

## ABSTRACT

### Using a Creativity-Focused Science Program to Foster General Creativity in Young Children: A Teacher Action Research Study

by

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The importance of thinking and problem-solving skills, and the ability to integrate and analyze information has been recognized and yet may be lacking in schools. Creativity is inherently linked to problem finding, problem solving, and divergent thinking (Arieti, 1976; Csikszentmihalyi, 1990; Milgram, 1990).

The importance of early childhood education and its role in the formation of young minds has been recognized (Caine & Caine, 1991; Montessori, 1967a, 1967b; Piaget, 1970). Early childhood education also impacts creativity (Gardner, 1999). The features of brain-based learning (Caine & Caine, 1991; Jensen, 1998; Sousa, 2001; Wolfe, 2001) have a clear connection to nurturing the creative potential in students. Intrinsic motivation and emotions affect student learning and creativity as well (Hennessey & Amabile, 1987).

The purpose of this study was to discern if a creativity-focused science curriculum for the kindergarteners at a Montessori early learning center could increase creativity in students. This action research study included observations of the students in two classrooms, one using the creativity-focused science curriculum, and the other using the existing curriculum. The data collected for this interpretive study included interviews with the students, surveys and interviews with their parents and teachers, teacher

observations, and the administration of Torrance's (1981) Thinking Creatively in Action and Movement (TCAM) test.

The interpretation of the data indicated that the enhanced science curriculum played a role in enhancing the creativity of the children in the creativity-focused group. The results of the TCAM (Torrance, 1981) showed a significant increase in scores for the children in the creativity-focused group. The qualitative data revealed a heightened interest in science and the observation of creative traits, processes, and products in the creativity-focused group children.

The implications of this study included the need for meaningful learning experiences, experiential learning opportunities, critical thinking and problem solving activities, and an emphasis on freedom, independence, and autonomy on the part of the learner. These elements, when combined with an integrated science curriculum, can foster creativity in young children.