



Research on Visual Literacy Education for Adolescents in the New Media Era

Qiaoqiao Shang^a, Na Cui^b, Qizhong Hu^{c*}

^a CNKI, Beijing 100083, P.R. China

^b College of Physics and Electronic Technology, Liaoning Normal University, Dalian 116029, P.R. China

^c College of Physics and Electronic Engineering, Sichuan Normal University, SiChuan 610000, P.R. China

ARTICLE INFO

Keywords:
New media
Teenagers
Visual literacy
Educational path

ABSTRACT

This article reflects on the education of visual literacy adolescents in the context of the proliferation of information in the new media era. Visual literacy is a fundamental literacy that is essential for young people in the 21st century, through the analysis of the connotation of the concept of visual literacy and the elaboration of its value, and in combination with the current situation and problems of visual literacy exposed during the "COVID-19" in China, this paper puts forward the path thinking of visual literacy education in China, which covers four aspects: developing characteristic visual literacy evaluation standards, teaching visual knowledge in multiple ways, promoting visual practice and problem solving through technical training, and forming visual literacy in reflection to promote the further development of visual literacy education.

1. Introduction

With the development of the times, the way we receive information has also shown corresponding changes. In the past decades, the integration of mobile media and the Internet has accelerated this process. From the invention of printing technology to the ubiquitous use of smartphones in our daily lives, technology has not only made information more accessible but also brought about a proliferation of information. The uneven quality of the media information environment and dissemination subjects makes it difficult for people to distinguish their authenticity, especially for adolescents with incomplete cognitive development and critical thinking development, it is even more difficult to be independent. Students live in an environment where they read and write through digital media. Today's students need to develop skills in multiculturalism, but the "information bomb" built on modern

media is constantly entering the vision of young people. Skills in various fields such as media literacy, information literacy, scientific literacy, and visual literacy have become effective measures for them to actively respond to complex environments. In 2003, the North Central Education Laboratory (NCREL) in the United States released a report titled "21st Century Abilities: Basic Literacy in the Digital Age" for 21st century learners, in which visual literacy was proposed as a basic literacy for 21st century university students. For 21st century learners, the development of visual literacy is crucial for multiculturalism and can help students improve their communication skills in the digital communication world. Therefore, in this context, China's education sector needs to maintain awareness and insight, and promote the cultivation of students' visual literacy.

2. The connotation and value of visual literacy

In 1968, John Dibess first proposed "visual literacy" at the first annual conference of the International Association for Visual Literacy. He believed that "visual literacy refers to the visual ability that people shape by watching and simultaneously possessing and integrating other perceptual experiences. This ability is fundamental, and only with this ability can people distinguish and understand visual dynamics, visual objects,

and visual symbols. The creative use of this ability enables people to communicate and enjoy classic works in visual communication." The American Society of Archival Photographers defines visual literacy as the ability to understand and use images, as well as to think and learn from them. Here, "understanding" refers to the analysis of artifacts in archives,

* Corresponding author: Qizhong Hu

Email: huqizhongft@163.com

Accepted 1 November 2023, Available online 10 March 2024

0124-5481/© 2023 Journal of Science Education. All rights reserved.

including the techniques used to create images, the sources of images, the views and meanings of creators, and the interpretation of the content of the images themselves; "Use" refers to the repeated use of such materials. Visual literacy is a set of abilities that enable individuals to effectively discover, interpret, evaluate, use, and create images and visual media. Visual literacy skills enable learners to understand and analyze the contextual, cultural, ethical, aesthetic, intellectual, and technical elements involved in the production and use of visual materials. A person with visual literacy is not only an important consumer of visual media, but also a powerful contributor to shared knowledge and culture.

A person with visual literacy can evaluate images and their sources, design and create meaningful images and visual media, effectively utilize visual media images, understand ethical, legal, social, and economic issues surrounding image creation and use, and effectively position the required images and visual media. They not only have the ability to interpret, analyze, and apply visual media, but also the ability to create and generate images. In today's rapidly developing new media, students can easily access numerous visual images through the internet, and visual images play an important role in the interaction process with textual materials. In the era based on printed materials, visual images were often overlooked and people often obtained the desired information from texts. Therefore, reading, writing, and arithmetic skills became the most important basic skills at that time. In the current multimedia network environment, visual ability has become equally important as reading, writing, and computing. The focus of visual literacy is on image evaluation, selection and use of image resources. People with visual literacy can not only understand and comprehend the meaning of visual information, but also make communication more effective through visual information, forming different ideas for problem-solving. Good visual literacy education can not only promote the development of aesthetic abilities among young people, but also help cultivate moral and ethical values of self-control, thereby cultivating a correct outlook on life and the world.

