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Commentary

Studying collaborative creativity: Implications for education

Anna Crafta,b,*

- a School of Education and Lifelong Learning, University of Exeter, St Luke's Campus, Heavitree Road, Exeter, Devon, EX1 2LU, UK
- b The Open University, UK

1. Introduction

The five papers in this collection of this Special Issue of *Thinking Skills and Creativity* offer varied, in-depth explorations of collaborative creativity, in educational contexts. Across each paper, expressed in differing ways, is a common focus: that of learning and pedagogy involved in planning, composing and revising within collaborative learning educational contexts in England, Finland Mexico and the United States of America. The contexts under exploration range across the investigation of how long-term collaborative communities develop and are sustained (as in the paper by Eteläpelto & Lahti and, to a lesser degree, Wix & John-Steiner), to shorter-term exploration of classroom work (as in the papers by Fernandez-Cardenas, Rojas-Drummond et al. and Vass et al.). The levels of investigation range across school-level learning (for example in the elementary or primary stages of education, as in the work by Fernandez-Cardenas and Vass et al. – both drawing on data from England – and Rojas-Drummond et al. – drawing on data from Mexico) to tertiary level (i.e. in working with a postgraduate programme for teachers in Finland, in the case of Eteläpelto & Lahti, and in working with postgraduate students in the United States of America in the case of Wix & John-Steiner).

It is notable that all five papers focus on the nurturing of creativity within an educational context, reflecting the increasing value attributed to creativity in education in recent years (Craft, in review).

2. Paradigmatic, domain and individual-collective principles

As discussant, reading these carefully constructed papers as a whole, a number of issues seem especially worthy of highlighting. Three in particular concern the nature of the field of enquiry investigating creativity in education at this early stage of the twenty-first century. They concern the shifting research paradigm itself, changes in the extent to which creativity is seen as domain-specific or domain-free, and shift of emphasis in the balance between the role of the individual and the collective in creativity.

First, the papers reflect the increasing volume of work being undertaken in the qualitative paradigm and thus epistemological and ontological foundations which recognise specificity, the role of situatedness and context, and the multiplicity of meanings. The high value placed on interpretive approaches plays in to the whole debate around what constitutes quality research, with qualitative researchers highlighting the credibility and complexity of insight offered by qualitative studies (need a reference for this). The expansion of studies which adopt interpretive methodology, documented at the turn of the century by Jeffrey and Craft (2001) perhaps reflects the geographical and cultural location of current studies, which are now much more diverse than the twentieth-century North America-dominated greater tendency toward quantitative, 'objectifiable' perspectives. There has been a shift in emphasis in the last decade toward characterising, recognising complexity, focusing increasingly on the collective and collaborative, and increasingly recognising the situatedness of activity rather than seeing creativity as 'universalized' (Craft, 2008a). All of the five papers in this collection reflect these principles, whether conceptually oriented (as in the Wix & John-Steiner piece which offers evidence-based reflection on approaches to nurturing creativity at postgraduate level) or more focused on emergence of theory through empirical work (as in all of the other four papers).

^{*} School of Education and Lifelong Learning, University of Exeter, St Luke's Campus, Heavitree Road, Exeter, Devon, EX1 2LU, UK. E-mail address: A.R.Craft@open.ac.uk.

Secondly, these five papers imply a mix of perspectives on the extent to which creativity in one domain is seen as being the same as it is in another. Whilst some argue that creativity can be understood as a 'transferable skill' across domains (Woods & Jeffrey, 1996; Mardell, Otami, & Turner, 2008), others argue that creativity cannot be understood without reference purely to the disciplinary area in which it occurs whether this be within or beyond schools (Miell & Littleton, 2008; Wallace & Gruber, 1989). Still others argue that the creative impulse is identical across domains, in that it ultimately involves asking 'what if?' in appropriate ways (Craft, 2001; Burnard et al., 2006; Chappell, Craft, Burnard, & Cremin, 2008; Cremin, Burnard, & Craft, 2006; Craft, 2008a,b, in press) – and yet its manifestation is diverse according to the domain of application (Craft, Chappell, Cremin, Burnard, & Dragovic, 2008). The tension made visible on this continuum, between the disciplinary-root and the generalisable view, may be an incommensurable one. It raises the question of how, in assessing creativity in education, both process and product are evaluated (Cochrane & Cockett, 2007); these five papers shed useful light on aspects of collaborative processes in this regard (discussed in Section 3). But the five papers also appear to occupy distinctive places on the spectrum of 'creativity in relation to the domain' and 'creativity as generalised'. Some papers emphasise the domain-specificity of the research (i.e. Fernandez-Cardenas, focusing on use of web-pages in History, Rojas-Drummond et al., focusing on oral and written texts, Vass et al. focusing on creative writing as a context). Others (Eteläpelto & Lahti, Wix & John-Steiner) focus more on generalisable characteristics albeit that they emerge from a specific domain context.

