A Core General Education Course Construction System to Improve College Students’ Art Literacy in Garment and Accessories

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Abstract. To adapt to the needs of undergraduate talent training in the 21st century, and to improve college students’ art literacy in garment and accessories, the course set three modules of body measuring and structure, sewing technology and accessories from the perspective of clothing profession, and provided undergraduate students with an artistic training in all aspects of clothing structure, fabrics, technology and colors. Through the combination of theoretical narrative and practice, students could grasp the connotation of the art of garment and accessories under the guidance of theory and hands-on practice and guide the individual's daily dressing and matching and promote the appreciation ability of the garments and accessories. The teaching effect of the course was analyzed by setting up questionnaires before and after the study. The results of statistical analysis showed that the study of the course had achieved remarkable results in improving college students’ art literacy in garment and accessories.

Introduction

Undergraduate education in the 21st century not only cultivates talents in a specific field such as engineering, liberal arts or science. Children of this age have a superior living condition since childhood, and most of them have received the cultivation of music, dance, painting and other arts, which have higher requirements for their own life or future planning. In the future, they will not only be the leading talents in various industries, but also require a high level of art to match their own dresses, home wardrobes, etc. Art of garment and accessories is professional and closely related to people's lives. It is not only a science, but also an art of life. People who know the art of garment and accessories are more delicate and appropriate in the arrangement of their clothes for various occasions, their life and work. Even students majoring in clothes and related majors on campus are very confident and outstanding groups on campus. Such group knows how to express their emotions with appropriate clothes, hats and costumes, attend various occasions in a coordinated way, and at the same time give themselves and their families more confidence. Therefore, more and more undergraduates are hoping to improve their art literacy in garment and accessories at the same time as they choose their favorite professions in agriculture, medicine, and science. In recent years, the construction of general education elective courses launched by undergraduate education has just catered to the needs of the students.

General education is a humanistic education for all college students, not for professional or career purposes. It is humanistic education beyond the utilitarian and practical, which focuses on "cultivating" rather than "teaching". Its purpose is to cultivate students' humanities background, healthy personality and good moral character, so as to create a complete humanity education with great vision, acquaintance, liberalism and graceful emotions[1]. The general education public elective courses implemented by colleges and universities is a kind of course system to implement this education. Our research is to set up a core general education course teaching system. Make more students to form preliminary understanding of body shape, technology, color and fabric collocation of garments and accessories, and form the preliminary mode of clothing art collocation.
It will play a very important role in improving students’ art literacy of garments and accessories and art of life, especially for engineering students.

**Course System Construction**

In a comprehensive undergraduate college with a complete range of disciplines, the course is available to all majors of the university, including freshmen and sophomores. Students can choose this course as long as they are interested in art of garment and accessories. The course system construction mainly starts from the three elements of garments: structure, fabric and color. Combined with the knowledge of body measuring, the course enables students to start from the understanding of their body shape and skin color, and make reasonable clothing modeling, structure and color matching. Through a large number of pictures, animations and the setting of practical links of the course, students have understood the art literacy of garment and accessories in the practice of measuring body, making boards, cutting cloth and sewing. The course setting module is shown in Figure 1.

![Figure 1. Designing of course system.](image)

From Figure 1 it can be seen the course system of the study consists of three parts as follows.

1. **Body Measuring and Structure Module**
   This module mainly combines the human body structure and clothing modeling and style to identify the body shape and analyze the clothing pattern[2]. Combined with example analysis of influence of dart, pleat, divider, yoke, and other forms of structure process on the human body and garment modelling, it inspired students to recognize and match the structure of garments through the understanding of their own body shape and clothing size, and students can experience the pleasure of garment structure cutting and the beauty of human body modification through garment modeling and structure.

2. **Sewing Technology Module**
   This module mainly combines a variety of sewing methods and fabric processes, and leads students to sew buttons, buttonholes, hem, seams and other processes one by one[3]. It enables the students to experience the pleasure of sewing masters and the beauty of craftsmanship with ingenuity in the process of sewing. Finally, it is a perfect course to finish a piece of high-grade hand-sewn clothing that fully conforms to the modification of one's own body shape.

3. **Accessories Matching Module**
   This module, mainly using various designs of backpacks, handbags, and corresponding handicrafts such as hair accessories and key pendants, with the art of patchwork, in the combination of different textures and fabrics, allowed students to further experience the matching aesthetics of jewelries and garments, needlework and skill in the hand-stitched art, as well as the harmonious beauty of jewelry, clothing, environment and people.
Course Opening Practice and Effect Evaluation

Course Objects

The courses were open to all freshmen and sophomores of the university, and there were no restrictions on majors. As long as students are interested in garment and accessories, they can choose voluntarily. In the first year, three classes were set up, each class was full of 60 students, and the students’ majors included medicine, normal education, foreign language, automation, computer, electromechanical, chemical engineering and many other non-apparel disciplines, as well as art, clothing, music and other aesthetic related disciplines. In the course of interaction learning, they give full play to their professional characteristics and the final design work is of great variety and colorful.

Analysis of Course Opening Effect Survey

Design of Questionnaire

The questionnaire, designed from the aspects of inspiration and improvement of students from three modules: structure, technology and accessories, mainly designed 16 problems, including identification of structure drawing, identification of process form, identification of fabric, identification and mastery of stitch method, collocation of costume modeling, collocation of costume fabric and etc. A comparative survey was conducted on the effects before and after learning, and the five-point scale of Likert scale[4] was adopted for the mastery degree of 16 questions: the ruler and score are set as follows:

| Semantic Category                  | No Understanding | A little Understanding | Familiar Understanding | Clear Understanding | Clear Understanding and Flexible Using |
|-----------------------------------|------------------|------------------------|------------------------|--------------------|----------------------------------------|
| Scale Score                       | 1                | 2                      | 3                      | 4                  | 5                                      |

161 questionnaires were distributed in the class, 161 were recovered, and the recovery rate was 100%.