3. The epidemic reflects the shortcomings of young people's visual literacy

The domestic COVID-19 is like a mirror, reflecting the shortcomings of China's current visual literacy education. Due to the lack of systematic and effective visual literacy education and training for teenagers, they lack independent thinking ability and are easily influenced by external information sources. Their visual information criticism ability is insufficient, their understanding ability is deficient, and their visual literacy practical ability is lacking.

3.1. Difficulty in identifying the authenticity of visual information

During the domestic epidemic, the internet was filled with various visual information that was difficult to distinguish. Due to the limitations of their own knowledge level and visual information discrimination ability, teenagers lacked the ability to recognize, explain, and use different visual forms and visual literacy, making it difficult for them to critically view the meaning conveyed by online visual information, and to correctly interpret various visual arts. Their aesthetic appreciation ability was also relatively weak, making them unconsciously believers and disseminators.

3.2. There are deficiencies in the ability to focus on visual information

During the epidemic, China launched an educational

practice of "suspending classes without stopping learning". Online education has shown a rapid development trend during this period, but this transformation has not played its due role in the student population. Due to the corresponding deficiencies in the analysis and understanding ability of visual information, teenagers have encountered problems such as lack of concentration and low efficiency in online classrooms, which also reflects the deficiencies in the development of visual literacy.

3.3. Lack of practical ability in visual literacy

During this epidemic, many students expressed their anxiety about not being able to contribute to the fight against the epidemic, which also reflects their lack of visual literacy and practical creative ability. Creating visual images with aesthetic value can reflect their unique value for personal development and social progress, but not many contemporary teenagers possess this ability. The lack of visual information creation ability brings a sense of powerlessness to teenagers, making it difficult to help them solve visual problems in their daily lives and studies.

4. The Educational Path of Visual Literacy

Visual literacy education is a dynamic process, and European and American countries have incorporated visual literacy teaching into primary and secondary school curricula, becoming a fundamental issue in national literacy education. At present, visual literacy education in China has not received the attention it deserves, and courses from basic education to higher education are rarely included. The reason for this is that people find it difficult to establish the concept that visual literacy skills can be improved through education. In addition, the abstract nature of this literacy itself makes it seem difficult to evaluate. The development of science and technology has posed new challenges to education and provided conditions and opportunities for its further optimization. Our country's visual literacy education should utilize the advantages of national visual culture to carry out localized visual literacy education and explore effective paths for the comprehensive development of visual literacy among young people.

4.1. Develop evaluation standards for distinctive visual literacy

Visual literacy standards are an important reference for the development of visual literacy among young people. In order to make visual literacy education practical and effective, there must be an accurate, detailed, and rigorous evaluation standard. However, currently, China has not introduced corresponding visual literacy standards. Any visual object is created in a certain cultural environment, and focusing on cultural background can help students better understand the meaning of the work and the social and cultural characteristics behind it. To ensure the effectiveness of localized visual literacy education, it is necessary to combine the relevant requirements of the new media era with the foundation of traditional Chinese civilization, identify the top priority of the development of contemporary Chinese visual culture, and establish a visual literacy education system with Chinese characteristics. Therefore, relevant educational researchers should be organized to participate in the research and development of localized visual literacy standards that meet the characteristics of education in China and the specific needs of learners. In addition, attention should be paid to the operability of standard formulation, and teaching cases and corresponding teaching resources can be provided as teaching and evaluation

references. To specify the goals to be achieved after improving visual literacy, and to scientifically measure visual literacy. Through visual literacy education, traditional Chinese visual concepts and ethnic visual characteristics can be deeply integrated into students' concepts, visual thinking, and daily behavioral expression in modern educational media communication activities, enabling traditional Chinese visual culture to burst out with its original strength in the era of new media.

