category has been constituted…Great care must be taken in establishing the categories in ways that most fairly reflect the responses made, and discussions with others in the process of collating the reported categories will be an important safeguard…They remain to some extent subjective interpretations… phenomenography explores relationships between them... [It] involves the researcher in an analysis of the meaning of each category in relation to every other one… and a thorough analysis of meaning of these differences.'

There is also the concept of 'bracketing' of presuppositions in phenomenography, i.e. the need for the researcher to set aside his or her own assumptions, in order to document the interviewee's own point of view. Some kinds of presupposition that must be bracketed are:
- importing earlier research findings;
- assuming pre-given theoretical structures or particular interpretations;
- presupposing the investigator's personal knowledge and belief;
- assuming specific research techniques;
- the researcher's concern to uncover the 'cause' of certain forms of [participant] experience... it would be a distortion to import the researcher's notions of cause-and-effect into the description of the experience.' [Ashworth & Lucas, 2000, p. 298]

In phenomenographic studies the focus is on identifying and reflecting upon the range of variations available. The data for this study was gathered through open-ended questions during interviews with teaching staff that grade final multimedia projects. As the number of interviewees is

small, this is not an exhaustive study but rather a limited investigation that reflects the context of the particular undergraduate degree. The interviews were transcribed verbatim and form the raw material for this study. The intention is to report on the variation that emerges from the whole group's understanding of the phenomenon - in this case, what does the final year project represent and what is assessed. Thus the range of questions (Appendix 1) was designed to focus the teacher's awareness on different aspects related to their experience of teaching and grading. The questionnaire was piloted with a number of staff that grade final projects in other disciplines within the same institution. Individual interviews lasted between thirty minutes and one hour, and concluded when the staff member indicated that they satisfactorily answered the questions.

3. Teaching and learning in Art and Design

Art and Design disciplines share a number of common teaching and learning practices some of which are characteristic to the sector. The Art and Design Benchmark Statement [Buss, Gretton, 2002, pp.2-3] describes these practices as placing emphasis on '… imagination, creativity and, where appropriate, craft skills… [Instruction is] designed to develop students' intellectual powers and their ability to communicate. The student experience embraces subject specific and generic knowledge and understanding, attributes and skills. Learning in Art and Design stimulates the development of an enquiring, analytical, and creative approach, and encourages the acquisition of independent judgment and critical self-awareness. Most students work in studio environments supported by a wide range of workshops and other dedicated facilities. Commencing with the acquisition of an understanding of underlying principles and appropriate skills, students normally pursue a programme of staged development progressing to increasingly independent and personally focused learning… Active learning through project-based enquiry has always been a feature of the Art and Design curriculum in higher education.'

It is worthwhile 'unpacking' this statement because as a summary it encompasses many truths about pedagogy in Art and Design, but also hints at evolution and new challenges.

The terms 'creativity', 'inventiveness' and 'innovation' are widespread in their use, and embedded in most project work in Art and Design disciplines [Davies, 1997a]. It is generally accepted that in these disciplines the outcome is normally an artifact that represents and embodies these creative qualities. '…The manifestation of these essential human capacities [to visualize the world from different perspectives] has always been through the production of artifacts…for cultural consumption' [Buss, Gretton, 2002, p.2]. It is explicit in Art and Design education that artifacts require but are not limited to, craft skills (vocational skills) that are mostly subject specific, and are better developed and enhanced in studio-based practices. A historical review confirms that the development and production of the various artifacts in Art and Design education followed the 'atelier' method or 'sitting by Nellie'; expert practitioners or master artists passed on their experience in one-on-one tutorials [Davies, 1997b].

In the late 1980s the 'atelier' approach was critiqued and additional instructional methods were adopted in Art and Design education, not negating the strong emphasis on subject specific craft/vocational skills, but functioning in combination and parallel with them. The new emphasis on student centered learning combined with studio-based practices is often attributed to a number of causes, such as the pressures of mass education and widening participation, the significance of developing transferable skills that have wider applicability and relevance to current employment requirements, and the recognition that design irrespective of discipline is in itself a transferable skill. Davies [1997a] lists the following imperatives for change: '…the recognition of students to learn independently, the participation of students from a wider range of backgrounds, financial pressures, changed expectations of specific work-related skills, graduates being able to deal with situations not yet existing and having transferable skills for new tasks, recognition of the limits to and scope for the commonality of art, design and craft as disciplines.'

