

CREATIVITY IN ASSESSMENT RUBRICS

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ABSTRACT

Creativity is a key topic in the scientific discourse on design education, and a desired outcome of general education worldwide. Concepts used in assessment have an important role in general education: they define knowledge and skills for future generations to possess. A prior research project (2007-2011) identified an alarming lacuna in the assessment repertoire of Norwegian Art and Crafts teachers regarding creativity. In interview settings, teachers struggled to describe what they valued as creative. Creativity was framed as an innate ability, and not something to learn. In this paper, the research strategy used to explore creativity is completely modified. Instead of asking teachers to explain how they assess creativity, a model that defines five creative habits serves as a lens to trace dimensions of creativity in teachers' assessment rubrics from 27 schools across counties of Norway. The strategy yields a nuanced understanding of what dispositions of a creative mind Norwegian Art and Crafts teachers cultivate through assessment, and highlights aspects that are not yet prioritised. The findings are used to discuss the assessment repertoire of Norwegian Art and Crafts teachers, and as a case to identify possible steps towards cultivating responsible creativity in design education across levels.

Keywords: Creative habits, assessment rubrics, responsible creativity

1 THE PUBLIC FACE OF CREATIVITY

Assessment rubrics set the direction for desired learning outcomes, and the concepts chosen for assessment pave the way for the knowledge and skills that general education seeks on behalf of future generations. Eisner [1] describes the words used in educational criticism as the public face of teachers' connoisseurship. This paper sheds light on the public face of creativity as expressed in assessment rubrics. National curricula worldwide uphold creativity as an important outcome of schooling across subject domains. As a highlighted aspect of schooling, one would expect to find a robust assessment repertoire, with explicit descriptions on what to expect and cultivate amongst learners. However, an earlier study on general education identified an alarming lacuna in the assessment repertoire of Norwegian Art and Crafts teachers [2]. The teachers interviewed in the study struggled to articulate what made pupils' designs creative, and the assessment evidence they could agree upon – 'unique ideas' – seemed rather counterproductive to learning. Teachers tended to side-line their own role – they waited for unique ideas to surface among pupils and observed how pupils protected their ideas from potential copycats among their classmates. A concern with this 'unique ideas' lens is that it frames creativity as an inherent ability that pupils express via Art and Crafts, not something to learn and expand through classes, and an educational setting that disparages sharing [2, 3]. When assessing creativity, teachers mimic the taxonomy of creative design, with imitation at the lowest level and original creation at the highest [3]. A notable weakness of this taxonomy, though, is that it illustrates nothing about the work's value, pertinence or efficiency [4] or the strategies that the pupil used to develop the design solution.

In this paper, the research strategy used to explore creativity is completely modified. Instead of asking teachers to explain and define how they assess creativity, a model that defines five core dispositions of creativity [5] serves as a lens to trace habits of creativity in teachers' assessment rubrics across schools and counties of Norway. The findings are used to discuss the assessment repertoire of Norwegian Art and Crafts teachers, and as a case to identify possible steps towards cultivating responsible creativity in design education across levels.

1.1 Responsible creativity

Schlitt defines creativity as ‘the ability to transcend traditional ideas, rules, patterns and relationships, and to make meaningful new ideas, forms, methods and interpretations’ [6:1356]. As a generic human ability that permeates virtually every aspect of life [7], creativity claims no responsibility for a better tomorrow. It can stimulate new ideas that contribute to environmental protection and degradation, human aid and human-made disasters [3]. To support a transition towards more sustainable modes of production, trade and consumption, the creativity of future designers and pupils in general education should align with other relevant concepts. Craft proposed the concept of ‘responsible creativity’ to emphasise the importance of fostering creativity in the context of wider ethical dimensions of our existence [8:149]. Regardless of their profession, all citizens make choices that influence our future visual and material culture – the mitigation or increase of pollution and overconsumption. Responsible creativity implies integrating questions of wider social and environmental impact into the design process and judging new ideas as meaningful on the basis of its contribution to a better tomorrow.

