Chapter 5
Bringing Learning and Teaching up to Date

ABSTRACT

This chapter of the book examines first various viewpoints about teaching and learning and then focuses on current ways of instruction with the use of social networking. Further text concentrates on instruction in art based on science and technology and then offers curricular postulates about building this kind of teaching and learning philosophy through engaging students in cognitive learning activities. Further text tells about learning with computing. Types of online instruction are described with the use of private network and social networking. The chapter concludes with postulates suggesting inclusion into the school curricula several actions aimed at strengthening the curricular program: iterative and integrative learning, building mathematical foundation, supporting linguistic aptitudes, using visualization techniques, coding, introducing programming, and games that hone cognitive abilities.

INTRODUCTION

This chapter describes selected learning theories which tell about the performance of learners who share the same purpose or intent and who are engaged in practice. Selected innovators in the fields of experimental and educational psychology include, among other theories, Behaviorism (Ivan Petrovich Pavlov, Burrhus Frederick Skinner, John B. Watson), Cognitive

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theories (Gestalt Psychology–Berlin School, Jean Piaget, Albert Bandura), and Constructivism (Jerome Bruner, Jean Piaget and Bärbel Elisabeth Inhelder).

Issues discussed pertain to discussion about transforming instructional design according to the developments in instructional technology. Discussion about the viewpoints on the up-to-date learning and instruction involves learning in a multisensory and integrative way and learning with the use of computer technologies. The further part of this chapter examines how visual and verbal forms of expression may interact, both in web delivery and in student's work. On the web, the user/visitor's interactivity may be important both for teachers and college students. Students may want to solve a literary assignment visually using art as a source of inspiration, applying signs, icons, and metaphors, and still maintaining informative quality of their writings. The learning with computing is essential part of instruction.

Description of the types of online instruction with the use of private network and social networking is followed by discussion of application of storytelling as a teaching tool. Further propositions include instruction in art production based on science and technology, and several curricular postulates about the content and mechanics of teaching. This chapter discusses postulates suggesting inclusion into the school curricula several actions aimed at strengthening the curricular program: iterative and integrative learning; building mathematical foundation; supporting linguistic aptitudes; using visualization techniques; coding: introducing programming; and games that hone cognitive abilities.

5.1. A LOOK INTO VIEWPOINTS ABOUT THE LEARNING PROCESS

Models of learning and teaching styles define the role of a teacher, starting from the ancient Master with apprentices, through the traditional blackboard and chalk as an old school strategy to teach and grade. Old schools gathered students in many grades in one classroom; some university schools revisit this model now while developing experimental programs for prospective teachers and the student teaching programs. A rote model followed, with memorizing and copying writings in the Middle Ages, mnemonics, and recitations to support memory. Home schooling have been present in the Middle Ages, Romanticism, and also now. Tutoring, private tutors in arts, sports, and other areas had an impact on the learning styles.