Thirdly, these five papers offer a view of creativity which recognises both the individual and the collective. To this degree they perhaps open up new ground, in field which has tended to polarise the study of creativity as exploring either individual or collaborative or collective effort (Craft, 2008b). Recent studies of creativity in education have attempted to explore creativity in relationship (eg Chappell, Craft, Burnard, et al. 2008) however these five articles seem to take the field a long way further, in offering holistic means of exploring and interpreting collaborative creativity, acknowledging cognitive, emotional, social and spiritual dimensions and in offering ways of understanding 'co-construction' as a new consciousness, understanding better the role of emotions in particular in developing trust at emotional, social and cognitive levels. Situated firmly in a socio-cultural theoretical stance the papers offer powerful insights into the development of co-constructive learning by surfacing a range of characteristics and processes involved in collaborative creativity; whilst two papers (Eteläpelto & Lahti and Vass et al.) acknowledge the overlapping relationships between creative and critical engagement.

3. Insights into characteristics and processes

The authors of these papers make visible a number of characteristics of collaborative creativity. Each author or group of authors approaches collaborative creativity from a stance of acknowledging multiplicity, in the building of inter-subjectivity. The focus on this inter-subjective engagement is explored by each team in differing ways, for example it is approached through the tool of Exploratory Talk (Barnes & Todd, 1995) in the paper by Rojas-Drummond et al., and through the 'window' of the communicative event (Hymes, 1972) as an ethnographic tool which illustrates the in-depth detailed co-construction, in the paper by Fernandez-Cardenaz, and through the concept of the 'collaborative floor' (Coates, 1996) in the paper by Vass et al. Wix & John-Steiner focus on dialogical peer enquiry in their paper, and it is this emphasis on dialogic engagement which each paper shares in common to some degree, seeking to document and discuss the shift between the individual and the social and vice-versa. The papers offer useful contributions to the existing literature on classroom discourse and the relationships between language and thinking. They build on studies which demonstrate the powerful impact of exploratory talk on the quality of learning (Mercer & Littleton, 2007), the inter-leaving of creative and critical thinking (Moran & John-Steiner, 2004), and the dynamic between the social and the individual. This last principle is, as Wix & John-Steiner note in their paper, informed by the perspective adopted by both Bakhtin and Vygotsky, and recognised by Alexander (2005), that thinking can be seen as a shift from the social to the individual, thus suggesting primacy of social engagement in generative (creative) activity.

To understand social engagement as a (or, perhaps, the) primary site for creative activity, raises a range of issues, including peer to peer equality, and how this is established and maintained in such a way that social engagement is productive for all participants. This dynamic is explored directly by three of the papers (Eteläpelto & Lahti, Rojas-Drummond et al. and Vass et al.), with Eteläpelto & Lahti and Rojas-Drummond et al. documenting the significance of the 'culture' of the classroom and of the group, the extent to which inclusion or domination are pervasive, with Eteläpelto & Lahti suggesting that the history of the group itself may also be a significant issue. There are stories of power relations in the group and in the classroom to tell—particularly stark in the work of Eteläpelto & Lahti, whose study of long-term collaborative creativity shows how the power and participation balance can be upset by dynamics between participants themselves and how pedagogy may contribute to or ameliorate this.

Classroom culture can of course seen as both situating and also being a product of pupil engagement, and the stance of the teacher has been demonstrated to play a significant role in this interaction (Craft, Cremin, Burnard, & Chappell, 2007). Eteläpelto & Lahti suggest that teacher expertise in sensitive, thoughtful pedagogy, has a significant role to play in nurturing productive collaborative creativity over time. For teachers, finding ways of recognising differences between people whilst also building trust is one of a number of tensions they identify; also discussed by Wix & John-Steiner, and Vass et al.