2 CREATIVITY IN ASSESSMENT RUBRICS

The practice of making detailed assessment rubrics that articulate expectations at low, medium and high attainment levels is rather new to Norway. It dates back to a reform initiated by the Ministry of Education and Research in 2006 to better monitor pupils’ progress and promote ‘Assessment for learning’. Detailed rubrics are a tool both for formative and summative assessment – they meet the new regulations that stress pupils’ rights to know the expected level of performance and receive subject-related and informative feedback on how to improve their performance. These new regulations bring into focus the assessment vocabulary that teachers use in all subjects, challenging them to express their curricula in terms of evaluation [9]. The earlier research project on assessment (2007-2011) was conducted as the reform evolved. This research is motivated by the desire to ascertain how the Art and Crafts teachers have measured up to the challenge.

2.1 A national pool of assignments

In spring 2015, I contacted Art and Crafts teachers in lower secondary schools recommended by scholars in art and design education at the university level from different counties in Norway. Through strategic sampling, only profiled and educated teachers were invited to participate – teachers who could represent the full capacity of the subjects’ specific repertoire on assessment. Experienced teachers’ assessment is an expression of expert opinion based on education [10]. Assessing the work of their pupils, these teachers draw upon the history of their profession to adopt [11] strategies and concepts used as descriptors of quality. Teachers were asked to contribute to a national pool of assignments by sending all the assessment rubrics and briefs for the final grade in the subject of Art and Crafts. The final grade is part of the diploma awarded to pupils completing 10 years of general education at the age of 15-16 years. As an incentive to participate, the teachers would receive the assignment pool on a USB pen drive so that they could see how other teachers interpreted the national curricula and chose the educational content. The majority of the contacted teachers consented to participate, and the pool represented 17 of 19 counties and 31 different schools. For this paper, the sample was limited to 27 schools as some counties had more than two schools represented in the national pool.

2.2 A model of five core habits to trace concepts of creativity in assessment rubrics

The concepts covered in the assessment rubrics were diverse and echoed the complexity of the four main subject areas of the existing curriculum: visual communication, design, art and architecture [12]. The study’s research strategy involved relating the concepts in the assessment rubrics to a predefined and explicit definition of creative dispositions. A model developed by researchers from Centre for Real-World Learning (CRL) was chosen because it has proved useful for articulating and cultivating creativity in general education in the following occasions (1) in two field trials administered by CRL researchers in 12 schools and (2) in how Thomas Tallis School [13] and Rooty Hill High School [14] integrated versions of the model into their pedagogical practice. A discussion of the findings of the CRL researchers or a comparison of the model with other frameworks for assessing or promoting creativity [15, 16, 17] is outside the scope of this short paper. The model is a prototype resulting from a research project commissioned – by the International Foundation for Creative Learning, Creativity, Culture & Education and the OECD Centre for Educational Research and Innovation in 2011 – to

satisfy the need for a comprehensive, clear and easily accessible tool for teachers and pupils to identify the core and learnable dispositions of creativity. The CRL research team created a framework, informed by literature review [18] and interactions with practitioners and a steering group. The framework centred on the habits of being:

1. Inquisitive (uncovering and pursuing interesting and worthwhile questions)
2. Persistent (daring to take risks and determination when facing difficulties)
3. Imaginative (ability to come up with imaginative solutions and possibilities)
4. Collaborative (social and collaborative aspects of the creative process)
5. Disciplined (knowledge and craft in shaping the creative product)

Each of the five core habits consists of three sub-habits that reflect the actions to ‘live’ each disposition fully [19]. For instance, the habit of being ‘imaginative’ consists of the sub-habits of being able to play with possibilities, make connections and use intuition. The 15 sub-habits provide a nuanced lens to trace corresponding concepts in the teachers’ assessments across schools and counties of Norway (Figure 1):

