EDICIONES
COMPLUTENSE

Oil painting within the framework of art education to support local ethnic cultures and preserve cultural heritage in China[1]

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Abstract. The purpose is to compare the development of innovative thinking in two groups of students who learn the intangible cultural heritage of the ancient ethnic group and master oil painting techniques in two formats: distantly and visiting the Miao settlement in the deep southeast of Guizhou. In addition to the traditional learning of oil painting techniques, the students learnt folklore and the cultural heritage of ethnic minorities as a part of the art curriculum. For practice, the control group (96 students) visited the villages of Miao in Guizhou, and the experimental group (96 students) gained experience and knowledge about the Miao ethnic minority distantly, through videos and e-discussions. At the end of the training, the students presented their final oil paintings on the life of the Miao. They have been assessed by teachers and art critics to identify innovative thinking among students as a driving force of creativity. The control group showed higher results on parameters such as Integrity (454 points) and Flexibility (287 points). The high-end result of the control group proved that innovative thinking is best developed by immersing students in the real world of the Miao and allowing them to experiment and feel their works.
Keywords: cultural heritage; innovative thinking; oil paintings; support for ethnic groups; the Miao ethnic minority

[es] Pintura al óleo en el marco de la educación artística para apoyar las culturas étnicas locales y preservar el patrimonio cultural en China

Resumen. El propósito es comparar el desarrollo del pensamiento innovador en dos grupos de estudiantes que aprenden el patrimonio cultural intangible del antiguo grupo étnico y dominan las técnicas de pintura al óleo en dos formatos: a distancia y visitando el asentamiento Miao en el sureste profundo de Guizhou. Además del aprendizaje tradicional de técnicas de pintura al óleo, los estudiantes aprendieron folclore y el patrimonio cultural de las minorías étnicas como parte del plan de estudios de arte. Para practicar, el grupo de control (96 estudiantes) visitó las aldeas de Miao en Guizhou, y el grupo experimental (96 estudiantes) adquirió experiencia y conocimiento sobre la minoría étnica Miao a distancia, a través de videos y debates electrónicos. Al final de la capacitación, los estudiantes presentaron sus pinturas al óleo finales sobre la vida de los Miao. Han sido evaluados por profesores y críticos de arte para identificar el pensamiento innovador entre los estudiantes como fuerza impulsora de la creatividad. El grupo de control mostró mejores resultados en parámetros como Integridad (454 puntos) y Flexibilidad (287 puntos). El resultado de alto nivel del grupo de control demostró que el pensamiento innovador se desarrolla mejor sumergiendo a los estudiantes en el mundo real de los Miao y permitiéndoles experimentar y sentir sus obras.

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Summary: 1. Introduction. 2. Methods and materials. 3. Results and discussion. 3.1 Student survey. 3.2 Teachers and art experts interviews and assessment of the students' works. 3.3. Assessment of innovative thinking in students. 4. Conclusions. References

1. Introduction

Urban and rural renewal, development and economic growth can be achieved through the realisation of cultural potential. The US, Western European countries, South Korea and Singapore have successfully utilised their cultural resources for sustainable development (Li et al. 2014; Lizun et al. 2022). Academic art education prepares artists for the social sphere and arts to promote the development of culture and cultural identity (Gao 2021).

Each country has a rich cultural heritage and teachers should encourage students to use art and cultural artefacts in their creative works. The oil painting, depicting the life of ethnic minorities, has two key aspects: it reflects Chinese painting techniques and preserves traditional culture. Thus, a unique cultural product is created: the cultural charm becomes the key point of artworks appealing to the audience (Zhang 2018).

The imagination and creativity of students are the key drivers of oil painting. Teachers should pay attention to technical points and introduce innovative thinking, broaden students' knowledge horizons by addressing exciting topics and develop creative abilities (Gao 2021). In modern higher education, the development of innovative thinking and the innovative environment is a current trend, and higher education institutions include special modules to develop such skills in art curricula (Barak and Yuan 2021; Barak et al. 2020; Barber and Krivoshlykova 2006; Bryndin 2019; Ignatova et al. 2019).

Innovative thinking helps students to unleash creativity and improve their artistic abilities. Creating an oil painting, an innovative-thinking artist goes beyond stereotypes, expands imagination and associations, is involved in cognitive activity, and demonstrates a unique style of painting. An artist develops his skills and demonstrates the highest artistic talent (Wang 2020).