A significant challenge for educators in particular, forms around how to effectively nurture and manifest multiple voices. The paper by Rojas-Drummond et al. in particular documents how the continual and dynamic shifts between macro and micro, between group and individual, require an open and exploratory classroom culture. Indeed each of these rich papers offers insights into the dynamic functioning of learning communities, which not only encourage 'interthinking' (Mercer &

Littleton, 2007) but frequently involve the core socio-cultural concept, inter-textuality and intercontextuality, as differing kinds of texts and contexts interweave in the classroom.

4. Questions raised; implications for education

The papers raise a range of questions and issues. Given that every paper is situated in an educational context of some kind, the five issues which follow are those which may have most traction for those seeking to nurture creativity in education.

Perhaps the most significant is the extent to which it is ever possible to say that creativity can be born only of individual (as opposed to collective or collaborative) effort. It has long been acknowledged that whether it simultaneous or not, each creator relies on what has gone before, to build on, to reject or to adapt (for example, in general, John-Steiner, 2000; in education, Sawyer, 2004). For teachers, developing creativity in the classroom must find ways of enabling creativity such that productive collaboration is possible. Initiatives which seek to develop partnership between educators and those beyond the classroom may nurture such co-production of possibilities but studies of reflective practice designed to do just this acknowledge that this does not automatically happen but rather emerge from intentional, mindful effort (Chappell, Craft, & Best, 2008; Craft, Dillon, & Cochrane, 2008; Galton, 2008). Additionally, as Vass et al. acknowledge, educators may ask themselves where does and should the emphasis lie, in the balance between what is valued most highly; in terms of the creativity of the individual and the group. It is certainly the case, as several papers in this collection illustrate, that creativity is messy, sometimes leading in to blind alleys, often creating tension and conflict, and raising both exciting and painful issues for resolution in the classroom.

Secondly, two of the papers (Eteläpelto & Lahti, and Wix & John-Steiner) highlight the difficulty of separating out 'creativity' from 'construction of meaning', a problem previously identified (Beghetto & Kaufman, 2007; Jeffrey & Craft, 2004; Moran, 2008). For, essentially, a constructivist approach to learning is very close to the notion of creativity—the generating of novel, useful ideas and outcomes through the use of imagination on a spectrum of individual and collaborative activity. Indeed, in England, the ongoing challenge of separating out creativity from 'effective learning' may be at least in part responsible for the confusion around use of the term 'creative learning' (Cochrane, Craft, & Jeffery, 2008); also the case, to an extent, elsewhere in the world (Craft, Cremin, & Burnard, 2008).

Thirdly, the papers in different ways each raise issues around the nature of the teacher's role in nurturing creativity. In their exploration of creative writing in classrooms with English children aged 7–9, Vass et al. highlight the role of exploratory productive talk opportunities in which learners establish a 'collaborative floor' (Coates, 1996) with discourse involving overlaps and interruptions. Their work emphasises the emotional dimension to creative collaboration. Fernandez-Cardenas, in his study of English 8–9-year olds working with web pages in History, focuses on the establishment of a community of practice which recognises multiple contributions without threat. Both papers raise questions for educators in terms of how such a community of practice is established. Wenger (2005) emphasises the role of both social competence and social experience in establishing communities of practice; essentially, aspects of the organisational or classroom *culture*.

In this Special Issue, Eteläpelto & Lahti emphasise the quality of the discourse 'culture' in Finnish graduate classrooms. highlighting the significance of emotional safety and the provision of a respectful environment in which differences are critically engaged with but not in a disputational way; rather in an inclusive fashion with participants utilising one another's ideas in the development of individual and group possibilities. The importance of culture is also recognised by Wix & John-Steiner, focusing on the US graduate classroom. They make the case for teachers creating a classroom culture that celebrates and relies more heavily on dialogical peer contributions in the construction of meaning and thus knowledge, not only in the process itself but also in the assessment of this. For Wix & John-Steiner, such a relational way of constructing knowledge draws on both feminist theory (a point worth of separate comment, and discussed later) and Wolf's (1989) artistic learning, typified by conversational approaches which encourage borrowing and building on others' ideas, and where there are no absolute rights or wrongs. Wix & John-Steiner emphasise the evolution of content in dialogical peer inquiry processes, as well as the dynamics which include teachers recognising and rewarding the co-construction of ideas, such that their focus shifts beyond individual learners to focusing on the social and relational processes, as well as the collective emergence of meaning or content. For Rojas-Drummond et al., focusing on the production of text using oracy, literacy and ICT by 9-10year-old children in Mexico, fostering a culture of collaborative creativity or co-construction, in the classroom means valuing the 'learning community'. This involves teachers emphasising opportunities for exploratory talk, and for the development of inter-thinking, but it also involved, in this particular study, inter-textual and inter-contextual opportunities in blending oral, written and ICT domains and the integration of appropriate cultural artefacts in collaborative knowledge-construction.

