A model for holistic studio assessment in the creative disciplines

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A key issue facing educators in studio is deciding on what to focus when assessing creative work. Some studio educators highlight that assessment of creative work throws up challenges, because of the very complex nature of getting to the final 'creative' artifact. Whether assessment should focus on the 'process', the 'person' and/or the 'product' in the creative disciplines remains under debate today. In this paper, we present a model developed to guide holistic assessment in studio in the disciplines of Architecture, Art and Design. The model is designed to engage teachers and students in assessing creative practice and focuses on outcome dimensions (product, process and person), knowledge and skills (underpinning content knowledge and core skills) and reflective and professional practice (acting and thinking like an architect, artist or designer and industry capability). The model is based on good assessment practices and a synthesis of findings from a study that explored what these three disciplines appeared to value as the outcomes of learning in studio. As a result, the model is underpinned by a conceptual paradigm that holistically values the person's (well)being, the process and the product; seeing all three as being integral to good learning experiences and outcomes in studio. It also recognises the different emphasis likely in each discipline, given that each of the disciplines privileged different aspects of learning in their publications on studio. Overall, the model acknowledges the different disciplinary perspectives, highlights holistic assessment of learning that is explicit, fair and balanced and is aimed at engaging both teachers and students and good assessment practices.

Keywords: *assessment model, creative practice, studio assessment*

Background

The studio mode of learning and teaching continues to be examined as a mode of learning and teaching in the creative disciplines, with much attention being paid to educational outcomes and how they are realised (Kellogg, 2004; Forsyth, Zehner & McDermott, 2007). Criticism of the studio mode is often aimed at the master/apprentice model of learning and teaching used within it. This model is seen by some as representing a teacher-centred and content-focused mode of learning, which may result in students being more likely to take a passive approach to their learning, to look to the lecturer for design ideas and "[to] wait for faculty approval before making design decisions" (Ehmann, 2005, p.107). In fact, some believe that the "traditional master/apprentice model of studio instruction fosters greater student dependence on faculty for decision-making guidance" than is desirable (Bose, Pennypacker & Yahner, 2006, p.33).

Assessment in studio is also widely debated by many and has been for some time. There are those who argue that assessment of creative work or design events or objects is difficult, if not

impossible, because of the 'creative' nature of the final artifact (Ellmers, 2006); while others question whether assessment criteria can truly capture what art products are about. Some suggest that lecturers routinely struggle to identify criteria that capture the essence of the outcomes of art and design work and what students are attempting to accomplish (Sabol, 2006). Thus, a key issue facing art and design educators is how to assess creative work effectively, with creativity tending to be assessed in terms of "…what is produced rather than the process that led to it" (Ellmers, 2006, p.6). For many, assessment remains squarely focused on the design or creative outcome, that is, the artifact, as opposed to the process of producing the creative outcome (Ehmann, 2005).

In terms of assessment practice in the creative disciplines, it may not be common to find art and design educators who explicitly and routinely outline learning and assessment criteria and who "…state or prescribe specific design goals or refer to knowledge categories" for students that contribute to learning and design expertise (Goldschmidt, 2003, pp.1, 2). This is despite attempts at undertaking work in the area of assessment criteria in studio (Ehmann, 2005) and calls for shifts to occur in practice, including making assessment criteria more explicit (Kellogg, 2004; Goldschmidt, 2003; Koch, Schwennsen, Dutton & Smith, 2002). Therefore, many are now recognising that, while there is a need to retain many aspects of the studio mode, there is also room for changes in the area of assessment (Kellogg, 2004; Forsyth et al., 2007). Despite this recognition, however, assessment is a "somewhat neglected area of design education" (Ehmann, 2005, p.107), with little literature available that focuses specifically on assessment in studio; especially in terms of suggestions and advice to guide practice (Ellmers, 2006).

A view that the product or final outcome of learning is what matters most is commonly held across higher education generally and so is not confined to the creative disciplines (Rust, 2002; Rust, Price & O'Donovan, 2003). Discipline content and its reproduction are often privileged above all else and there may well be a tenuous link between content and assessment. The issue of whether assessment is about product, process and/or person remains under debate today (Ellmers, 2006; Ehmann, 2005; AIAS Studio Culture Taskforce, 2003; Goldschmidt, 2003).

Literature on assessment

There is extensive educational literature on assessment. For example, Rust (2002) has put forward a set of principles that underpin good assessment approaches, based on research findings and the UK QAA general principles of assessment.