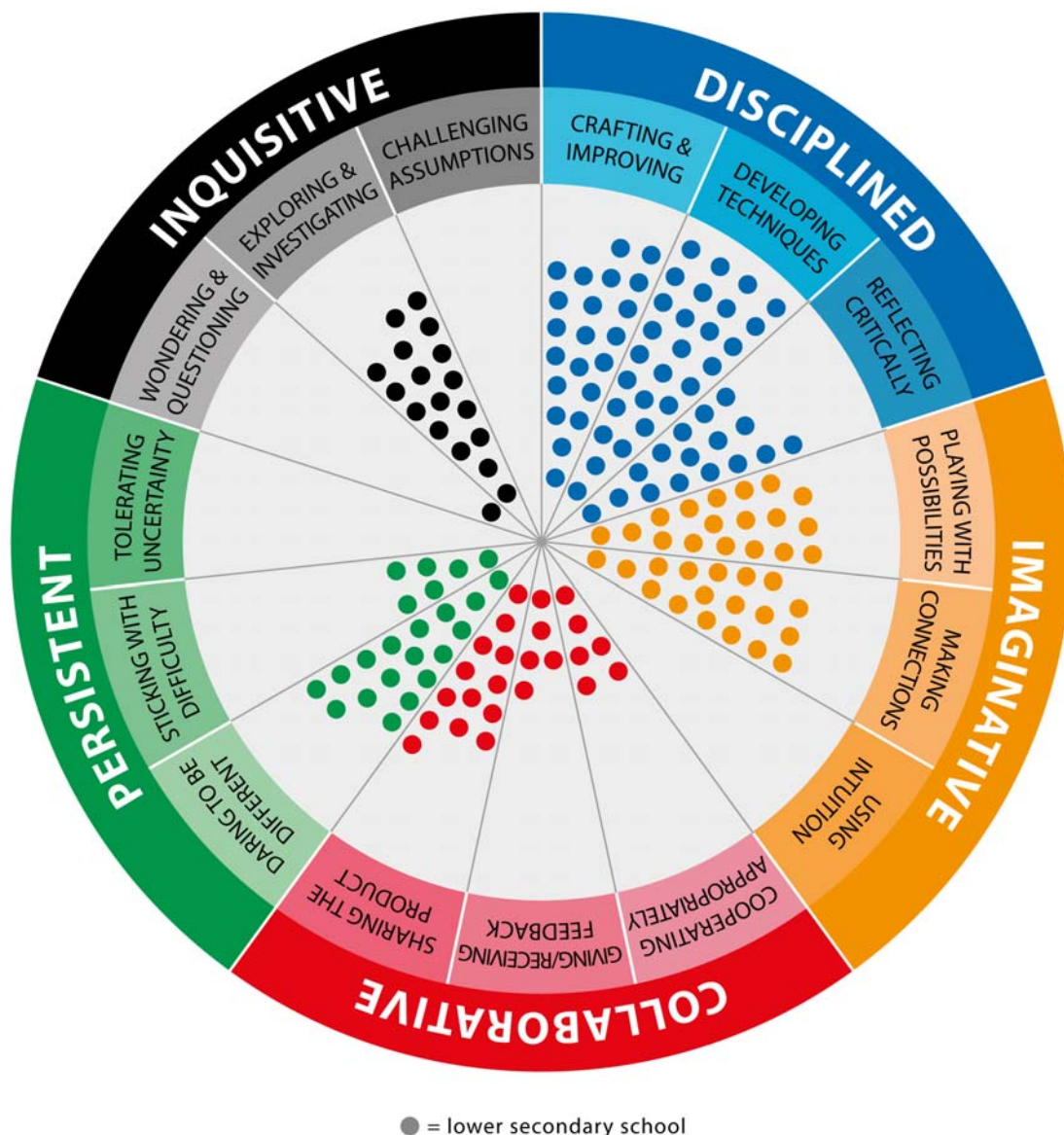


Figure 1. Creative habits traced in assessment rubrics from 27 schools across the counties of Norway

