

A Study on WorldSkills Graphic Design Technology's Promoting Effects on Layout Design Teaching

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Abstract

This paper translates the competition content and assessment standards of Skill Graphic Design Technology of WorldSkills Competition into training standards for skilled talents, and the results of WorldSkills Competition are translated into daily teaching results. Through researches, new technology, new skills and new standards can be widely applied to teaching and benefit all students so as to cultivate highly skilled talents with high comprehensive quality and strong innovation consciousness.

Keywords

Graphic Design, WorldSkills Competition, Layout Design, Teaching

1. Introduction

The WorldSkills Competition (WSC) is by far the largest and most influential vocational skills competition with the highest reputation in the world, and is acclaimed as the “WorldSkills Olympics”, whose competitive level represents the world’s advanced level of vocational skills development. It is an important platform for members of WorldSkills International (WSI) to showcase and exchange their vocational skills. Organized by WSI, WSC is held every two years and has now been successfully held for 45 times.

Graphic Design Technology is a skill in Creative Arts and Fashion sector of WSC, which requires competitors to have unique creativity in visual communication, proficiency in computer software operation, ability to design colors, fonts, graphics and layouts, and to be able to fully focus on completing four modules of editorial design and digital publishing, packaging design, corporate and infor-

mation design, advertising and display design with new media within specified competition time. Layout design in WSC is a part of the Editorial design and digital publishing module and one of the important assessment aspects in the competition. Competitors are required to make editorial design and production for relevant content based on the material and information given in test projects within a set time frame. The content includes design and production of a book or corporate brochure cover and inside pages, which should reflect the aesthetics of layout design and have an effective expression of textual information. Excellent layout design can accurately introduce products, implement advertising strategies and promote brands. It can also bring visual information to people in its own distinctive manner and stimulate people's interests in feeling things so that the purpose for people to recognize these things will be achieved.

Some countries are relatively advanced in the study of WSC skills, such as Brazil, South Korea and Russia, which have all set up "Graphic Design Technology" related majors in their vocational education and higher education systems. China will host 2022 the 46th World Skills Competition in Shanghai, and the country also attaches great importance to the system of training, utilising, evaluating and motivating talents, promoting the craftsmanship of excellence and inspiring young people to be able to become skilled and talented. Therefore, WorldSkills standards need to be brought into the classroom. Understanding the requirements and enterprise industrial standards of WSC on Graphic Design Technology, formulating reasonable assessment content and standards for teaching layout design, and bringing the teaching of layout design closer to meeting international standards, (Liu, 2018) are important parts of layout design teaching reform.

2. The Necessity to Integrate Teaching Task Design of Layout Design with WSC Graphic Design Technology

Information transmission has become particularly essential in this era of information explosion. How to accurately and efficiently convey information is the primary issue that designers need to think about. While trends in layout design are constantly changing with the times, the basic principles and laws have an enduring basis and a traceable pattern. In layout design classroom, main teaching content is principles, basic elements, composition, layout and so on, and then coupled with case studies. However, there are often such problems with the cases in textbooks as isolated cases disconnected with the needs of society, outdated case design styles and a low frequency of updates etc. Students learn the basic rules of knowledge and examples explained, but are still overwhelmed and lack the ability to innovate on their own when it comes to practices and subjects they need to design in real work scenarios. Empty talk is a major taboo for design. And high requirements of WSC represent the latest standards and trends in the industry, and the high quality test projects give students a clear learning objective, which is of great significance for students to be exposed to the world,

broaden their international horizons and improve their design skills both in the classroom and in practice.

3. Insights for Layout Design Teaching from the Assessment Content of WSC Graphic Design Technology

WSC adopts a skill-based and modular approach to develop test projects, which is not suitable for scientific studies, but it matches practical applications, vocational teaching requirements and industry requirements. The WSC marking scheme can be used to measure the operation process of a specific skill during training, which helps to achieve high precision, standardization and safe production in vocational skills training and teaching system, which is also in line with the contemporary requirements of enterprises and society for skilled people (Gao, 2020).

Take the sample test project of Graphic Design Technology in the 1st Vocational Skills Competition of China for example, layout design is involved in the Advertising and display design module, Editorial design and digital publishing module and Corporate and information design module. The Editorial design and digital publishing module takes the brand Free Outdoor as the theme. Competitors are asked to design a new product brochure for its fully upgraded brand. This is typical content of layout design, which includes design of the cover and inside pages of the brochure for both paper and digital media. Prior to this, competitors had been asked to design and draw a brand logo and products. These were then integrated into the final product brochure design so as to keep the style and design consistent throughout, testing the competitors' ability to integrate. A primary analysis can be made based on the test project. Free Outdoor is recognized as a leading global outdoor brand and its products are mostly used for camping and hiking activities. Considering the demands of its target market of outdoor travelers aged between 35 and 50, we can conclude that the design should be upmarket and reflect its professionalism. The aim of assessment is to pinpoint its entrepreneurial culture and characteristics through layout design, cater to target market, enhance its brand image and convey a high-end professional brand message. Therefore, teachers can design teaching tasks from different angles for students to practice by breaking the theme down into multiple aspects, identifying branches with brand characteristics, starting from small points and making key content as prominent theme. Take camping for example, students can be asked to do some researches to adopt some elements of outdoor camping, and then combine them with nature. Students can use elements such as camping environment, colors and shapes of the camping gear as a starting point for design. They can also apply basic rules of design based on this, and integrate them with each other, prioritize and refine the theme to complete final design task.