Similarly, Johnston [2002, p.33] states that '…there are larger numbers of students than previously. The result is that there are pressures on higher education to produce summative assessment systems with high levels of consistency and which are easy and economical to implement… They must also be usable in terms of 'feed out' to employers and postgraduate schools… the student population has become increasingly diverse and requires more varied approaches to teaching, learning, and assessment.'

On assessment, the Art and Design Benchmark Statement [Buss, Gretton, 2002, p.8] states '…summative and diagnostic assessment are regarded as positive learning tools… Assessment strategies support students' understanding of their learning processes and are designed to foster a deep approach to learning. Strategies also promote autonomous learning and self-evaluation as vital elements within the overall learning process. Self and peer evaluation constitute an important part of the formative assessment diet… Assessment criteria accommodate the speculative enquiry common to most disciplines in art and design, and provide fair and accurate assessment of team work and individual contributions to the overall outcome of collaborative projects.'

The current amalgam of teaching and learning practices in Art and Design education includes tutorials, workshops, demonstrations, PBL, and the recognition that students acquire knowledge through active engagement in learning activities. It is common that learners have some control over the curriculum through negotiated projects and individual contracts, and to engage in group work through collaborative and often cross-discipline projects [Jackson, 1997]. Regular formative assessment is part of the learning process.

4. Educational objectives and final year project

The general educational objectives and the level of knowledge graduates aim to achieve upon completion of the degree are described in the course document (CIA, 2002]. The module description for the final project is more specific and refers to objectives and assessment criteria in relation to the subject alone. The latter is a sub-set of the former and this inter-relation is significant for the course document sets the wider educational objectives that individual modules and their combination aim to achieve. The reference below to these documents sets the background and an institutional benchmark against which teaching and learning procedures and achievements are compared and evaluated.

The course document includes a number of programme specific aims and objectives, as well as general transferable skills, and is divided into three levels corresponding to each academic year of study. They all attempt to encapsulate the wider spectrum of learning and achievement. Programme specific aims are listed as '…to provide [the student] with the opportunity to develop practical, conceptual, creative and vocationally specific skills in… areas of Multimedia Design', and these are supported through the development of 'Conceptual abilities… an advanced understanding of the differing theories and debates surrounding the field of digital media and… [Ability] to confidently develop complex arguments and apply the theories and concepts of practical work… a range of technical abilities… an understanding of the changing nature of the technologies used in the digital media and [the graduate] will be equipped to respond to these changes and take advantage of emerging technologies as they become available… practical skills, an appreciation and understanding of the value and importance of research, planning and project management skills to [the chosen] professional field. [The graduate] will have [developed] practical team working skills… [Creativity will develop] through confidence in technical skills, matched with conceptual and practical abilities…[The graduate] will be able to provide creative solutions to specific digital media problems…' [CIA, p.101]

In addition to the pursuit of programme specific aims, the general educational aims include: 'To enable [the student] to develop as creative individuals with the capacity for independent judgment and an awareness of the social and ethical implications of their work; to perceive relationships between different disciplines and topics of study and to locate their educational experience within a broader, contemporary, social and economic perspective; to encourage the development of imaginative approaches to problem solving through enquiry understanding and judgment; to enhance, through increased opportunities self-centred and independent learning…' [CIA, p.102]

The final project is a double module, i.e. it has a value of 20 points and is delivered over a period of two semesters, as opposed to a single module with duration of one semester and a corresponding value of 10 points. This is significant in two respects. Firstly, the final project represents only 20 points from a total of 180 that students have to achieve to complete the course, yet its symbolic value is of greater significance than the points attached to it indicate. Secondly, and related to the first point, it is possible for students to perform poorly in the final project but pass it. If the same students achieve high grades in all other subjects over the last two years of the course, they can graduate with a first class honours, for final classifications are determined by combining the grades of all subjects in during these years.