In China, innovative thinking is one of the pillars of successful education (Guo 2019). The teaching of oil painting based on innovative thinking development becomes a challenge for educators. Though, the development of up-to-date pedagogical methods for oil painting remains a difficult task for educators. The main problems (Wang 2020) are as follows: low cultural literacy, lack of theoretical knowledge on oil painting, inertia in thinking and poorly developed observation skills. The main task of educators is to overcome these three barriers to creativity that hamper the development process. Further research is required to investigate these issues.

Oil painting was brought to China during a period of cultural exchange from the West at the end of the Ming Dynasty. Since the early XXth century, oil painting has been developing, but this process has some limitations. The main reasons were the lack of innovation in creating artworks. One of the main problems of teaching oil painting is that existing methods do not develop innovative thinking in students and art remains mediocre to be perceived as lacking vitality and originality (Gao 2021).

For any artist, life means creativity and inspiration. Artists are in constant search of creative ideas, an appropriate atmosphere, exploration of inner vitality, and outer charm (Zhang 2018). The present and historical path of the ancient ethnic minority, spirituality, inner strength, external attributes of identity, and unique perception of the culture accumulated over many centuries or just created, are the research object of many painters seeking inspiration in the historical and cultural past. Cultural sensitivity, awareness of the historical, genetic, educational and economic value, psychological aspects of ethnic identity should be in any contemplator (Lei 2018).

The main questions often asked by art critics are: How important is it for an artist to plunge into the world that he will depict on canvas? Is it possible to replace the real perception of the world around with a virtual one? Is it possible to acquire skills of innovative thinking without leaving the traditional classroom and using modern technologies?

The research purpose is to compare the development of innovative thinking through the lens of the cultural background of local ethnic cultures, visiting the Miao settlements and remotely. After the training course, the following steps were taken:

1. surveying students to identify the main challenges of the cultural heritage preservation of the Miao ethnic minority group;
2. developing a framework for supporting local ethnic groups;
3. evaluating the innovative thinking and the methodology effectiveness using the final works of students;
4. conducting interviews with teachers and art experts about the work of students.

2. Methods and materials

The scholars chose the Miao villages and culture (Fig. 1) as a research target for future artists to practice observations skills because it was one of the largest minority groups in China, with a population of about nine million people. This minority ethnic group has some distinguishing characteristics including a unique identity, a unique local community and a desire for freedom. The Miao group lives in a large area located in South Central China and beyond.

The beautiful natural environment, unique customs and traditions including national cuisine, manufacture, architecture, etiquette, social roles, religion, and taboos are the key issues of originality and creativity manifested in cultural diversity (Xia 2017).

Figure 1. Miao settlements in China's Guizhou Province (Source: Bowers Museum, 2022).

The sample consisted of 192 students. All participants took the same theoretical learning course. Students learnt the theoretical background to understand the various oil painting genres, mastered different oil painting techniques, learnt how to perceive the spatial and physical features of paintings, and identified commonalities. Extracurricular programmes for oil painting were focused on the cultural heritage and folklore of Chinese ethnic minorities. Teachers recommended students to read academic literature on relevant topics. Moreover, students watched and commented on videos during lectures. The traditional teaching of an oil painting focuses on the teacher's preferences and vision of the subject matter. The teacher transmits information to students who have only to receive and memorise it (Yi 2021). The training course provided students with online micro-lessons, containing not only 5–10-minute videos, but commentaries, psychological and practical tests, students and the teachers' feedback.

The advantage of such education is that boring facts are divided into modules and each module has concise and clear video parts, so the student can repeat the information about oil painting techniques before lessons by watching the video. Students analysed in detail the themes of oil painting typical for ethnic minorities including Qinghai-Tibet Plateau, Southwest China, the Silk Road, and Inner Mongolia grassland.

At the end of the theoretical course, students were randomly divided into control (96 individuals) and experimental groups (96 individuals). In April 2021, the control group visited the Miao Villages in the Leigongshan area (Southeast Guizhou, Fig. 2) and spent in the villages three weeks. The experimental group underwent practice painting in a distant format. The ancient, high-altitude villages of the Miao have unique architecture, national costumes, and festivals. The cultural heritage that attracts tourists from all over the world includes flying songs, love songs, drinking songs, and bronze-drum dances.

