

# Chapter 12

## From Visualization Framework on Teaching Process: New Methodical Approach to the Teaching of Bookbinding in Graphic Technology

**Suzana Pasanec Preprotić**

*University of Zagreb, Croatia*

**Gorana Petković**

*University of Zagreb, Croatia*

### ABSTRACT

*A framework for learning was developed with input from teachers, education experts, and business leaders to define and illustrate the skills and knowledge that students need to succeed in work, life, and citizenship, as well as the support system for learning outcomes. The critical system ensures student development and learning environment, including their personal skills, content knowledge, and important expertise, which they will need at Faculty, on the job, and generally in life. Students achieve better when they are actively engaged in solving meaningful problems. Today, among other academic courses, ICT-based learning provides an active learning process that enhances student-centered learning approaches, collaborative and participative forms of teaching and learning. Dialog, writing, and “high-order thinking” have significant importance, which directly improve communicative learning processes, including social network model of thinking. That process involves focusing on achieving a particular prior learning outcome (previous courses) and resolution comprehension of all aspects of the issue.*

### INTRODUCTION

Graphic technologies represent one of the largest professions in the world. The profession embraces change, requiring those pursuing graphic technology careers to learn new and diverse skills. The graphic technologies program appeals to a variety of individuals including students with interest in creativity, technology and management. The graphic technologies include traditional printing and electronic, publishing, packag-

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ing, digital imaging, computer graphics, website development, digital photography, printable electronics and related areas. The discipline includes media and mass communication involving creation, production, management and distribution of advertising, marketing, web sites, books, magazines, newspapers, catalogues, packages and other media in printed and digital form. Graphic engineering is the part of technology field that requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities; it lies in the occupational spectrum between crafting and engineering but more close to the engineering. Engineering is the profession in which knowledge of the mathematical and natural sciences gained by study, experience, and practice is applied with judgment to develop ways to utilize economically the materials and forces of nature for the benefit of humankind.

The market for traditional print products offers more variety. Usually, printed products are categorized into commercial printing and periodicals. This classification differentiates printed matter with regard to its frequency of publication. Since the production process also depends largely on these basic conditions, print shops usually specialize in one or the other market segment. Commercial printing refers to print products that are produced occasionally (e.g. catalogues, brochures, leaflets, business cards). Periodicals are printed matter that appears periodically (e.g. newspapers, journals, magazines). Publishing houses and companies are the typical clients for periodicals printing (Kipphan, 2001, p. 4)

Gutenberg's work and his invention, printing with movable lead type, in the middle of the fifteenth century triggered a revolution in book production. A much greater proportion of the population had a chance to acquire education, culture, and information than had ever been possible with hand-written books. Consequently, illiteracy decreased in the following centuries. Books continued to be colored by hand even after Gutenberg's invention and a lot more colorful volumes has been produced in high quality comparable to earlier ones. For over 500 years, letterpress was the dominant printing technology for books. Only when phototypesetting and lithographic printing became widespread, in 1970s, printed books have turned into a low cost mass medium. It was because more efficient production processes and availability of inexpensive paper who were the main reasons why books have become a mass medium. The printed book has developed its independent look and form over the years, which is still used today, and the number of produced new book titles has been growing continuously since Gutenberg's invention. Even today, in the age of electronic media, annual growth rates in book production are still recorded in Germany, Great Britain and China (Kipphan, 2001, p. 5).

The extensive range of books is classified on the one hand in terms of content; on the other, it extends from high quality, thread-stitched leather volumes with a gilt edge to simple perfect-bound pocket books or paperbacks. Books are offered both in one color as well as in top-quality multicolor art publications. Along with advertising inserts, which we find daily in newspapers and magazines, there is a large market for leaflets and product descriptions. Such printed matter is referred to as brochures. Unlike magazines and newspapers, brochures are not published periodically. Brochures are commercial print work. Another significant difference from newspapers or magazines is the usually low print volume. Today, brochures are generally printed in color and are available as either folded individual sheets or bound copies. Also, brochures are in better quality than newspapers and magazines because are mainly used to advertise, describe and sell some company products (Kipphan, 2001, p. 6).

Every book product is usually made of book block as a carrier of printed information and cover as protection unit, produced independently and then assembled into a single unique product. To analyze the organization of the processing procedure it is useful to structure the bookbinding finishing processes into individual process sections. Each section characterizes the transformation of the materials with regard to the desired processing outcome. The designations of these processing sections use unique terminology

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