The educational aims of the module description for the final project are listed as: 'To enable learners to develop self-management skills and take responsibility for their area of specialization; to enhance the ability of learners to research, develop, design and produce content which takes advantage of the unique characteristics of New Media… to be critical, original and creative within the chosen area of specialisation; to develop, design and produce a New Media project of professional standards... The learning and teaching methods to achieve these objectives are listed as self-directed study, group discussions (class-based and online forum), critique sessions and case studies, critical analysis, reflection and brainstorming, peer appraisal, one-on-one feedback and guidance, and formative assessment.' [CIA, p.15]

Finally, the module comprises six assessment tasks with corresponding percentages (Table 1). This breakdown into smaller assessed tasks allows for 'chunks' of summative feedback as students progress through the project. This is supplemented with formative feedback as each student has regular sessions with an allocated supervising lecturer. The CRA assessment regime assumes that if students progress well through the individual stages – emphasis on correct process - the final artifact (graded out of 30%) will demonstrate quality, and/or irrespective of this, it is possible for students to achieve a high grade if they perform well in most other tasks (70% of total grade).

- Assignment 1: Selection of topic and area of specialisation. Justify and explain in learning contract (500 words). 10%
- Assignment 2: Content research, production timetable and presentation (Record in log-book). 20%
- Assignment 3: Progress report. How the project is progressing according to student timetable (Present progress). 10%
- Assignment 4: Final project (The artifact). 30%
- Assignment 5: Critical appraisal, user testing/ software testing (1000 words). 20%
- Assignment 6: Final presentation and content documentation (15-20 minutes). 10%

Table 1: *Assessment tasks and percentages.*

5. Categories of conceptions and outcome space

The first level of analysis involves the identification of the qualitative distinct ways the interviewees conceive and consider different elements of the final project. This is the structural aspect of the variations. The replies to each question comprise the minimum number of conceptions expressed, and form distinctive categories that are mapped in the outcome space (Table 2).

5.1 Conceptions of the final project

The majority of the interviewee's perceptions on what the final year multimedia project represents, refer to the potential of the project to contribute to the employability prospects of the students. For some teaching staff the project is a sufficient indicator of the potential for employability, while others consider together with the project other skills and qualities the students may have or need (creativity, time management, communication, etc) for employment. There is also the perception that the final project represents the synthesis of knowledge developed and acquired by individual students. In terms of learning, an interesting observation is that if the final representation of knowledge (artifact) is less significant compared to what students learn through the instructional process [Biggs, 2003], a 'polished' final project is not a pre-condition for learning.

• Conception A: The final multimedia project reflects the employability of the student. 'It is a springboard for working life after college. It is a vehicle for future professional prospects.' (Interviewee D)

• Conception B: the qualities of the final multimedia project plus other skills and qualities contribute to employability prospects. 'There are many ways to perceive quality.' (Interviewee B) 'The final work can be assessed on a number of levels. For example, creativeness where you can have something beautiful but does not hit the market. Yes, I do. But employability can be across a number of fields. Some graduates will be employed because they have professionalism and others according to their creative standards.' (Interviewee A)

• Conception C: The final multimedia project represents the synthesis of knowledge acquired. 'It is a culminating point for their studies. [The students] should be bringing together a whole range of things they have learned and skills throughout their time as students. It should reflect the work of a thinking practitioner.' (Interviewee C)

5.2 Originality, creativity, growth and progression

The responses on creativity and originality (the status of the artifact) versus individual growth and progression (how much the student advanced in learning) form two contrasting views. The first is that all students have the potential to develop creativity on the premise that learning and progression occurred; creativity is synonymous with progression. The opposing position values the relative progression of individual students irrespective of levels of creative achievement.