‘Disciplined’ (habit 5) stands out as the habit closest to the attainment levels expressed in the assessment rubrics. The three sub-habits appear frequently, and ‘Developing techniques’ is valued in all 27 schools. This shared expectation of ‘Developing techniques’ captures, as emphasised by the CRL research team [19], how creative individuals practice in order to improve their skills. The sub-habit of ‘Crafting and improving’ relates to how the pupils take pride in their work [19]. In the

teachers' rubrics, three frequent expectations correspond with this sub-habit: make products with precision (21 schools), use principles of design and elements of art skilfully (22 schools) and develop functional objects (13 schools). The sub-habit of 'Reflecting critically' pertains to the attainment levels in pupils' self-evaluation of their own process and product (16 schools). In the earlier research project (2007-2011), craftsmanship also emerged as a highly prioritised learning outcome, but unlike with creativity, teachers were able to clearly articulate their expectations on craftsmanship. Creativity was clearly linked to the ideation phase, while craftsmanship referred to the ability to realise the ideas, pupil's technical performance. The CRL research team, however, bridge the two concepts by making craftsmanship a vital aspect of creativity.

With regard to 'Imaginative' (habit 3), both the sub-habits of 'Playing with possibilities' and 'Making connections' feature frequently in the assessment rubrics (18 schools). The element of play relates to how teachers expect their pupils to explore both techniques and design principles to further the possibilities demonstrated in class. By explicit references in their own design to artworks, traditional crafts and design icons, pupils make connections to the wide repertoire of prior makers. Under 'Persistent' (habit 2), the sub-habit 'Daring to be different', has the highest score representation (17 schools). It is derived from concepts related to expectations of 'unique ideas' in the rubrics. Thus, the assessment evidence described as counterproductive to learning in the earlier research project (2007-2011) reappears as a vital aspect of the assessment repertoire. As a stand-alone criteria difference or uniqueness illustrates nothing about relevance or value, but as part of a model with 14 other sub-habits, 'Daring to be different' supports the need for a certain level of self-confidence and risk-taking to be creative [19]. The sub-habit 'Sticking with difficulty' I found in some schools associated with pupils' ability to accomplish challenging designs (6 schools).

Habit 4, 'Collaborative', is scarcely represented in the rubrics. Some teachers value how pupils are 'Sharing the product' via oral presentations, exhibitions or by documenting their work in portfolios (13 schools). Only a few teachers expect pupils to 'Give and receive' feedback (5 schools) and 'Co-operate appropriately' (6 schools), which relates to the pupils participating in cleaning and caring for the studios. Most of the assignments in the pool are directed at the individual, and this explains why collaboration is an under-represented habit in the attainments levels. Habit 1, 'Inquisitive', is the most under-represented in the teachers' assessment rubrics. This is possibly because of how teachers frame the brief – pupils do not need the sub-habits of 'Challenging assumptions' and 'Wondering and questioning' to succeed. Pupils are typically entering at step three of a design process [20], ideation – teachers expect them to be 'Exploring and investigating' a predefined problem through sketches and prototypes (17 schools).

2.3 Towards a renewed understanding

Comparing the assessment tool of five creative habits to the expectations articulated in the attainment levels serves to renew the picture of what creative dispositions that Norwegian Art and Crafts teachers value and cultivate through assessment. Expectations of 'unique ideas' reappear as a strong tradition in the rubrics, but another strong tradition are invited to come along by habit 5, expectations of craftsmanship. 'Disciplined' (habit 5) was included by the CRL researchers in the model to counterbalance the dreamy, imaginative side of creativity [19]. By including the need for knowledge and craft, the Norwegian Art and Crafts teachers might approach the assessment of creativity with greater confidence as this is their aspect with clear and nuanced assessment criteria. Three commonly occurring sub-habits in the teachers' assessment rubrics reflect the trait of moving beyond replication in crafts: 'Playing with possibilities' of form, content and technique; synthesising past solutions in one's own design by 'Making connections'; and 'Exploring and investigating' a given problem. All the frequently cited sub-habits (Figure 1) help pupils turn their own ideas into solid, functional products and recognise craftsmanship and longevity in products as consumers. However, for the cultivation of responsible creativity, the existing assessment rubrics are inadequate. In the next section, I discuss how the sub-habits not represented in the assessment rubrics may contribute to critical thinking and ideas that allow both the people and the planet to flourish.