Take the real test project of Graphic Design Technology in WorldSkills Shanghai 2022 Trials for example. In the Editorial design and digital publishing mod-

ule, the task is to design and produce a brochure for “Ying Ai Children’s Wellness Center”. The theme of the campaign is “Pinky Swear with Ying Ai”. The test project clearly defines requirements and gives a clear design objective and target group. Requirements are clear and precise in every aspect including file format, finished size, reading order, binding style, color profile and resolution. Besides, competitors also need to highlight the theme and reflect artistry of design. As can be seen, these requirements are close to the design needs of actual work cases, so teaching tasks can be made in accordance with design procedures depicted by WSC assessment, which can make teaching objectives clear and practical. In teaching tasks, teachers can use such themes, combine them with practical projects and assign tasks to students. Students are asked to think out of the box. The brochures contain many parts and require field researches, in which students can practice their field research skills, capture points of the theme, and be detail-oriented and divergent thinking so as to complete design tasks according to standardized and clear task requirements. This method of teaching allows students to design freely while developing a habit of standardized design. It can also be considered as a public service project by incorporating ideological and moral elements, allowing students to understand public service and serve the community while designing.

It is also important to analyze teaching content of layout design based on a summary of assessment content of WSC Editorial design and digital publishing module. The WSC design themes meet international standards, because international brands and themes are usually used as content. By adopting such themes as teaching cases in the classroom, we can make designs take place in an international context, which helps to broaden students’ horizons. As the formats and standards of layout design in Chinese and English are different, making courses include not only Chinese cases, but also English design cases and integrating both Chinese and English into design can enhance students’ design skills in different language environments, develop students’ international perspectives and strengthen their international design views of layout design techniques.

Teaching task design is the key to ensure teaching quality. The assessment of WSC skills is highly comprehensive, involves a wide range of knowledge, and is in line with high international standards. The assessment content is applicable to the use of integrated cases in the later stages of teaching, or splitting topics corresponding to different basic knowledge points as simple teaching cases, linking the knowledge points through the course and finally completing the complete teaching task of layout design. Currently, Chinese higher education institutions have few existing courses that have been translated from WorldSkills Competition, and there is an urgent need to develop innovative teaching designs. So it is of great significance to make teaching task design be in conjunction with WSC assessment.

4. Insights for Job Competencies from WSC Skills

The WSC assessments can be applied into making curriculum criteria. In accor-

dance with the requirements of the competition and professional assessments of expert group, with job competencies being considered, core knowledge and competitiveness are added to the design of curriculum, which provides a basis for the curriculum development, guides teaching, deepens teaching reform and promotes school-enterprise cooperation and major development. Test projects of WSC come from real work scenarios. During competition, every task reflects the professionalism of employees at the front line of workplace. The work-oriented and task-driven models commonly adopted by vocational institutions can be used to break down the competition tasks, and course content is designed through a spiral progression of knowledge and competencies, providing students with professional help to master relevant professional knowledge, competencies and professionalism. This can guide the optimization and integration of relevant courses in vocational institutions.

The focus of the graphic design technology job requirements is on document compliance with standards and attention to production detail, which requires students to have knowledge of production standards and proficiency in computer software operation. It is important to improve students' professionalism, cultivate the spirit of craftsmanship and guide them to have a big picture of view. These are also requirements from enterprises for talents. For a real graphic design job, layout design only accounts for a small part. It has to integrate with other content, such as logo design, font design, packaging design, UI design and other elements, to maintain unity and integrity. Only in this way, can the implementation of programmes be guaranteed.

5. Insights from WSC Marking Scheme for Performance Evaluation of Layout Design Teaching

WSC marking scheme is also an important reference for course evaluation. This marking scheme is today's world industry standard for design and also the standard for graphic design technology.

For example, in module 3 Corporate and Information Design, judgment is made on a scale of 0 to 3. 0 represents layout is not balanced or harmonious, and does not apply sufficient spacing between elements; 1) represents layout is somewhat balanced and/or harmonious, and applies spacing between elements; 2) represents layout is balanced, harmonious, and includes spacing between elements; 3) represents layout is very well balanced, harmonious, includes appropriate spacing between elements and additional effective elements.