• Conception A: Creativity and originality are synonymous with growth and progression. 'Creativity and originality are nearly the same with personal growth and progression…' (Interviewee B)

• Conception B: Student growth and progression is relative. 'Individual student progress is very important. It is important to take account where each individual student is, and where they finish up.' (Interviewee D)

5.3 Conceptions of teaching methods and their contribution to learning and progression

The module description for the final project lists a number of teaching methods, such as self-directed study, group discussions (studio-based and online forum), critique sessions, analysis and reflection of case studies, peer appraisal (group work), and one-on-one feedback and guidance (formative assessment). In this study, one-on-one supervision and self-directed learning constitute one group of expressed perceptions, and the second group is that methods ought to vary more and depend upon the different objectives and contexts. One-on-one supervision with individual students and self-directed study - in this degree in the form of learning contracts – is consistent with the trend identified by Davies [1997a], i.e. the move away from the transmissive model of 'sitting with Nellie' to a conception of a more independent and active student engagement in learning activities. The introduction of multiple teaching methods beyond and in addition to those associated with self-directed study, can have workload and resource implications.

• Conception A: One-on-one and self-directed study as the dominant teaching methods to achieve educational aims.
'By this stage of the course students should demonstrate that they can work independently. It is part of the skills they should have acquired… With one-on-one sessions you can get much more out of the student at that stage of the degree... It is about independent learning... The main focus should stay one-on-one.' (Interviewee C)

• Conception B: Use different teaching methods as appropriate to achieve educational objectives. 'The one-on-one approach may be appropriate for some cases. But it is also useful that they [the students] see their peers, share ideas and make presentations to each other. It is also good for them to have multiple tutors so they can see different perspectives.' (Interviewee D)

5.4 Conceptions of NRA and CRA

The perceptions of the interviewees on NRA and CRA and their preferred assessment method constitute two categories. The first is that NRA reflects better the changing workplace because it is not tied to fixed assessment criteria. CRA relies upon set criteria and if these are not updated

regularly they may not reflect the rapid changes associated with the fast moving trends common to electronic media. Perceptions in support of CRA are based on parity; all students are assessed against the same criteria and this implies that students may not always perform well.

• Conception A: NRA can accommodate for the rapidly changing workplace; not tied to strict criteria. 'I think I am on side of the norm mostly because of the more inclusive aspect of HE now… In addition, the world of the work has changed. That doesn't stay still. Who can lay down a solid set of rules for assessment? Norm referencing has to stay because each year things move up and down. You cannot anchor down on to one strict set of criteria. The world will change…' (Interviewee A)

• Conception B: CRA is fair for all; no 'dumbing down' of standards. 'Criterion-Referenced is OK, otherwise you are selling crap wine from one year to another. You got to have a certain amount of criteria and even then it is very hard to measure against all criteria…' (Interviewee B) 'I consider Criterion-Referenced to be fairer. It is not right to expect that each class will always have a certain number of high marks because groups of students can be very different from each other.' (Interviewee D)

5.5 Conceptions of assessment tasks for the final project

The six assessment tasks in Table 1 entail the appraisal of a variety of outcomes and performances, such as content development, research, presentation skills, the writing of an evaluative report, and the production, and testing of the artifact. The tasks attempt to engage the students in scenarios that require integration of concepts and their application. The distribution of grade percentages for these tasks aims to emphasise the process and not the final artifact alone. Staff workload – often associated with marking and grading - can be reduced if the tasks were limited to only four, for example. However, will a reduction of assessment points provide for an adequate number of learning activities, and will it be possible to assess the complex process and provide sufficient feedback? Appropriate instruction entails the right strategy and the right amount of assessment.

• Conception A: Regular assessment is beneficial to the students; the assessment regime is well balanced. 'The assignments should stay the way they are. If students are not impressed, it should be emphasized that the final project is not only the outcome but also the process. The hoops are there to help, they are steps across a river, and they give us a chance to assess the students not just on the final bit.' (Interviewee B)

• Conception B: Some assessment tasks can be integrated; the assessment regime requires changes. '[Assignments are] …part of the process rather than a series of hoops and hurdles that they have to get through. There should be some weighted points for the process they are going through, but not too many…' (Interviewee C)

5.6 The outcome space

Some of the 'what' components in the categories of per-

What the final project represents				
	Creativity and originality – growth and progression			
		Teaching and learning methods		
Employability			**NRA and CRA**	
				Assessment tasks
Synthesis of knowledge	*Creativity synonymous with progression*	*Self-directed study as the main teaching and learning method*	*NRA flexible to changes associated with new media; no set criteria*	*Change assessment regime, integrate tasks more*
The final project plus other skills contribute to employability	*Progression is relative*	*Different teaching methods as appropriate to cases and objectives*	*CRA no 'dumbing down' of standards, may require regular revision of criteria*	*Regular assessment is beneficial, no change to the assessment regime*