3 POSSIBLE PROGRESSIONS TO CULTIVATE RESPONSIBLE CREATIVITY

The assessment evidence described by the teachers, across the national pool of assignments, is focused on end products, sketches or written or oral reflections that document the choices made in the design process. The sub-habits of 'Tolerating uncertainty' and 'Using intuition' depend on observation and

dialogue during the process of making and thus find no place in the assessment rubrics. ‘Using intuition’ has been acknowledged as both intangible and hard to evidence CRL researchers, nevertheless, an important trait of creative individuals [18]. In the Norwegian context, assessment rubrics are expected to facilitate both formative and summative assessments. However, the challenge with this approach is that the habits of creativity that are difficult to evidence may be left out. The cultivation of the full range of creative habits calls for two different, but related assessment tools – one more comprehensive for formative use and pupils’ self-assessment. Asking pupils to assess how they use their intuition, strike with difficulty and tolerate uncertainty in creative processes makes them recognise, appreciate and refine those habits. These are vital creative dispositions in any formative assessment tool aiming to help pupils to cope with the challenge of building more sustainable societies [21]. An educational setting that encourages risks and allow for failure is important – we do not yet know how to arrive at the deep-structural changes needed.

The sub-habits of being inquisitive – ‘Challenging assumptions’ and ‘Wondering and questioning’ – are both features of critical thinking [22], and none of them occur in the assessment rubrics of Art and Crafts teachers. This represents a critical gap in the cultivation of responsibly creative individuals as sustainable solutions depends on future generations ability to identify and address social inequity, exploitation of nature, challenge assumptions and navigate complexity. Ingalls Vanada [23] identifies big picture thinking as a central issue in her paper on how to educate tomorrow’s change makers and problem solvers. With a view towards fostering deep, connected and independent thinkers, she calls for balancing creativity with practical wisdom and the ability to think critically. Directing the assessment repertoire towards the cultivation of responsible creativity relies on the inclusion of the two sub-habits in both formal and summative assessment tools as critical thinking is vital to determining the wider social and environmental impacts of proposed solutions. Further, teachers should allow pupils to enter at step one of a design process [20] by challenging them to participate in the framing and identification of design problems. It makes a vast difference whether pupils design desirable products to increase sales or design to improve quality of life or to mitigate pollution. Ethical concerns derive from connecting to real-world dilemmas and chose problems worth solving.

4 CONCLUDING REMARKS

Using the tool to evaluate the assessment repertoire of Norwegian Art and Crafts teachers yields a more nuanced understanding of what dispositions of a creative mind Norwegian Art and Crafts teachers cultivate through assessment than the earlier research project (2007-2011). Still, the more important finding of this study is that the sub-habits not yet prioritised provide the most vital dispositions towards cultivation of responsible creativity. After two field trials, the CRL researchers concluded that the model of five habits is ‘sufficiently comprehensive, and internally coherent: no missing habits or sub-habits, or overlap of sub-habits’ [19:100] – further, that the terminology is clear, accessible and applicable to a broad range of real-world types of creativity. Responsible creativity – empowering citizens to promote sustainability and meet the global challenges ahead – is an urgently needed type of creativity. As the model of five habits includes key dispositions to critical thinking, wisdom and consciousness of craftsmanship, play, communication and coping with uncertainty – it stands the test of being a formative tool to cultivate responsible creativity. As assessment drives learning, a question that is equally important to both general education and higher education is ‘What assessment criteria might play a role in promoting ethical concerns and design ideas that allow both people and planet to flourish?’ Even though the CRL researchers have narrowed the recommended user group for the model from 4-16 to 5-14 years, I would like to conclude this paper by challenging educators of future product designers and engineers to consider how the model of five creative habits might adapt to higher education. Does it provide a lens to refine repertoires of assessment towards responsible creativity?

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