

Karen Maras (UNSW) argues that Critical and Creative Thinking (CCT) should be a fundamental part of all Visual Arts teaching. She provides us with the findings of a collaborative research-based professional learning program (carried out by Karen and public school Visual Arts teachers) developed to make CCT an integral part of Visual Arts classrooms...

Critical and Creative Thinking (CCT) is regarded as an important attribute that students need in order to adapt to a dynamic and rapidly changing world of work and life in the 21st century (ACARA, 2020). CCT is one of eight general capabilities nominated in proposals for curriculum reform in New South Wales (NESA, 2019) and as an area to strengthen in recommendations for the further development of the Australian Curriculum (Commonwealth of Australia, 2018). General capabilities are proposed by policy-makers and researchers in the area of educational measurement as a means for improving students' academic achievement in all subject areas (Education Council, 2019; Griffen, McGaw, & Care, 2012).

Definitions of CCT abound. They are typically expressed, however, as generic statements describing sets of capabilities that can be integrated in learning, teaching and assessment. ACARA (2020) defines CCT as 'two types of thinking' that support 'complementary dimensions to thinking and learning' including the mastery of cognitive skills such as *concept formation, theory construction, metacognitive reflection* and *higher order thinking*. A CCT learning continuum describes how these skills articulate at different levels of learning. The Department of Education New South Wales also subscribes to this definition of CCT, further distinguishing them as separate skills in their advice to teachers (DOE, 2020).

The Report

While Visual Arts teachers and policy makers are confident that the development of CCT is fundamental to learning in the subject, to date there is limited research or advice that makes explicit the links between syllabus content in Visual Arts and pedagogical strategies teachers can use to promote the development of CCT in the classroom. To progress the challenge of understanding more deeply the relationships between CCT and learning and teaching in Visual Arts, Ms Kathrine Kyriacou, Dulwich Hill High School, in partnership with Dr Karen Maras, School of Education UNSW Sydney, designed a collaborative research-based professional learning program to investigate the role and place of CCT in teaching and learning in Visual Arts.

This initiative, *Teaching and assessing students' critical and creative thinking skills in Visual Arts Years 7-10*, was awarded the inaugural Creative Innovation Grant funded by the Learning and Teaching Directorate, NSW Department of Education in 2019. The aim of the project was to develop teachers' understandings of the theoretical bases of critical and creative thinking in Visual Arts and explore how this understanding could be applied in the classroom to enhance students' CCT. A group of five early career and more experienced teachers, from a range of metropolitan and remote rural public schools, collaborated with a researcher in this Visual Arts professional learning program through online and face-to-face meetings. The project comprised four parts which supported the group to move from theory to practice and back again.

Phase 1: Professional learning workshops

The investigation of research on CCT in Visual Arts was grounded in the premise that CCT in Visual Arts is a domain specific capability (Maras, 2019) and takes the form of practical and conceptual reasoning (Brown, 2017/2005). The group took a deep dive into learning about empirical research, focussing on the cognitive and conceptual dimensions of students' reasoning in art. They learned how students develop increasing autonomy in their reasoning and thinking in art as they learn to work with frameworks of meaning and the practicalities of reasoning about artworks, artists, audiences and subject-matter as they grow older (Brown & Freeman, 1993; Freeman, 2011, 2010, 2004; Maras, 2010, 2018a, 2018b). These studies show that, as students develop, they gradually acquire reasoning skills that support them to organise sets of **critical** claims, or facts about art, and use these recursively to **create** and represent intentional points of view about relationships among agencies in the artworld. *Recursion in reasoning* is the means by which we learn to engage in the processes of *concept formation*, *theory development* and *metacognitive reflection* (Fleischer-Feldman, 1987). These skills underscore CCT (Maras, 2019).

Through further investigation of the cognitive constraints on reasoning in art, the teachers learned how CCT relies on mobilising Visual Arts syllabus concepts in students' thinking and reasoning in their learning (Maras, 2018a). This phase of the project concluded with an investigation of how concepts, derived from frameworks of meaning and value, in conjunction with the core concepts of artist, artwork, audience and subject matter within the Visual Arts Syllabus, provided a rich array of possibilities that could be strategically engaged, in the classroom, to support the development of CCT. CCT was, therefore, understood to be at the heart of learning in the domain of art.

Phase 2: Curriculum construction

Each teacher then applied their new understandings of CCT to the design of a lesson sequence. The aim of the lesson sequence was to support students to engage in *concept formation*, *theory building* and *metacognitive reflection* as a function of their critical and creative reasoning and thinking about art. To achieve this aim, the sequence addressed nominated concepts from the *Years 7-10 Visual Arts Syllabus* (2003) to augment an existing program of work implemented in Stage 4 or 5 Visual Arts. Lesson sequences featured activities that engaged:

- a. one or two key concepts derived from one Frame
- b. particular relationships between agencies of the artworld they wanted students to explore in depth (Conceptual Framework)
- c. pedagogy promoting critical reasoning exchanges and the formation of a point of view about art
- d. examples of artworks by one or two artists, and
- e. a body of resources that would be used as prompts to extend students' critical reasoning exchanges about artwork meanings.

Group discussions of pedagogical strategies that would best support students to engage in *recursive reasoning exchanges* (that promoted the sharing and clarification of critical claims and the creation of different points of view about the meaning and value of artworks) supported teachers to develop their lesson sequences.