Rust (2002) points out that assessment is best if it is:

- constructively aligned, that is, criteria and tasks relate to the stated learning outcomes
- mapped against whole-of-program learning outcomes
- realistic, non-threatening and not overly anxiety provoking
- appropriate, varied and fit for purpose
- intrinsically motivating, actively engaging, real-world and authentic in nature, offering students choice
- designed to provide opportunities for slow learning
- formative, well paced and provides formative feedback that is timely
- clear and includes information on how and when feedback will be given
- inclusive of opportunities for assessment by self and peers

- flexible and at times considers the use of alternative indicators to marks and grades

Ramsden (2003) concurs, adding that it is best if it is:

- used as an opportunity to learn from students' mistakes to modify teaching
- valid (measures something important) before being reliable (measures consistently)
- something the lecturer would be willing to answer themselves and be prepared for
- treated suspiciously in terms of an objective measure of student ability and remembering that it is only based on human judgment

It is now widely accepted that good assessment is holistic, incorporates integrated capabilities, acknowledges the developmental and iterative nature of learning and skill development and goes beyond merely assessing recall of content knowledge (Biggs & Tang, 2007; Biggs, 2003; Ramsden, 2003; American Association for Higher Education (AAHE), 1996). Criterion-referenced assessment systems are also acknowledged as being the most appropriate for assessing student learning outcomes in higher education contexts. Criterion-referenced assessment is based on whether students are able to meet the assessment criteria, not by comparing students with one another (Biggs & Tang, 2007). In criterion-referenced assessment, "[t]he point is not to identify students in terms of some characteristic, but to identify performances that tell us what has been learned and how well…[thus] one student's result is quite independent of any other student's" (ibid., p.177). For the creative disciplines, this means identifying clear assessment criteria, as well as assessing all aspects of design/artmaking, including the product, the process and the person.

The objective is to balance all of these aspects to ensure that graduates are well rounded, that is, they are able to produce good designs/artworks; have the required knowledge, skills and attitudes to manage the process of design/art making and develop as a person. It is important to reconcile these three aspects, because otherwise the risk is that good art/designs may be produced at the expense of the person and process aspects. Equally, graduates may develop as a person, but be unable to produce good art/design outcomes or they may be accomplished in the process aspects of art/design, but not be able to realise an outcome or develop as a person and so on.

Literature on studio

In an attempt to determine what is most valued in the creative disciplines in relation to assessment, an analysis of 118 journal articles on studio in Architecture, Art and Design published over the last decade was undertaken (de la Harpe, Peterson, Frankham, Zehner, Neale, Musgrave & McDermott, under review). The analysis revealed that 11 key indicators most often underpinned assessment in studio, namely, product (including event or object), process, person, content knowledge, hard skills, soft skills, learning approach/style, technology, reflective practice, professional and innovative practice and interdisciplinary collaboration. The indicators, with definitions and example statements, are presented in Table 1.

Table 1: Indicators with definitions and example statements

Indicators	Definitions	Example statements
Product	Outcome of process, emphasis primarily on product (event or object)	*Design product, end product, design results, artwork, technical solutions, project representations, responses to works of art*
Process	Process involved in developing outcome rather than emphasis on product	*Development of design ideas, working through the artistic process, exploring the idea and the design process*
Person	Student/ human/ emotional aspects	*Educational process from student's perspective, care in the context of classroom practice, including thoughts and feelings when displaying work for critical response*
Content knowledge	Underpinning body of knowledge of discipline	*Design fundamentals, design knowledge, knowledge of aesthetics, program content basics such as history, theory, contemporary practice*
Hard skills	Art/design thinking and competence, cognitive and technical skills in the art/design process	*Skills of integration, projection, exploration, innovation, critical thinking, problem framing/solving, decision making – basics of design thinking, sketching, painting or drawing techniques*
Soft skills	Non-technical and people skills	*Teamwork, communication, verbal and visual literacy skills, making of personal meanings, developing positive attitudes, confidence, cultural and ecologically sensitive awareness*
Technology	Use of hardware, software, information communication technologies, mobile devices, virtual studio	*Application of new technologies and materials, using high end computer graphics and low and high bandwidth internet technology, using technology to communicate online*
Learning approach/style	Learning strategies and methods, ways of learning	*Exploring method of learning and effectiveness for design knowledge building, helping students learn from others, expanding conceptions through dialogue journals or visual analogy*
Reflective practice	Reflective thinking, reflection in and on action	*Becoming more rhetorically astute, systematically reflecting on habitual thinking and actions, evaluating and adapting to the ambiguous, knowledge-building nature of practice*
Professional & innovative practice	Industry and professional capability, new ways of working, transforming praxis	*Responding to challenges in the business environment, staying current, being sensitive to pressures of real world practice, preparing for demands of professional life/work*
Interdisciplinary collaboration	Working/collaborating with others in different disciplines/subject domains	*Experiencing inter/multidisciplinary and cross-curricula projects, working as part of a development team comprising people from different professional backgrounds*