4.2. Teach visual knowledge through multiple channels

Integrating visual literacy education into curriculum teaching is the most direct and effective way to educate students. This can not only promote the learning and application of visual knowledge by learners, but also enhance their visual literacy. The two complement each other and can promote the development of students' comprehensive abilities. Teenagers who want to critically evaluate information and its underlying sources, resist the influence of negative media. The first point is the relevant knowledge of visual literacy. If there is no relevant knowledge to resist media information, it is unlikely to produce meaningful changes in attitude and behavior. In the era of new media, there are countless ways to impart knowledge, but what is the most positive and effective way? There are two dimensions to consider: the first is the school curriculum. Visual knowledge can be incorporated into school curriculum, and teachers can use rich visual resources and cultural contexts in daily life to assist cognition, helping students critically analyze and create information in an environment filled with constantly changing media information, and developing critical visual nurturing abilities. Teachers should try to master multiple teaching methods and choose appropriate methods based on different visual teaching content. Visual literacy should be integrated into curriculum teaching to enable students to understand the widespread role of visual media and popular culture in society. The second is online courses. In today's era, online learning has become one of the development trends of education, especially since this year's "COVID-19 Feet Ban", online learning shows an irreplaceable development trend. Therefore, it is necessary to explore online paths for cultivating visual knowledge, create integrated online courses such as MOOCs and open courses, and achieve convenience and cutting-edge teaching of visual knowledge. By integrating the theoretical and conceptual materials of visual learning for adolescents in this way, they can effectively coordinate visual learning and experience in the real environment and media environment, combine visual knowledge learning with practice, and develop high-level visual literacy.

4.3. Promoting visual practice through technical training

The Association of American Colleges and Research Libraries believes that creativity is an important part of visual literacy education, indicating that individuals with visual literacy must also possess technical literacy in image creation and production technology. Therefore, it is necessary to carry out course practice that can train students' visual technology literacy skills. From this perspective, teachers need to design the curriculum, provide opportunities for students to directly collaborate with media technology from a creative perspective, and further develop technical literacy skills related to creativity and production capabilities. By strengthening students' participation in media production technology, they can fully explore creativity and design. Students need to simulate creation and design through hands-on practical activities, using media production tools and techniques to gain a more comprehensive understanding of the internal composition mechanisms of media products they encounter in archival practice, in order to develop more balanced visual literacy skills and enhance practical abilities. The practice of visual literacy skills can have a positive impact on students' knowledge and understanding of visual media. In addition, workshops and related practices can be used to train creative abilities and develop visual literacy skills in education. For example, encouraging students to create short animations, analyze visual effects, or create comics to reinforce the use of visual learning concepts and tools.

4.4. Developing visual literacy through problem-solving and reflection

The solution to visual problems is an effective way to test the effectiveness of visual literacy training practice. Developing a problem-solving ability that combines theory with practice plays a crucial role in consolidating the visual literacy skills of young people. Therefore, curriculum revisions that include multimodal skills can be incorporated into a series of task based higher-order thinking activities, stimulating students' curiosity and helping them step out of their comfort zone by assigning problem-solving tasks. The learning process is very personalized, so for learners, having autonomy in learning is important. The main goal of problem-solving training is to enhance students' learning, help them establish narratives and meanings from visual learning experiences, and thus change their self-awareness and identity. Reflection helps students form more specific ideas and perspectives on the content and research methods they are researching, helps them monitor the visual learning process, improves their metacognitive and related thinking abilities, and establishes self-awareness. Therefore, giving students enough time to conduct group research and complete related projects, allowing them to receive problem-solving training and reflect on their learning situation, can consolidate relevant knowledge and skills, promote the consolidation and improvement of visual literacy.

References

Hector D C, Ana B G,&Lacasa P . Literacies through media: identity and discourse in the process of constructing a web site[J]. *International Journal of Educational Research*, 2003, 39(8):85-89.
 Felten P . Visual literacy[J]. *Change the Magazine of Higher Learning*, 2008, 40(6):60-64.
 Feng Hongmei. Visual Literacy and Its Cultivation for High School Students [J]. *Curriculum, Textbooks, and Teaching Methods*, 2012,32 (07): 103-106.

Zhang Qianwei. Visual Literacy Education: An Urgent Field to Explore [J]. *Research on Electronic Education*, 2002 (03): 6-10.
 Tian Hong, Zhang Yongfang. Research on the Integration of Visual Literacy Education into Curriculum Teaching [J]. *China Electronic Education*, 2015 (04): 26-30+67.
 Wang Fan, Zhang Shuyu. Mass Literacy in the Era of Reading Images: Media Literacy or Visual Literacy [J]. *China Electronic Education*, 2008 (02): 21-24.