Figure 2. Guizhou's location on the map (source: Bowers Museum, 2022).

Innovative thinking in oil painting (Gao 2021) means flexibility, individuality, and integrity. Flexibility is the ability to see the image from different angles. Individuality can be explained as the superimposition of life experience and cultural knowledge on the acquired knowledge and skills. Integrity is expressed in the generalization of behaviour patterns and causation. Two specially invited art experts and eight professors assessed the final art pieces of students. The assessment was based on the Likert scale from 1 to 5. The scale contained 5 responses with two extreme sides and a neutral opinion. Instead of "strongly agree" or "strongly disagree," the assessment is based on a numerical description, using 1 to 5 points to evaluate flexibility, individuality, and integrity.

Criterion $\chi 2$ was used to assess the validity of differences among groups. The characteristic of the group was taken as the average rating on the indicator of innovative thinking (flexibility, individuality, and integrity). The calculated values of $\chi 2$ at 2 did not exceed 2.46, proving the validity of the results.

Students answered questions about the challenges and problems they faced in preserving the cultural heritage of the Miao people. The scholars took into account the fact that students were not experts in this area, but they communicated with the ethnic minority group, their observations during the practice were important for the research. Using students' responses and literature review (Khan 2011; Li et al. 2014; Vera et al. 2020; Yang et al. 2018), the scholars developed recommendations to support local ethnic groups.

The calculations were performed using the Microsoft Excel and Statistics 12.0 programmes. All students surveyed were adults and no personal information was collected or processed.

Research limitations. The present research has some limitations. The scholars did not take into account the ethnic composition of students to avoid discrimination. Nevertheless, the scholars admitted that the ethnic and social background of

the research participants could influence the practice and academic outcomes. The IT technologies used during the practice of the experimental group did not include virtual reality. This technology is costly and the research has no financial resources to supply students with such technology. This factor could lower the results of the experimental group.

3. Results and discusión

3.1 Student survey

The survey was completed by both students of the control and experimental groups. The control group had the opportunity to gain firsthand experience (for three weeks of practice, the students of the control group communicated with the representatives of the Miao and learnt about their lifestyle). The experimental group gained knowledge using the distance learning format. The questionnaire asked students to outline the main problems faced by the Miao ethnic minority. The results helped to identify the main problem areas. The results of the control and experimental groups were almost the same and identified the same problems experienced by the Miao. What problems did students consider important?

First, students admit the high-quality of handmade products that require time and labour resources to be manufactured. Such products cannot cost the same price as similar machine-made products, but their high cost deters potential buyers. This problem is not limited to the Miao cottage industry in China, but it is common in many other countries, including India and Pakistan (Upadhyay 2020; Yang et al. 2018). The low profitability of handicrafts, a shortage of raw materials (Khan 2011) and rapid changes in consumer tastes are the main problems identified by students (Yang et al. 2018). The control group could not determine such details and define clearly the challenges faced by the Miao artisans. In the experimental group, only three students admitted a shortage of raw materials for crafts.

Second, students noted that the lack of logistical support and the basic infrastructure made it very difficult to market handicraft products and limited their distribution on the local level. Similarly, the research (Shah 2016) found that high-quality handmade embroidery in rural Pakistan was produced exclusively for local use and the low level of marketing was a barrier to the development of handicraft industries.

Third, it is difficult for the young generations to master the labour-intensive process of manual production, because they can get a stable high income working in factories, so young people are not interested in continuing long-standing family crafts. The research (Wu et al. 2017) stated that young villagers do not want to learn from the older generation the baskets making techniques because of their complexity. If young citizens are unemployed, economic growth slows down (Mukosa et al. 2020) and government introduces reforms to combat unemployment.

Fourth, it is difficult to form a register of artisans because their business is informal, and an individual employed in the agricultural sector, during evening hours or between seasons, earns additional income by needlework. Employment in crafts is difficult to control thus the government should introduce corrective reforms or ensure social guarantees to protect crafts.

Fifth, artisans are not mobile to use innovative technology in their crafts. Many products such as brocade patterns are passed down orally from mother to daughter for generations.