A fourth issue raised by several of these papers and implicit in the above discussion of culture, is the one of power relationships in the classroom, not only between teachers and students, as highlighted by Wix & John-Steiner, and Eteläpelto & Lahti, but between peers, as surfaced in each of the papers but perhaps most poignantly in the papers by Eteläpelto & Lahti where problems are identified, and by Rojas-Drummond et al., where there is some evidence that the involvement of children in the Learning Together programme over the previous year, had contributed to the children's capacities to develop better social, cognitive, psycholinguistic and technological capabilities (reflecting previous studies, eg Wegerif, Perez, Rojas-Drummond, Mercer, & Velez, 2005).

Finally, the co-participative, co-constructive approaches explored, discussed and advocated in different measure by each paper in this Special Issue, all involve the acknowledgement that each individual plays a role in a wider social fabric of idea construction. Wix & John-Steiner offer a fascinating insight into this feature of collaborative creativity, in acknowledging

the role of feminist theory in co-construction, in particular the development of identity through relational engagement (eg Goldberger, Tarule, Clinchy, & Belenky, 1996) and in particular through the development of empathy (Clinchy, 1996). Their paper highlights the integration of feeling and cognition in creative collaboration, and this, together with their use of the midwife metaphor for the teacher's role, contributes to a feminised discourse which also emphasises the embodiment of creativity. The extent to which this feminisation of discourse and practice serves ultimately to exclude other ways of relating and being, is a question deserving future scrutiny. What happens to traditionally masculine ways of relating, and identities, in classrooms where a feminised discourse is dominant? Are the models shared in these five papers, of co-participative co-construction, the only ways of developing productive collaborative creativity in the classroom?

5. Concluding thoughts

The five sets of issues raised above all bring evident implications for education, and contribute to a growing literature offering insights into how pedagogy, power relations, conceptions of learning and knowledge-construction, may support the nurturing of productive, co-constructed novelty. Emerging from the socio-cultural context of the papers, these are of direct practical relevance at a time when educational contexts and processes are under scrutiny globally, offering both opportunities and challenges for educators.

The explicit recognition of 'middle c' by Eteläpelto and Lahti as a new idea or product emerging from a small community or from within a single organisation, together with the idea of the 'thought community' as described by Wix & John-Steiner, may offer much to practitioners, policy makers and researchers keen to foster creativity in education. In particular these concepts offer means of distinguishing between creativity and learning, in recognising the generative, novelty-orientated element of the middle 'c' thought community.

At a time when, internationally, policy efforts to nurture creativity in education are increasing in parallel with a concern with performativity, 'excellence' and 'standards' (Craft & Jeffrey, 2008), there is an urgent need to avoid technicist, overmarketized responses (Ball, 2003; Jeffrey, 2003; Troman, Jeffrey, et al., 2007) and to generate an international literature of rich insights into how educational futures may attend to both excellence and the open possibilities that are generated from an outlook disposed positively toward creativity (Craft, in press). These five papers offer much to chew on in addressing the challenge, for researchers, policymakers, practitioners and students.

References

Alexander, R. (2005). Culture, dialogue and learning: Notes on an emerging pedagogy. In Keynote speech at Education, Culture and Cognition: Intervening for growth; International Association for Cognitive Education and Psychology, 10th International Conference University of Durham, UK, July 10–14.

Amabile, T. (1990). Within you, without you: The social psychology of creativity and beyond. In M. Runco & R. Albert (Eds.), Theories of creativity. London: Sage Books.

