Footwear Design Sketchbook Practice for a Portfolio

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Introduction. The sketchbook is a useful and effective tool for artists to present ideas and research perceptions (Green, 2006). Sketchbook practice is valuable in fostering students' training in sketching skills and the ability to further apply those skills to the process of shoemaking. McKinney and Dong (2018) found that students had positive experiences when engaging in learning activities using a sketchbook for fashion design research; however, there is little academic research on appropriate uses of sketchbooks. Although sketching skills can be enhanced through the use of varied perspective templates of shoes found in the book, *How to Draw Athletic Shoes* (Kokavec, 2014), there is a lack of information (e.g., sketchbook practices, basic sketching skills, or shoe portfolio) about shoe design in academia. Thus, the literature provides little explicit instruction for novice students on how to conduct shoe design research to create sketchbook content. In turn, how instructors can use that content as a fundamental resource and develop course material for a creative shoe design course. Therefore, the purpose of this study was to assess the effectiveness of students' skills in shoe design sketching through a series of practice tasks in in-class activities and assignments in a footwear design course.

Methodology. Prior to collecting data for this study, Institutional Review Board approval was obtained from the University's Human Subjective Review Committee. A total of 12 undergraduate students (ten seniors and two juniors) attended a shoe design course. The course consisted of three main sections (sketching, patternmaking, and 3D printing) with the goal of completing a shoe prototype at the end of the semester. This study focused on evaluating students' learning experiences when sketching shoe designs in the three main sections through in-class activities and assignments. All students had no prior shoe design sketching experience nor experience creating shoe designs using hand sketches for a traditional portfolio. Among the students, 67% were in apparel design majors, and 33% were in industrial design majors. Each student finished 50 shoe design sketches and two final shoe prototypes (individual and group projects). The instructors demonstrated and provided instructional sketching shoe design templates according to five different views of the shoe (front, back, side, upper, and overall views) in a step-by-step process for all in-class activities and a series of assignments. Each student brought five preferred shoe images and followed each step to practice sketching the shoes' designs. After that, students continued practicing their creative shoe designs (five images)

according to each different view of the shoes. During each activity, the instructors provided students with feedback on how to improve their sketching skills. At the end of the semester, the researchers administered a questionnaire that elicited demographic information and included a few open-end questions (i.e., on primary sources of shoe design and advantages or disadvantages of sketchbook practice) and 17 evaluation questions regarding the sketching practices based on a seven-point Likert Scale (1 = strongly disagree to 7 = strongly agree) that was adapted and modified from an existing study (Ma & Lee, 2012). SPSS 20 software was used to generate basic descriptive statistics and quantitative data.

Results. Shoe design sketching skill growth of students was sufficiently evident to the instructor through their completed sketchbooks and in-class activities and assignments. Students' three primary sources for shoe designs were the Internet (75%), blogs or social media sites (24%), and fashion magazines or books (1%) because they could promptly obtain information and find their favorite and trendy shoes. Most students mentioned, *"the sketchbook practices helped me bring new ideas (brainstorm) to create a shoe prototype for the final project."* The sketchbook assignment series served as a practical and useful tool and was more innovative than traditional pedagogical approaches in fashion design courses (McKinney & Dong, 2018). Table 1 summarizes students' evaluation of the sketchbook activities and assignments. All students indicated positive attitudes and were satisfied with the sketching tasks, according to their responses on all question items, with mean values ranging from 4.3 to 6.5. Based on Likert-scale responses, the shoe design sketching practice made students think about a variety of shoe designs ($M = 6.5$, $SD = 1.00$); this means that students obtained various ideas and brainstorming opportunities during the in-class activities and assignments. The sketching practice did not help students think overtly about the materials used shoes in their project ($M = 4.33$, $SD = 1.17$). However, a few students responded that they believed *"the sketchbook practices helped me rethink material selection, detail design, and problem-solving skills."* Overall, the sketching shoe design practice was a valuable learning experience in the shoe design class ($M = 6.17$, $SD = 1.04$). The majority of students indicated positive outcomes of the activities in the evaluation, and all students successfully finished their final project based on their distinct ideas and plans through sketching practice. After submitting the entire sketchbook with 50 shoe design sketches as an assignment, students reported, *"the sketching practice was effective for the shoe design process and could help me improve sketching skills."* Therefore, we firmly believe that the sketching practice was helpful and valuable for students' learning processes and their portfolio showcasing, and their preparation for future shoe design or advanced shoe design courses.

Implications, Limitations, and Future Study. By learning the sketching practice during in-class activities, unskilled students can learn fundamental designs, patternmaking, and construction of footwear and other soft goods. Educators should consider adding sketchbook practice to course content (e.g., via in-class activities and assignments) or devise a new course to improve students' sketching skills. The data collected in this study were limited to small numbers of students in one shoe design course; therefore, future research is needed to investigate

the effectiveness of sketchbook practices on various courses related to product design to confirm the findings of this study. Therefore, sketchbook practice will be necessary for unskilled students to strengthen their shoemaking skills in shoe design courses. In the future, to enhance students' sketching skills and create their shoe design prototypes, we will continuously and experimentally develop instructional aid materials (e.g., shoe design templates and a tailored instructional manual) in the shoe design course.

Table 1.

Descriptive Statistics for Student Evaluation of Sketchbook Practice

Questions	N	M	SD
1. The sketching practice comprised complex activities to be investigated over a period of time.	12	6.25	0.97
2. The sketching practice provided the opportunity to improve my drawing skill for my project.	12	5.92	1.00
3. The sketching practice had real-world relevance in the footwear industry.	12	6.08	0.97
4. A variety of resources were used to complete the sketching shoe design practice.	12	5.33	1.00
5. The sketching practice provided an opportunity to examine tasks from different perspectives.	12	5.50	0.90
6. The sketching practice allowed competing solutions and diversity of outcomes.	12	6.00	0.99
7. The sketching practice made me think about a variety of shoe designs.	12	6.50	1.00
8. The sketching practice helped prepare me for work in the footwear industry.	12	5.25	1.00
9. The sketching practice helped me acquire shoe design related knowledge and skills.	12	5.50	0.94
10. The sketching practice helped me think critically.	12	5.00	1.22
11. The sketching shoe design practice helped me think more clearly about the materials.	12	4.33	1.17
12. The sketching practice helped me think clearly about a type of shoe design.	12	5.67	1.50
13. The sketching practice helped me think more clearly about a pattern in my project.	12	5.67	1.23
14. The sketching practice helped me think more clearly about my ideas and brainstorming.	12	5.67	1.23
15. The sketching practice was a worthwhile experience.	12	6.00	0.95
16. The sketching practice helped me solve complex real-world problems of the footwear industry.	12	5.08	1.31
17. Overall, the sketching practice was a valuable learning experience in the shoe design class.	12	6.17	1.04

Note. M = mean, SD = standard deviation.

References

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