Table 2: *The outcome space, structural aspects.*

ceptions relate in a hierarchy based on inclusiveness. The perception that the final project plus other skills can contribute to employability includes the possibility that graduates can be employed on the merit of their project or portfolio alone. The objective of the final project is to integrate diverse skills; it requires the synthesis of knowledge, expertise and proficiency in a number of technical and creative areas. It is safer to assume that not all students develop in parallel paths (different targets, learning styles and unequal access to recourses, etc), and this supports the position that individual progression is relative. In any case, what are objective evaluation criteria for 'creativity', 'inventiveness' and 'innovation'? Self-directed study may be appropriate for students who prefer independent learning, but what of those who want the safety net of supervised workshops and timetabled classes with their peers? One size does not fit all. If progression is relative, teaching methods need to vary and they can include independent learning. Equally, if learning is relative it is preferable to grade students by set criteria than ranking order, for this can tell us more about their performance. CRA can be flexible to the rapid changes in the workplace associated with new media, on the premise that assessment criteria are revised regularly. Lastly, the integration of tasks and the reduction in the number of assignments can shift the focus away from the formative and diagnostic intention of some of the assignments (Table 1), towards a more summative approach to assessment, which is contrary to the spirit of the Art and Design Benchmark Statement.

6. Conclusion and reflections

This study explored staff conceptions on what the final year multimedia project represents in terms of learning and assessment. It has a double pretext. Firstly, the anecdotal comments from visitors to the graduating exhibition who equate what they view with the quality of the undergraduate degree even though weak projects are not exhibited due to marketing pressures. Secondly, the extensive debate among the teaching staff on what to assess and what these projects represent in terms of student learning and progression.

The Art and Design Benchmark Statement [Buss, Gretton, 2002] advocates teaching and learning strategies that promote 'deep' and autonomous learning. This implies variation in what constitutes progression. In turn, this questions notions of assessment based on measurable and objective criteria. Although not explicitly stated in the Benchmark Statement, the implication is that effective teaching and learning is not dependent upon the production of precise assessment criteria but rather of a dynamic interaction between educational aims and learning strategies. Objective criteria are inherently difficult to establish particularly in design disciplines where the educational value of the final artifact is open to multiple interpretations. 'There are difficulties developing statements of learning outcomes for awards at different levels… These are not trivial disputes because they stem from ontological and epistemological uncertainties… some criteria statements are not easy to translate into concrete and situation-specific terms…' [Knight & Yorke, 2003, p.6]

This pilot study suggests that teaching staff perceive the final project either as a reflection of the employability prospects of the student or as representing a synthesis of accumulated knowledge. There is also the perception that employability includes more than the status of the project and encompasses the individual qualities of graduating students such as their level of progression and creativity. For some teachers creativity is synonymous with progression and for others progression is relative. Based on these responses, it appears that teachers do no consider students without a 'polished' end product as less learnt; learning is relative.

Conceptions on the teaching methods employed are divided between those who consider the use of one-on-one tutorials as the appropriate approach, and those who wish to complement this with additional methods. It is not clear in this context if one-on-one equates with a mainly transmissive model – 'sitting with Nellie'. The use of individual learning contracts promotes student-centered learning but does not exclude the potential for increased adoption of a wider number of methods. What hinders the latter is increased workloads and scheduling limitations. This predicament is also evident from the conceptions on the assessment tasks for the final project. The reduction of tasks through integration can lighten staff workloads but will decrease opportunities for regular feedback. Certainly any implementation of NRA requires regular revisions of the course content, and any implementation of CRA requires regular revisions of assessment criteria.

Overall, the study exposed both a degree of congruence and a level of divergence. These may not alter how visitors to the graduating exhibition consider the work on display, but may contribute to the first part of the equation put forward by Prosser and Trigwell [2000]. Teaching and learning are closely related and the required alignment is between the teacher's and the student's perception of teaching and learning.

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