Ball, S. (2003). The teacher's soul and the terrors of performativity. Journal of Education Policy, 18(2), 215–228.

Barnes, D., & Todd, F. (1995). Communication and learning revisited. Making meaning through talk. Portsmouth, NH: Boynton/Cook Publishers.

Beghetto, R. A., & Kaufman, J. C. (2007). Toward a broader conception of creativity: A case for "mini-c" creativity. Journal of Psychology, Aesthetics and the Arts, 1(2), 73–79.

Burnard, P., Craft, A., Grainger, T., Duffy, B., Hanson, R., Keene, J., et al. (2006). Possibility thinking. *International Journal of Early Years Education*, 14(October (3)), 243–262.

Chappell, K. (2007). Creativity in primary level dance education: Moving beyond assumption. Research in Dance Education, 8(1), 27-52.

Chappell, K. (2006). Creativity within late primary age dance education: Unlocking expert specialist dance teachers conceptions and approaches. Ph.D. thesis. Laban, London: http://kn.open.ac.uk/public/document.cfm?documentid=8627.

Chappell, K., Craft, A., Burnard, P., & Cremin, T. (2008). Question-posing and Question-responding: The heart of 'Possibility Thinking' in the early years. Early Years, 28(October (3)), 267–286.

Chappell, K., Craft, A., & Best, P. (2008). Mapping ripples of influence: Understanding shifts in practice within the creativity action research awards 2 (2006–07). In Paper presented at British Educational Research Association Annual Conference Edinburgh, September,

Clack, J. R. E. (2008). Teaching the ethereal: Studying teaching creativity in the mathematics curriculum. In Paper presented at the 5th International Conference on Creativity in Mathematics Education and the Education of Gifted Students Haifa, Israel.

Clinchy, B. M. (1996). Connected and separate knowing: Toward a marriage of two minds. In N. Goldberger, J. M. Tarule, B. M. Clinchy, & M. F. Belenky (Eds.), Knowledge, difference, and power (pp. 205–247). New York: Basic Books.

Coates, J. (1996). Women talk. Conversations between women friends. Oxford: Blackwell.

Cochrane, P., & Cockett, M. (2007). Building a creative school: a dynamic approach to school development. Stoke-on-Trent: Trentham Press.

Cochrane, P., Craft, A., & Jeffery, G. (2008). Mixed messages or permissions and opportunities? Reflections on current policy perspectives on creativity in education. In J. Sefton-Green (Ed.), Creative Learning. London: Creative Partnerships.

Craft, A. (2001). Little c creativity. In A. Craft, B. Jeffrey, & M. Leibling (Eds.), Creativity in education. London: Continuum.

Craft, A. (2003). Creative thinking in early years of education. *Early Years*, 23(2), 143–154.

Craft, A. (2008a). Trusteeship, wisdom and the creative future of education. In Open Seminar given in School of Education and Lifelong Learning Seminar Series at University of Exeter, 1 July 2008.

Craft, A. (2008b). Approaches to assessing creativity in fostering personalisation. In *Prepared for discussion at DCSF Seminar: Assessing the development of creativity: Is it possible, and if so what approaches could be adopted?* London: Wallacespace, October.

Craft, A. (in review). Trusteeship, wisdom and the creative future of education? Unesco Observatory UNESCO observatory E-Journal Multidisciplinary Research in the Arts, for Volume 1, Issue 3, December 2008 Special Issue: Creativity, policy and practice discourses: productive tensions in the new millennium.

Craft, A. (in press). Possibility thinking and wise creativity: Educational futures in England? Chapter for Kaufman, J., & Beghetto, R. (Eds), Creativity in the classroom. Cambridge: Cambridge University Press.

Craft, A., Chappell, K., Cremin, T., Burnard, P., & Dragovic, T. (2008). Possibility thinking: An evidence-based concept driving creative learning? In *Presented at British Educational Research Association Annual Conference* Edinburgh, September.

Craft, A., Cremin, T., Burnard, P., & Chappell, K. (2007). Teacher stance in creative learning: A study of progression. *Thinking Skills and Creativity*, 2(Autumn (2)), 136–147.

Craft, A., Cremin, T., & Burnard, P. (Eds.). (2008). Creative learning 3-11 and how we document it. Stoke on Trent: Trentham Books.

