



Analysis and Critical Thinking Skills: A Line-for-Line Copy Draping Project

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Rationale: Most university-level educators maintain that developing a student's critical thinking (CT) skills is extremely important. The way to accomplish that goal, however, is open to debate. Students aspiring to a career in fashion and technical design need analytical and CT skills in order to successfully contribute to their chosen field. Apparel design and construction classes are ideally suited for hands-on, active, problem-based learning in order to develop the skills as opposed to the traditional lecture format (McKeatchie, Pintrich, Lin, & Smith, 1987).

Brief Literature Review: Although there is disagreement on the definition of CT among educators, psychologists, and philosophers, most researchers and teachers agree that it is "the ability to think deeply about an issue, consider evidence for and against a proposition, and [the application of] reasoning skills and logical inquiry to arrive at possible conclusions" (Williams, 1999; Nargundkar, Samaddar, & Mukhopadhyay, 2014). Bloom's Taxonomy of Learning (1956) addresses the concept of learning by which a person moves toward being able to analyze and offer conclusions and solutions to a problem. Blending the ideas of philosophers and psychologists with those of Bloom's Taxonomy, Nargundkar, et al., (2014) have operationalized the construct to mean "the ability to solve problems, collect and analyze data, and use the analysis for decision making."

Instruction: Draping problems were assigned in an earlier apparel construction/technical design course. Verbal and visual instruction plus student textbooks providing written and numbered diagrams were the primary modes of instruction. The purpose of draping, the need for accuracy of execution, and the craftsmanship of draping were also emphasized. The next course required more difficult draping techniques such as greater numbers of small pleats, tucks, gathers as well as directional manipulations, bias draping, and contouring. Types of fabrics suitable for different draping manipulations were discussed. Increasingly difficult problems were chosen in order to prepare students for the final draping project, the Line-for-Line copy.

Assignment: A total of twenty garment pictures were chosen by the instructor from *Vogue*, *McCall*, and *Simplicity* pattern books, 1930s through 1950s. Designs were evaluated for difficulty, draping techniques, time needed for quality execution, cost of fabric, diagrams of pattern pieces/information shown with the design, and skill levels of students. A photocopy of each picture was made including pattern piece diagrams and descriptive information. Students chose a picture; no duplication between students. Questions were answered but the instructor did not direct any student (n=10) toward or away from any pattern choice. High quality muslin or purchased fabric was used. Two weeks were allotted and students were told that the most successful drapings would be displayed plus the pattern picture. Students in the senior Capstone course, who participated plus one graduate student, discussed the project with the instructor and answered an 11 item questionnaire about enhanced confidence, improved CT skills, improved draping skills, and reasons for choice of pattern. One question asked whether students felt more

course work meant to develop stronger CT skills should be developed for design students. The open-ended question also allowed for comments and suggestions.

Results: Five drapings of ten were displayed. (One student did not want the draping displayed). Eight students answered questionnaire. Six felt that their ability to analyze garment construction improved. Five students felt their draping skills greatly improved, two indicated some improvement. Six students answered that this project helped enhance their confidence to copy garments offered by retail clothing stores. Eight students indicated that more projects should be developed to improve analytical and CT skills. Six students believed that this project should be a routine part of this particular course. Five students felt it prepared them for their Capstone class. Responses to the open-ended question indicated that although challenging, the project helped to improve CT skills, and draping, construction, and analytical skills. One student stated, "Hated it at the time. Looking back it was very helpful. Definitely keep it." Another student wrote "I can now look at any design (or draping) and know I can copy it line-for-line." One student commented that CT skills improved *in relation to apparel construction and garment evaluation*. This is consistent with the findings of Kirshner, Sweller, & Clark (2006).

Implications/Discussion: An option for more significant results would be to repeat the assignment for several semesters, under the same conditions, and tabulate the results. The questionnaire should be administered during the same semester as the project in order to capture the opinion students before they are cannot be located. Pintrich (1991) has developed a scale (MSLQ) for assessment and measure of student motivation, learning strategies, and thinking skills. An adaption may be possible to better assess project effectiveness. This instructor will continue to include this project due to the overall positive response from the students.

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