Phase 3: Curriculum Implementation

Each teacher then implemented their own lesson sequences in their schools. They engaged *formative* and *summative assessment* strategies to evaluate levels of student engagement in CCT. As would normally occur in their practice, the teachers assessed artworks, art writing and observations of students' classroom exchanges to make an evaluation of how successful reasoning strategies, and associated pedagogies, were in promoting students' engagement in CCT.

Phase 4: Evaluation

The teachers participated in individual and group reflections about their experiences in the project. They were invited to reflect on what they learned about the relationships between CCT, Visual Arts content and the role of *recursive reasoning* in promoting CCT in students' creative exchanges and performances. They also reflected on the challenges they perceived in the design, and implementation, of teaching strategies that they had envisaged would enhance CCT in the classroom and the way these challenges could be addressed. Discussions in this phase of the project were recorded and transcribed for research purposes in accordance with UNSW Human Research Ethics and State Education Research Approvals Process (SERAP) approvals. The results of this component of the project will be addressed in greater detail in articles published in peer reviewed research journals in accordance with these ethical clearances. A summary of key insights gained about the role and CCT in Visual Arts teaching and learning follows.

Reflections and learnings

The outcomes of this project were multi-layered:

Student engagement in CCT

When working with students to make critical claims and using these claims to create new points of view in their reasoning, the teachers commented on the ways these two types of thinking functioned in an integrated way rather than as discrete types of thinking. They observed, when engaging in whole class in *recursive reasoning exchanges* in which particular concepts were made more explicit, that they were largely surprised by the responses of their students. For example, they observed that:

- many students gradually gained confidence in working with the practical and conceptual structure of reasoning, with more students actively contributing to these investigations of art
- the discussions were more lively than usual with an increase in peer-to-peer exchanges as claims were debated and collectively evaluated
- students of all ability levels generally appeared to enjoy these exchanges and, when encouraged to reflect on their learning in previous lessons, appeared to be more confident in expressing their points of view in more coherent and reasonable terms, evaluating their own stance in relation to others' views, and representing these ideas in written accounts.

On the whole, while some teachers acknowledged their own need to continue exploring strategies to engage all students in whole-class and small group exchanges, they were confident that the calibre of students' CCT and the representation of these in oral and written accounts had improved.

Pedagogical strategies for developing CCT in Visual Arts

Strategies that were effective in prompting students to extend their reasoning about artworks, when building critical judgements and constructing explanations of their own artmaking, involved providing information about the circumstances that informs the production of an artwork or situates the development of an artwork within conventions of practice. This involved asking students to explain and interpret source material including:

- images of the artwork in context of site, or with audiences and artists
- extracts from critical reviews and historical accounts
- statements by artists and audiences
- extracts from documentaries or video clips on the artist and their practice.

Teachers also commented that, by orientating their teaching to targeted concepts, they felt more engaged in the *reasoning exchanges* in the classroom and intervened in *reasoning exchanges* by students more often and with greater strategic purpose. For example, they felt greater confidence in offering counter views or issuing provocations to adopt alternate views to prompt students to explore different kinds of critical claims. They believed that these kinds of interventions promoted the development of critical claims that supported students to develop *higher order thinking* and *metacognitive reflections* about their thinking.

Teacher autonomy through collaborative learning

Teachers reflected on ways their understanding of syllabus content and strategies (for engaging with particular concepts that built, over successive investigations, toward the creation of more substantive and reflexive forms of thinking about art in the classroom) had developed and deepened. Paramount in these individual and collective reflections were claims that the teachers:

- deepened their own knowledge of Visual Arts syllabus content (frames, conceptual framework and practice) and how to apply this in the design of learning activities sequenced to build increasingly more complex ideas
- had developed greater confidence in knowing how to adapt their pedagogy to further enhance the development of students' CCT in their classroom practice,
- felt initially challenged by the research and theory, but through revisiting the literature several times and then working with their peers in collaborative and open discussions of how the theory applied to classroom practice, these feelings abated.

They all remarked that they enjoyed learning with peers and that the exchanges about subject specific issues and ideas left them feeling reinvigorated as professionals. There was consensus among the group that professional learning opportunities that specifically addressed their subject expertise, and facilitated links with other teachers in different schools, was of great value to their own development as teachers.

Conclusion

The apparent alignment between students' engagement in sustained, practical, and conceptual reasoning about art, points to the centrality of CCT to learning and teaching in Visual Arts. While teachers' observations and reflections, on their lesson sequences and pedagogical strategies, revealed some interesting insights into the nature of teaching and learning CCT, these are provisional findings that require confirmation in the form of further research. Extending this initial investigation to delve more deeply into these issues could entail implementing a similar project across a broader range of schools in which data could be collected in the form of observations of classroom exchanges between teachers

and students and evaluations of work samples. One thing was crystal clear. The benefits of research-informed teacher professional learning that addressed a general capability, in the terms of the discipline content and pedagogy, was the key factor for the teachers involved.

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Collaborating Critically and Creatively In Visual Arts



critical and creative thinking skills in Visual Arts Years 7-10 involving UNSW and Dulwich Hill Visual Arts High School and funded by the NSW Department of Education Creative Innovation Grant, Learning and Teaching Directorate (\$25,000).

Karen's contributions to teacher education are complemented by her ongoing involvement in state and national curriculum reform, previous classroom teaching experience in schools and leadership roles in professional teacher associations at state and national level.