The WSC marking scheme reflects opinions of representative enterprises in the industry worldwide. It represents the global competence requirements for jobs or occupations in the industry and enterprises, is today's highest vocational skills standards in the world, and has gradually become the basis for vocational technical education and training systems of member countries. For WSC marking scheme, how to make well-balanced evaluations for students' class performance, homework and test from both subjective and objective perspectives and

how to better combine them with actual situations, are problems that need to be solved in layout design teaching. This is why teachers need to have a deeper understanding of employment standards and company design needs, as well as to develop reasonable teaching and evaluation criteria in line with WSC marking scheme. Regular evaluations and feedback on students are made by applying WSC marking scheme. This will enable students to reflect on themselves and understand shortcomings of their designs. By comparing scores with their peers, they can further understand industry needs and design standards, and therefore improve their design skills (Qi, 2021).

Through a systematic research on the test project design, module content and assessment methods of WorldSkills Graphic Design Technology, and analysis of the common ground between WSC skills and curriculum development, we have a clearer understanding of professional knowledge and comprehensive ability requirements of graphic design and job opportunities. We can fully draw on and refer to the technical documents of WorldSkills Competition, and rely on WSC to continuously promote the reform of professional teaching in school, which are reflected in the following aspects respectively: taking WSC standards as the basis to optimize professional teaching standards; taking competition skills as the carrier to reform professional teaching content; taking WSC marking scheme as the reference to refine professional teaching reform.

The application in teaching evaluation is more specific and can be divided into objective and subjective scores.

Objective scoring has the following rules, with each corresponding to a certain number of points, and the final sum is the total score. For example:

- 1) Illustration board size: 200 mm × 200 mm accurate.
 - 2) Illustrations have correct colour usage patterns with accurate CMYK.
 - 3) Whether picture vectorisation is completed (tolerance value ± 0.2), and whether the drawing nodes are controlled within 1000 - 1500 nodes.
 - 4) The size of the brochure meets the requirements of the test: 210 × 285 mm (width × height).
 - 5) Headers, footers and page numbers use home page settings.
 - 6) The title and body text use paragraph style settings.
 - 7) The content of each page must be at least 3 mm from the fold line. Bleed, fold lines or die-cut lines are set reasonably.
 - 8) Front and back cover: must have PANTONE 285C, PANTONE 386C.
- etc.

There are a number of scoring points for subjective scoring, each of which is divided into four levels. For example:

The Judg Score has a scale of 0 - 3 for subjective scoring in terms of originality of cover design, theme conveying and corporate image matching. A cover design that is not visually communicative is 0 points; a cover design that achieves a basic design visual effect is 1 point; a cover design that is coherent, expressive and complete, with strong rendering power is 2 points; a diversified design, with

strong rendering power, innovative, with a unique design perspective and a distinctive theme and in line with the corporate image is 3 points.

The above evaluation system is only an example, and the specific scoring requirements need to be reflected in the specific teaching design programme in conjunction with the content of the lectures.

6. Translation and Innovation of the Application of WSC Results in Layout Design Teaching

Layout design in graphic design is an indispensable part of the industry. Social values should be mirrored during design process. On the basis of reasonable expression of real message, the overall beauty and balance of the design should be constantly increased, to effectively deliver information. A wider application of layout design also puts forward higher requirements for designers. In the process of development, designers also need to constantly improve their design ability, keep up with international design trends, pay attention to the popular content of society and stick to the spirit of innovation. They should understand the needs of the public and integrate their own design concepts, use clear arrangements to enhance the visual artistic effect of layout design, so as to enhance the overall artistic expression of graphic design.

Teaching innovation in layout design should improve the quality of talent training through a combination with industry needs. Curriculum development is the key to ensuring teaching quality, strengthening teaching comprehensiveness by dovetailing with WSC assessment, expanding international perspectives and knowledge, and improving skill levels. There is a relative lack of courses that have been translated from WSC results. Therefore, researches on course development based on WSC results are of great significance.

At the 46th WorldSkills Competition in Shanghai, teachers from Shanghai Publishing and Printing College are also involved in the preparation for the competition as Workshop Managers for Graphic Design Technology Skill, and in making a curriculum design that integrates competition with teaching.

Through applying WSC results, schools can organically reorganize the original curriculum modules to form a system that is better aligned with vocational competencies. With the cultivation of vocational ability as the core, and practical needs as the criteria for content selection and structural reorganization, schools can analyze relevant knowledge and skill elements, break down the barriers between original courses and disciplines, integrate and update course content and emphasize the practicality of course content. Students' vocational skills for work and the effectiveness of curriculum can be enhanced by avoiding cross-repetition, highlighting the cultivation of comprehensive knowledge and practical ability, and stressing the vocational adaptability of the curriculum content.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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