(Source: adapted from de la Harpe et al., forthcoming)

The indicators for each discipline, in order of priority, were,

- *Architecture* – 1) product, 2) process, 3) soft skills, 4) hard skills, 5) learning approach/style, 6) professional & innovative practice, 7) content knowledge, 8) technology, 9) reflective practice, 10) interdisciplinary collaboration, 11) person

- *Art* – 1) process, 2) hard skills, 3) soft skills, 4) person, 5) product, 6) professional & innovative practice, content knowledge, and technology, 9) learning approach/style, reflective practice and interdisciplinary collaboration

- *Design* – 1) process, 2) hard skills, 3) soft skills, 4) professional & innovative practice, 5) learning approach/style, 6) product, 7) content knowledge, 8) technology, 9) reflective practice, 10) person, 11) interdisciplinary collaboration

Overall, the product was central to Architecture studios, while the process took centre stage in Art and in Design. Notably, the 'person' featured in the top 5 most mentioned categories only in Art.

Model for holistic assessment

Based on best practice in assessment outlined earlier and on what was mentioned most often in studio research published over the last decade in the disciplines of Architecture, Art and Design presented above, we have developed a model to guide studio assessment in these disciplines (see Figure 1).
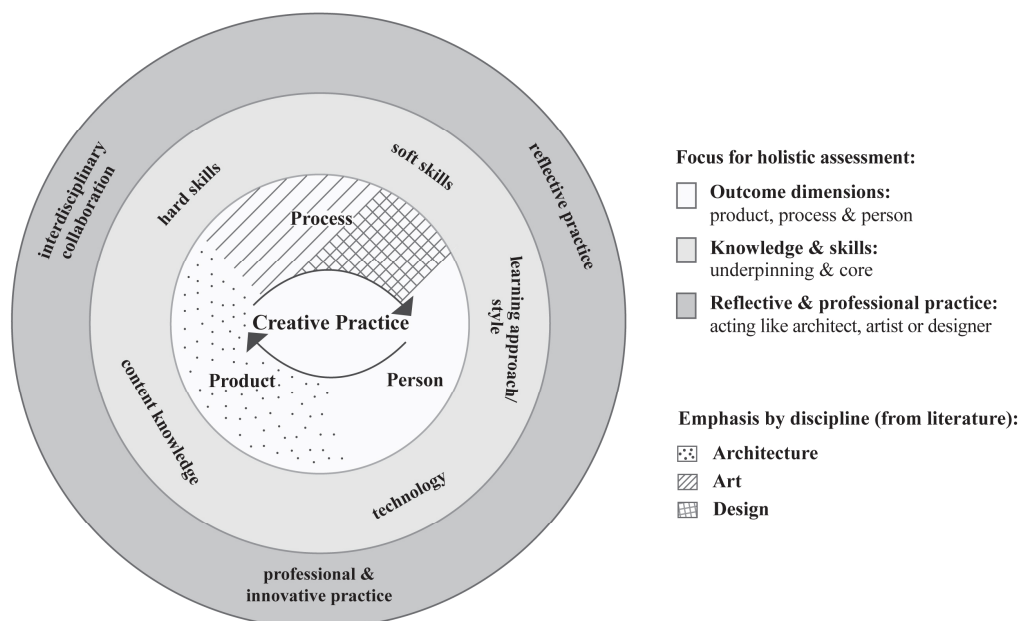
Figure 1: Model for holistic assessment in studio including emphasis by discipline from literature in Architecture, Art and Design
(Source: adapted from de la Harpe et al., forthcoming)

The model is based on a conceptual paradigm that assesses all aspects of design/artmaking and at its core equally values the process, the final product and the person's (well) being, since these are all crucial to good studio learning experiences and impact on studio outcomes. The indicators for assessment of creative practice are grouped under three headings: outcome dimensions, knowledge and skills and reflective and professional practice.

Assessing the dimensions of a 'good' outcome focuses on the product, the process and the person – not simply on one or the other(s).

Assessing knowledge and skills focuses on content knowledge, hard skills and soft skills, as well as technology use and learning approach/style.

> Assessing reflective and professional practice focuses on acting like an artist or designer, as well as industry capability and encompasses reflective, professional and innovative practice skills and interdisciplinary collaboration.

The model responds to the call by participants at the American Institute of Architecture Students Studio Culture Summit (Kellogg, 2004) for guidance on assessment, so that assessment can contribute to ensuring that studio is the inspirational place it should be.

