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Expressing Chemistry through Various Art Media

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Abstract: This paper examines the theory of Eisenkraft (2006) in expressing chemistry concepts in the forms of lines, shapes, colors or the combination of these through various art media such as crayons, moulding clays, colored pencils, neon pens and acrylic paints. Two topics (1) Properties of Matter and (2) Chemical Bonding were the focus of interpretations of 71 subjects. Each art work was evaluated through an objective categorical label coding scheme or content analysis (Miles and Hubberman 1994). Categorical labels as relevance, patterns, relationships, application, color and emotions were noted; short interviews were also conducted. The result revealed that chemistry concepts are commonly associated with daily activities and things that are frequently seen around the environment, home or community thus, method of instruction in teaching chemistry must progress on the practical application rather than concept, emphasizing real-world use of this science for higher appreciation. Artworks showed that students' minds are open that chemistry is in the surrounding hence teachers need to associate the lessons to real-life events. Participants also interpreted that the focus of teaching strategy must be on the tactile and visual methods rather than auditory as exposed in drawings of things which are mostly tactile and visual in nature. Students also expressed that purpose, function, task or role must be introduced prior to concepts' description, category or classification. Students associate reactions of elements/compounds to human characters such as cooperation, support, teamwork, collaboration, working together, finding groups and even finding partners. The paper suggests that today is the time to operationally use the term chemistry as "central science" as it covers not only the matter itself, but what is within the matter that really matters. The artworks highlighted that chemistry must be taught not only as a study of matter but of human life, human connections and emotions.

Key Words: Chemistry Arts; Chemistry Teaching; Fun Chemistry; Content Analysis