The control group revealed another vulnerable issue: skilful masters did not want to share their secrets with strangers and other craftsmen. If their family members do not continue their family crafts, crafts disappear. Computer technologies can be used to digitise the craft sector, craft techniques will be preserved and their accessibility will increase for the rest of the population. The artisans are not interested in digitalisation because there is no state-based system of incentives and they do not want to share their secrets with others.

The analysis is based on the literature review that helps to find possible solutions to the problems mentioned above (Khan 2011; Li et al. 2014; Vera et al. 2020; Yang et al. 2018). The research proposes the following framework to support local ethnic groups in China (Fig. 3).
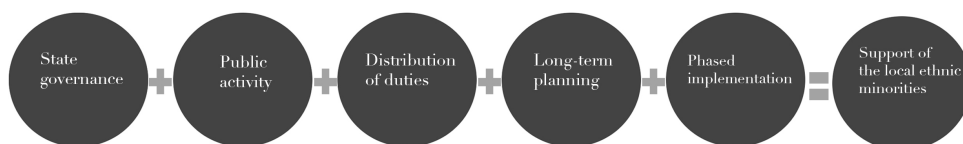

Figure 3. Framework for supporting local ethnic groups (source: own development).

3.2 Teachers and art experts interviews and assessment of the students' Works

The final work is an oil painting depicting one of the everyday life aspects of the Miao ethnic group. The students had freedom of action and could depict anything related to the Miao. Observation skills are fundamental in the visual arts. They should be developed in students by teachers at all educational levels (Marinkovic 2021).

Nature and landscapes are common themes in oil painting. Many artists depict ethnic minorities very skilfully and oil painting techniques allow them to combine vivid landscapes, unique perceptions and personal experiences of the artist (Zhang 2018).

The Miao people have reverence towards nature. The students' works depict birds and butterflies. Students skilfully integrate images of dragons, cattle, and fish in their works. The flora images include flowers, leaves, stems, and bamboo. Traditional Miao clothes and their needlework are decorated with unique motifs and geometric ornaments of the ethnic group. Several students portrayed needlework as the main theme in their work, using ornaments with birds or leaves. On the Miao clothes, the birds symbolise the desire for a better life (Lili 2019).

The portraits painted by the students were of special interest to experts. Art critics gave the following comments on one of them: The vast majority of works are portraits of leaders of the Miao ethnic minority. This is a simple way to solve the problem: combine oil painting and a need to integrate ethnic identity features into the artwork. There are many portraits of the young Miao: smiling faces of girls in traditional bright clothes. Most of these portraits reflect happiness and optimism, but there are some gloomy faces, where oppression and depression are evident: grey colours and thick strokes prevail on such paintings. The students painted several male portraits. For example, the painting depicts the portrait of an old potter selling his pots and a

crowd of tourists around him. A frail doctor examines the patient's leg, from which a huge splinter sticks out, but a volatile young man with a crescent-shaped hairstyle stands out: his hair is long, pulled into a bun, and shaven around the head. He is dressed in a blue-black suit. There are no weapons on the painting, but it seems that weapons are invisibly present and anyone can fire at any moment and for any reason. The plot reflects innovative thinking of a young artist and creativity (Lili 2019).

Ethnic festivals are of special importance to the Miao. They have a special place in the intangible cultural heritage of the ethnic minority. In Guizhou, there are many different festivals and there is a saying that small festivals are in Guizhou each day (Fan and Huo 2020). Only 20 annual ethnic festivals have been included as part of the national intangible cultural heritage. The ethnic group has rich cultural traditions, but some of them exist as cultural traditions only and are a reflection of cultural identity. During the practice, the students attended one of the major Miao Festivals: at the end of April was the Miao Sisters Festival in Taijiang County (Fig. 4). The participants visited these festivals in the village while the experimental group watched the festival remotely.

Figure 4. Miao Sisters Festival in Taijiang County,
April 25, 2021 (Source: Xinhuanet, 2022).

After the festival, students completed some works depicting dancing women in national costumes and silver headdresses, eating a sister's meal (an important banquet, a custom meal, during the festival), men's competition, and dog and cock fights. Experts discussed the main themes of the festivals in the students' paintings as touching and colourful real-life scenes fixed on canvas.

