

Chapter 5

THE EFFECTS OF PORTFOLIOS IN PROVIDING CONNECTIONS BETWEEN DAILY LIFE AND LABORATORY EXPERIENCES FOR MEANINGFUL LEARNING AND PUPILS' VIEWS ON SUCH PORTFOLIOS

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Introduction

The need for meaningful learning in education impels researchers on different quests. There is no doubt that learning environments which are presented to the target mass of students, and teaching methods and measuring processes which are applied must increase interest and motivation, and provide students with opportunities to learn by practicing and experiencing, in order to realize meaningful learning. On the other hand, the subjects taught in the class must be associated with daily life and society. Association of the subjects with daily life and society may provide important results for realizing meaningful learning. The researchers conducted previously indicate that when students find subjects associated with their lives and society, they are motivated much more in their studies (Byrne & Johnston, 1988; Blumenfeld *et al.*, 1991; Barker & Millar, 1999). Science education in chemistry, as in biology and physics, must be presented by associating the subjects in the curriculum with students' lives and society, and students must be prevented from perceiving the subjects learned in the class environment as if they were very disjointed with daily life. In other words, they must become aware of the fact that certain theoretical knowledge which is learned in the class is in fact interrelated with daily life very closely, and that there are a great number of examples which occur in daily life. In dealing with chemistry subjects, this association must be maintained in laboratory environments. The laboratory experiences related to theoretical chemistry subjects must be associated with students' daily lives. Students should notice that a daily life experience, which they have never paid attention to or have gone through without being aware of, is a natural equivalent of an experience in the chemistry laboratory, or they can be enabled to perceive that the experiences they have gone through in their daily lives are related to a basic principle of chemistry. This can enable them to be more conscious in their daily lives, and to understand the events taking place in the world better. Moreover, an awareness that chemistry is interrelated closely with

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According to the results of the present study, it can be assessed that portfolios have a positive effect on awareness of students and in relating theoretical chemistry with daily life experience. The relationship between daily life and theoretical information makes the learning more meaningful. Students stated that this relationship makes the learning more permanent. Furthermore, this relationship makes the learning more concrete, and students feel themselves well-informed. In this context, the relationship helps individuals to make sense of the world. As a result of this, teaching methods and assessment tools can be designed on a more practical basis. Researchers can examine this relationship using different methods, disciplines and age groups. The effects of the relationship on the students, either in chemistry or in other fields, can be studied.

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