Craft, A., Dillon, P., & Cochrane, P. (2008). King James I Community Arts College Creative partnership project: Writing for radio-Final report. Durham: Creative Partnerships Durham Sunderland.

Craft, A., & Jeffrey, B. (2008). Creativity and performativity in teaching and learning: tensions, dilemmas, constraints, accommodations and synthesis, British Educational Research Journal, 34(October (5)), 577–584.

Cremin, T., Burnard, P., & Craft, A. (2006). Pedagogy and possibility thinking in the early years. Thinking Skills and Creativity, 1(Autumn (2)), 108-119.

Csizsentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R. J. Sternberg (Ed.), Handbook of creativity. Cambridge: Cambridge University Press.

Galton, M. (2008). Creative practitioners in schools and classrooms. In Final report of the project: The pedagogy of creative practitioners in schools. Cambridge: University of Cambridge.

Gardner, H. (1993). Creating minds. New York: Basic Books.

Goldberger, N., Tarule, J. M., Clinchy, B. M., & Belenky, M. F. (Eds.). (1996). Knowledge, difference, and power. New York: Basic Books.

Hymes, D. (1972). Models of interaction in language and social life. In J. J. Gumperz & D. Hymes (Eds.), Directions in sociolinguistics: The ethnography of communication (pp. 35–71). London: Basil Blackwell.

Jeffrey, B. (2003). Countering student instrumentalism: a creative response. British Educational Research Journal, 29(4), 489-504.

Jeffrey, B., & Craft, A. (2001). The universalization of creativity. In A. Craft, B. Jeffrey, & M. Leibling (Eds.), Creativity in education (pp. 1–13). London: Continuum. Jeffrey, B., & Craft, A. (2004). Teaching creatively and teaching for creativity: distinctions and relationships. Educational Studies, 30(1), 77–87. John-Steiner, V. (2000). Creative collaboration. New York: Oxford University Press.

Mardell, B., Ótami, S., & Turner, T. (2008). Metacognition and creative learning with American 38 year-olds. In A. Craft, T. Cremin, & P. Burnard (Eds.), Creative learning 3-11 and how we document it. Stoke-on-Trent: Trentham Books.

Mercer, N. (2000). Words and minds: How we use language to think together. London: Routledge.

Mercer, N., & Littleton, K. (2007). Dialogue and the development of children's thinking. A sociocultural approach. London: Routledge.

Miell, D., & Littleton, K. (2008). Musical collaboration outside school: Processes of negotiation in band rehearsals. International Journal of Educational Research, 47(1), 41-49.

Moran, S. (2008). Creativity in school. In K. Littleton, C. Woods, & J. K. Staarman (Eds.), Handbook of educational psychology: New perspectives on learning and teaching. New York: Elsevier.

Moran, S., & John-Steiner, V. (2004). How collaboration in creative work impacts identity and motivation. In D. Miell & K. Littleton (Eds.), Collaborative creativity: Contemporary perspectives (pp. 11-25). London: Free Association Books.

Sawyer, R. K. (2004). Creative teaching: Collaborative discussion as disciplined improvisation. Educational Researcher, 33(2), 12-20.

Troman, G., Jeffrey, B., & Raggl, A. (2007). Creativity and performativity policies in primary school. cultures. Journal of Education Policy, 22(5), 549-572.

Vass, E. (2004). Understanding collaborative creativity: Young children's classroom-based shared creative writing. In D. Miell & K. Littleton (Eds.), Collaborative creativity (pp. 79-95). London: Free Association Books.

Wallace, D., & Gruber, H. (1989). Creative people at work: Twelve cognitive case studies. Oxford: Oxford University Press.

Wegerif, R., Perez, J., Rojas-Drummond, S., Mercer, N., & Velez, M. (2005). Thinking together in México and the U.K.: A comparative study. Journal of Classroom Interaction, 40(1), 40-48.

Wenger, E. (2005). Communities of practice, learning meaning, and identity. New York: Cambridge University Press.

Wolf, D. P. (1989). In D. Hargreaves (Ed.). Children and the arts. Philadelphia: Open University Press.

Woods, P., & Jeffrey, B. (1996). Teachable moments: The art of creative teaching in primary schools. Buckingham: Open University Press.