The teachers recognised in oil paintings joy and happy moments of life, but also grief and pain: "The artist tries to imitate the simplicity of ordinary life, uses dark and heavy colours to reduce visibility. The tonality of his work is clear-cut, a little rough, and gloomy. Viewers feel the pain of life, historical and cultural heaviness experienced by the ethnic minority. In the central part of the painting, the artist uses primary colours without a good transition to the background colours. Disharmony is evident between the centre and the background. Probably, the student has not yet formed his artistic style."

3.3. Assessment of innovative thinking in students

The analysis of paintings included 3 parameters to assess the development of innovative thinking: flexibility, individuality, and integrity. According to the results of the average scores assigned by experts and teachers, the control group achieved a good result in Integrity (454 out of 480 possible points) (Fig. 5). The experimental group got only 319 points (Fig. 5). For Individuality, the experimental group obtained 433 points against 412 points of the control group (Fig. 5). The difference is within the statistical error of 5%. For Flexibility, the control group got higher results (287 points) than the experimental group (225 points) (Fig. 5).
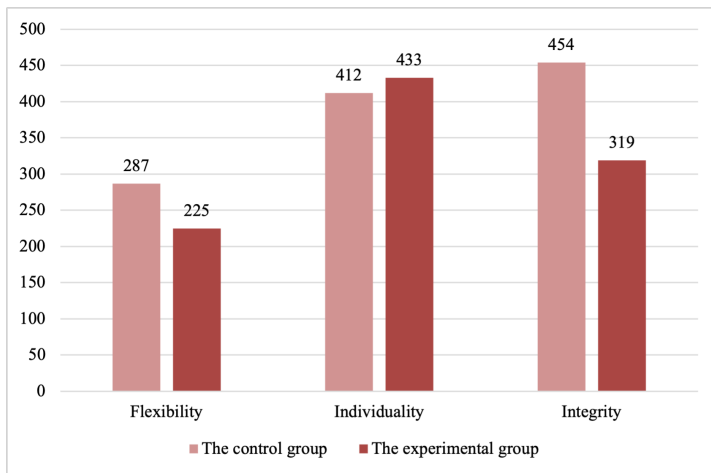

Figure 5. The results of students on each of the indicators (Source: Authors' development)

The total score of the three indicators is 1153 points for the control group (the average score is 384.3) and 977 points for the experimental group (the average score he average score is 325.7) (Fig. 6).
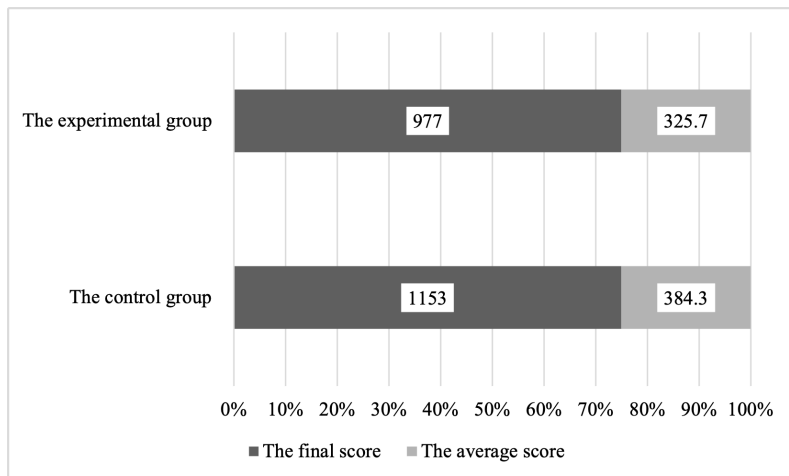

Figure 6. The total and average scores of the group (Source: Authors' development)