Using the model

First, the model supports holistic assessment. When designing tasks at the individual subject level, the model can be used to support the selection and development of learning outcomes in line with what is seen by the discipline as fundamental to creative practice. Interrogating the model at the wider whole-of-program level and then systematically applying all the indicators to assessments throughout a program of study will also ensure that the aspects identified as fundamental to creative practice are assessed at appropriate times in the student's total program learning experience. Using the model in this way will help to ensure that assessment, at both the individual subject and program level, is not overly focused on one aspect and is not ad hoc. Using the model to reflect on assessments will also reveal whether the subject or program is privileging one or more aspects at the expense of others, which may be equally important, needed and valued.

Second, the model supports developmental assessment, given that it can be used to inform developmental progression of learning and assessment, by lecturers considering each of the aspects in relation to learners and their stage of learning and then focusing the design of assessment tasks accordingly. For example, in some discipline areas this may mean that in the early stages of a program more attention is paid to the development and assessment of process, hard skills, soft skills, technology and learning approach/style. The model can also serve as a reminder for lecturers that it is important to support the development and assessment (through allocation of marks) of all aspects fundamental to learning.

Third, the model is flexible, in that it does not require that every assessment task should include every indicator, every time an assessment is undertaken. For example, at times when developing creative practice, it will be appropriate to focus on different dimensions, including at times the product, at other times the process or person; similarly for the aspects of knowledge and skills and professional practice. However, overall, the total assessment experience for students in their program of study should be one that addresses, develops and assesses all aspects over time, where all are valued outcomes and where both students and lecturers are clear that this is the case. One way to show what is valued is to allocate marks to it. As Ramsden (2003, p.182) reminds us:

> [f]rom our students' point of view, assessment always defines the actual curriculum. In the last analysis, that is where the content resides for them, not in lists of topics or objectives. Assessment sends messages about the standard and amount of work required, and about which aspects of the syllabus are the most important. Too much assessed work leads to superficial approaches; clear indications of priorities in what has to be learned, and why it has to be learned, provide fertile ground for deep approaches.

Overall, the model aims to ensure that studio assessment is productive, active and engaging, as well as personally rewarding for both students and academic staff.

Given that:

> [a] challenging studio learning environment contains many aspects:
> relating knowledge to student experience and vision, a multiplicity of
> pedagogical and learning styles, a variety of student-faculty and
> student-student encounters, an ability to take risks, and an opportunity
> to share power to construct new knowledge and transform thinking
> (Koch et al., 2002, p.16).

The model aims to capture the complexity of studio and to help ensure that studio assessment reflects this, so that the experience is productive, active and intellectually engaging, as well as personally rewarding for both students and academic staff.

A shift to a more explicit and holistic model, such as the one described above – that sees the person, process and product equally at the core – may not be easy for some lecturers/disciplines. It may not be easy because, as revealed by the literature analysis, certain indicators are privileged by each discipline and may define the identity of practitioners and studio in that discipline. Assessment traditions may be deeply held in the zeitgeist of each discipline and of those who teach within it.

In fact, shifting views on assessment may be all the more challenging since the studio mode of learning and teaching, including the assessment approaches used, is a 'signature pedagogy' (Shulman, 2005). Signature pedagogies are "…habitual, routine, visible, accountable, interdependent, collaborative, emotional, unpredictable and affect laden" (ibid.). A learning and teaching practice is deemed a signature pedagogy if it is distinctive in the profession, pervasive within the curriculum and found across institutions teaching the discipline.

On the other hand, despite signature disciplines appearing to be "…remarkably stable at any one point in time, they are always subject to change as conditions in the practice of the profession itself and in the institutions that provide professional service or care undergo larger societal change." Thankfully they are, therefore, "…not eternal and unchanging" (Shulman, 2005). This capacity for change offers promise for enhancing assessment practices in the creative disciplines since, as mentioned previously, assessment may be seen at times as too narrowly focused, difficult to make criteria explicit and articulate and not necessarily supportive of independent and self-regulated student learning outcomes. We, therefore, remain optimistic that changes to assessment in studio, while not easy, may be achievable.

Conclusion

In this paper we have described a model that encompasses a broad set of indicators to guide and inform assessment in Architecture, Art and Design studios. The model is holistic, developmental and flexible. It is based on best practice in assessment and on an analysis of 118 journal articles published in art and design education over the last decade. Embedded in the model are eleven key indicators fundamental to design/artmaking, including the product, process and person, as well as hard skills, soft skills, content knowledge, technology, learning approach/style, professional and innovative practice, reflective practice and interdisciplinary collaboration. At the core of the model, however, are creative practice outcomes that are exemplified through the product, the process and the person, within discipline-specific contexts. Focusing on all three aspects including the product, the process and the person

maximises opportunities to engage students in all dimensions of learning, rather than narrowly focusing on only the product or content, as may often be the case. Thus, if practitioners in the creative disciplines look with open hearts and minds to taking assessment in studio further, they may well find that using the model has the potential to engage and transform their teaching and their students' learning.

Acknowledgement

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