(2) Summary and Analysis of Results

Spss23.0 software was used to analyze the survey results, and the mean value of each survey question before and after learning was calculated and summarized as follows:

Body Measuring and Structure Module

Table 2. Comparison of learning effect in Body Measuring and Structure Module.

| Clothing structure index           | Mean value of pre-learning | Mean value of post-learning | Promotion range | Improvement amount |
|------------------------------------|-----------------------------|-----------------------------|-----------------|--------------------|
| 1 Lines and sizes                  | 1.75                        | 4.52                        | 1.58            | 2.77               |
| 2 Identification of process symbols| 1.36                        | 3.73                        | 1.74            | 2.37               |
| 3 Relationship between style and allowance | 1.68                        | 3.72                        | 1.21            | 2.04               |
| 4 Body shape and size              | 2.35                        | 4.18                        | 0.77            | 1.83               |
| 5 Identification of fabrics        | 1.51                        | 3.98                        | 1.63            | 2.47               |
| 6 Garments modeling and body shape | 1.99                        | 3.8                         | 0.91            | 1.81               |

Where: Promotion range = (post-learning - pre-learning)/pre-learning; Amount of improvement = post-learning - pre-learning.
From Table 2 and Figure 2, it can be clearly found that students of any major have the highest awareness of their own body shape and size before learning. In addition, they are very confident about the collocation of garment modeling and body shape, while they have a very low awareness of professional garment tailoring drawing. The improvement of students through learning is very significant, especially the indicators 1, 4 and 5, which correspond to the identification of garment tailoring drawing, the identification of fabric and the collocation of garment modeling and body shape. The results show that the students who choose this course have a significant improvement in their understanding of garment pattern after learning.

**Sewing Technology Module**

| Sewing technology index | Mean value of pre-learning | Mean value of post-learning | Promotion range | Improvement Amount |
|-------------------------|---------------------------|-----------------------------|-----------------|--------------------|
| 1 Dress sewing process  | 1.47                      | 4.25                        | 1.89            | 2.78               |
| 2 Lining application    | 1.6                       | 3.85                        | 1.41            | 2.25               |

**Table 3. Comparison of learning effect in sewing technology module.**
Where: Promotion range = (post-learning - pre-learning)/pre-learning; Amount of improvement = post-learning - pre-learning.

Table 3 and Figure 4 indicate that students have little knowledge of the professional indicators such as the sewing technology of the dress and the technology of the lining and other accessories before learning. But students know more about stitching and sewing on the tempering of character. Through the study of the course, the students’ understanding of sewing technology and stitching of the dress has been greatly improved.

**Accessories Making and Collocation Module**

Table 4. Comparison of learning effect in accessories making and collocation module.

| Index                  | Mean value of pre-learning | Mean value of post-learning | Promotion range | Amount of improvement |
|------------------------|----------------------------|-----------------------------|-----------------|-----------------------|
| 1 Accessories making   | 1.47                       | 4.25                        | 1.89            | 2.78                  |
| 2 color patterns       | 1.6                        | 3.85                        | 1.41            | 2.25                  |
| 3 shape modeling       | 1.79                       | 4.38                        | 1.45            | 2.59                  |
| 4 fabric material      | 1.79                       | 4.07                        | 1.27            | 2.28                  |

Where: Promotion range = (post-learning - pre-learning)/pre-learning; Amount of improvement = post-learning - pre-learning.

Figure 5. Improvement after learning pre-learning and post-learning.
It can be seen from Table 4 and figure 6 that students have little knowledge in accessories and garment’s color patterns before learning. After learning, students’ awareness of these two aspects has been greatly improved. In the collocation of shapes and color patterns, students have a good sense of themselves before learning. After the professional learning of the course, their awareness is also significantly improved.

**Investigation on the Improvement of Students’ Overall Sense of Art**

Finally, the degree of improvement of students’ overall sense of art was investigated. (1) The course investigated the enhancement of students’ artistic sense of garment and their preferences for handcrafting. (2) The course investigated students’ expectations of other relevant courses. The results are shown in table 5.

| Artistic sense promotion index | Mean value of pre-learning | Mean value of post-learning | Promotion range | Amount of improvement |
|-------------------------------|----------------------------|----------------------------|----------------|-----------------------|
| 1 Awareness of garment art sense and preference of handcrafting | 1.47 | 4.25 | 1.89 | 2.78 |
| 2 Expectation of relevant courses | 1.6 | 3.85 | 1.41 | 2.25 |

Table 5 indicates that students’ sense of garment art has been significantly improved. Students have learned more professional garment knowledge from the aspects of structure, shape, fabric, color and collocation. These provide professional basis and guarantee for the appreciation and selection of garment in their subsequent daily life.
Summary
The course is taught through structure module, technology module and accessories making and collocation module. Both the students of garment related disciplines and non-related disciplines have achieved different degrees of improvement through learning, which has played a significant role in the improvement of students’ garment artistic literacy.

Conclusion
This paper satisfies the educational needs of improving college students’ comprehensive literacy, gives full play to the characteristics of garment art teaching, and designs three modules: garment structure, sewing technology, accessories making and collocation. The course provides professional guidance to all students who are interested in the art of garment and a questionnaire was designed to investigate and analyze the effect of students before and after learning. It is concluded that each module has achieved remarkable results, which proves that this course is a very effective general elective course to improve undergraduates’ garment art literacy.

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