In general, the result shows that in the control group, students perfectly demonstrated their innovative thinking skills. They stood out from the experimental remote group primarily by broad and comprehensive thinking (Integrity). These students also had a somewhat better ability to choose the right angle and place accents (Flexibility) (Fig. 7).
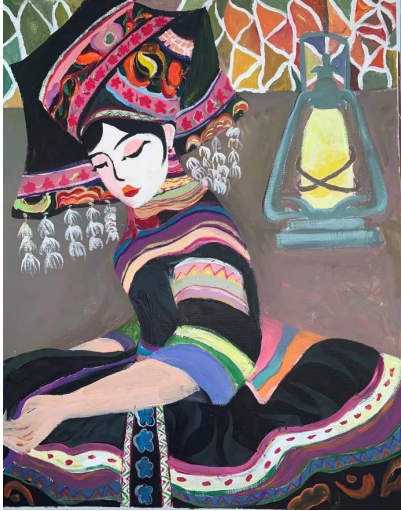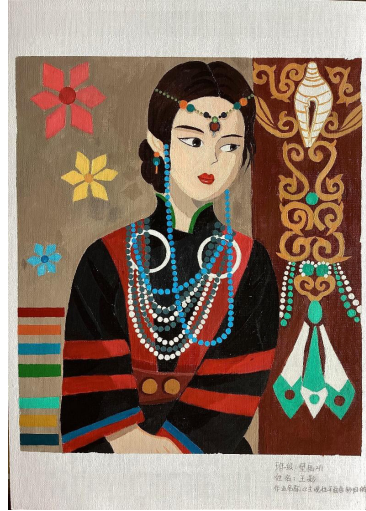
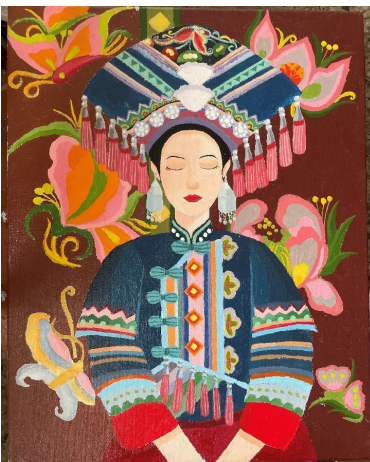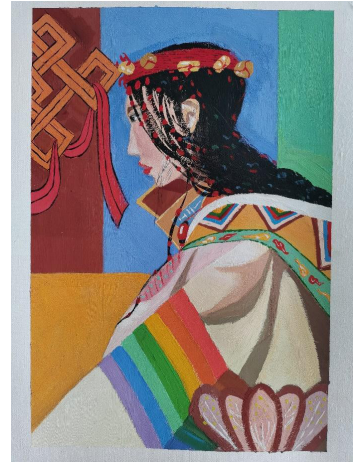
a – the control group   b – the experimental group

Figure 7. Examples of students' works with different levels of
Integrity and Flexibility (Source: Author's photos)

The experimental group that learned remotely showed slightly more Individuality in the painting schemes (Fig. 8). This result may be due to the additional educational capabilities of Internet+.

a – the control group   b – the experimental group

Figure 8. Examples of students' works with different levels
of Individuality (Source: Author's photos)

It is important to note that no identical visual perception exists and everyone sees and interprets the world around them individually (Marinkovic 2021). E-technologies provide students with more opportunities than face-to-face interaction: they can pause the video, watch it again, rethink, or find another video. The use of advanced technologies, such as virtual reality would influence the results of remote learning. The scholars suppose that the control group would perform better and the scores could be higher. Educators underline that virtual reality technologies provide an immersive sense of objects and promote the development of the right aesthetic perception and expand the knowledge horizons (Xu and He 2021). The scientists highlight that the changes in various fields of education are forced by the possibilities of virtual reality (González-Zamar and Abad-Segura 2020; Kerr and Lawson 2020; Makransky and Lilleholt 2018; Xu and He 2021). The high cost of these technologies has prevented educators from using them in the learning process and that is one of the limitations of the present research.

The main disadvantages of traditional education are conservativeness, closeness and the leading role of one individual, a teacher who determines the course of action. Moreover, the scholars admitted challenges of education such as the impossibility to teach simultaneously several dozens of students (Yi 2021). Therefore, the introduction of Internet technologies would not only support the development of techniques within traditional learning but motivate students for active research and innovation (Wang 2020; Yi 2021; Zhou 2020). The scholars agree with the statement mentioned above and use the Internet + for the training of both groups, considering it an important part of the educational process.

The replacement of real three-week practice in the villages of the national ethnic minority with virtual training has shown low results in the experimental group. The students could not communicate with the Miao and understand the uniqueness of their culture. The development of innovative thinking, as one of the main components of the artist's success, were better in the control group because they practised for three weeks and learnt about the Miao culture and traditions of the ethnic minority group. The scientific community considered that information technologies are of vital importance for students because they affect the social processes on a large scale and cultural heritage is not an exception (Skublewska-Paszkowska et al. 2022; Trček 2022; Wang 2021; Yi 2021).

Each group used Internet+ technology for learning, but only the control group had an opportunity to communicate with the Miao and it was the main factor of the high academic achievements.

There are **two key steps** (Wang 2020) to develop innovative thinking in oil painting learning:

- The scholars propose to stimulate innovative thinking inspiring new ideas and innovative perception. The teaching of oil painting should transform the traditional way of thinking and impose a different logic in the reality perception: observe the shape of objects from different angles, identify the relationship between the individuals and the objects and develop artistic imagination.
- The development of a harmonious environment helps students and teachers to cooperate, remain active and keep a fresh mind for creativity. It maximizes the creative potential of students. Learning should encourage students to explore and discover inner strengths and vision.

The scholars of the present research agree with the two issues mentioned above. Moreover, they identified one more important factor to develop innovative thinking in students:

- The scholars believe that an artist needs inspiration for creativity. The higher the degree of his immersion in the world he is trying to imitate on his paintings, the more innovative will be his art on the canvas. Virtual immersion into the world of minority ethnic groups shows good results, but to create masterpieces an artist needs live experience, dive deep into this world, and live the life inside, not outside.

In the context of globalisation and the erasing of borders between countries, cultural identity should be preserved. Therefore, the national characteristics of each ethnic group are important and in demand, especially for such a large nationality as the Miao. For the Chinese nation, its heritage is an important part of spiritual values, historical memory and vitality, which has absorbed the thinking, imagination and creativity of many generations. The analysis of ethnic cultures, their ideological and moral norms, awareness of one's ethnicity is an important aspect of upbringing and education (Lei 2018).

Some Chinese colleges and universities protect intangible cultural heritage. Students are the future scientists and researchers who preserve culture, education, healthcare, and management. Therefore, the focus is on preserving and popularising the cultural gene pool of the nation seeing it as the core of the sustainable development of Chinese culture. Chinese universities supported initiatives of student participation in the protection of intangible cultural heritage. Xinyang Normal University promotes Xinyang intangible cultural heritage music events (Guo, 2021). Hebei University of Science and Technology supports the project of Intangible cultural heritage on the campus (Lei 2018). The present research will make a great contribution to the preservation of the Miao culture and will become the core of cooperation between higher education institutions and Chinese ethnic groups.

4. Conclusions

The task of higher education is to train professionals and educate them on how to preserve cultural heritage and popularise the culture of the ethnic minority. Any country with enormous creative potential and centuries-old traditions, such as China, needs to promote and preserve its culture. Future artists, using cultural elements in their art, can develop the mastery of oil painting. The cultural elements that appeared on their oil paintings can be considered as renovation of century-old traditions, popularisation and integration of culture into various spheres of modern life. Innovation in thinking, multiplied by mastery of the technique of oil painting, can ensure the success of individual works and fine art in general. Students, in addition to the oil painting course, learnt the folklore and cultural heritage of Chinese ethnic minorities.

For real-life practice and gaining knowledge about cultural identity, the control group visited the Miao villages in Guizhou. The students of the experimental group did not visit any world heritage sites to explore but knew about the Miao ethnic minority and their handicraft practices, festivals, and customs using IT technolo-

gies. The knowledge and inspiration were expressed by the students in the final oil paintings portraying the life of the Miao ethnic minority group. The paintings were assessed by experts and educators for innovative thinking. The control group showed a higher result compared to the experimental students. It indicates the importance of the artist's real perception of the scenes he depicts on the canvas. Moreover, the research admits that the use of modern technologies in oil painting learning is less effective than face-to-face learning and visiting cultural sites.

The students' survey identifies the main problems of preserving the Miao culture. Based on the results, the framework was developed to support local ethnic groups. The research is an example of the development of innovative thinking through the prism of cultural background, not only for art education students, but for other employees of universities and colleges. Future research is needed to investigate the effectiveness of other innovations in the oil painting curriculum to improve the academic achievements of students.

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