



The Influence of The Use of New Media in Music Education on Students' Music Aesthetic Ability

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ABSTRACT

Musical aesthetic ability is one of the important components in college music education. It comprises of music literacy, music appreciation and music performance. The cultivation of students' music aesthetic ability is very much affected by the teaching methods. The purpose of this study is to examine the effect of the use of new media in teaching music on students' music literacy, music appreciation and music performance. This survey involved 130 college students from Henan Finance University in Zhengzhou, Henan Province. Regression analysis was used to measure the impact of use of new media on the 3 dimensions of aesthetic ability. The study found that the use of new media has a significant impact on students' music aesthetic ability. The use of new media by teachers has the greatest impact on students' music performance. Secondly, it has also had a certain impact on students' music appreciation. The impact on music literacy is minimal among the three dimensions. Therefore, in music education in the future, teachers will comprehensively use teaching tools to more effectively and targetedly strengthen the cultivation of students' music aesthetic ability.

KEYWORDS: Music aesthetic ability, new media, music performance, music appreciation, music literacy

INTRODUCTION

With the significant improvement of people's spiritual civilization and material living standards, the artistic atmosphere they come into contact with is increasing, highlighting the importance of students' musical aesthetic ability. Music appreciation courses shoulder the mission of improving students' comprehensive abilities and music literacy in higher education. In the music education of ordinary higher education institutions in the 21st century, both the music education of Chinese higher education institutions and the music practice achievements of students have made certain progress.(Creech, 2020) In university music appreciation courses, music teachers have varying degrees of influence on improving students' music aesthetic ability through different teaching pedagogies and new media methods of music teaching. From the spread of multimedia courseware involved in classroom teaching to the spread of microblog, WeChat, TikTok and other platforms outside the classroom, it is conducive to the development of music education in universities and universities, and promotes multi period, multi angle and all-round learning and thinking. Teachers' use of different music teaching methods and new media, as well as reflection and feelings about their own teaching experience, will have a direct impact on the teaching effectiveness of music teaching classrooms. The application of new media not only enriches the forms and content of music teaching in universities, but also brings



comprehensive improvements to the dissemination of music knowledge.(Li & Sun, 2023)

BACKGROUND

Zhengzhou has always been one of the most fiercely competitive cities in China's university entrance examination. In the context of emphasizing exams, music and aesthetic education are not mandatory subjects for university admission requirements. Therefore, students' learning abilities in music and art education are not as valued as in other subjects. Many universities and teachers have insufficient understanding of aesthetic education in universities. One snidely believing that aesthetic education in universities is equivalent to art education, lacking understanding of the function of aesthetic education. But now university teachers recognize the important role of aesthetic education in cultivating students' creative thinking and improving their overall quality. Strengthen the teaching methods and quality of music aesthetic education courses, improve students' music aesthetic education abilities, and form distinctive and personalized aesthetic education.

LITERATURE REVIEW OF USE OF NEW MEDIA

New media is the development and progress of media types brought about by the development of information technology. It is a product of the development of modern information and communication technology, which processes information and spreads it through the network, achieving real-time transmission between information and users. The development and application of new media technology have brought more possibilities for the development of music education in universities.(Li & Sun, 2023) New media refers to the media form that, on the basis of information technology, uses new technologies such as computers, the Internet and mobile communications to disseminate information, realize interaction and create content in a digital form. New media has the characteristics of digitization, networking, diversity, and interactivity. Nowadays, media itself has the attributes and functions of education, and new media education constitutes a new educational ecosystem and its way of existence.(Muhammad et al., 2021)The development of education and our research today should start with understanding media culture. If we do not understand the way contemporary young people survive through new media, it will be difficult to truly promote digital education and understand the educational philosophy behind it.

New media has brought about a conceptual revolution in music education. Music is an auditory art form, and unlike other art forms, music melodies have a special charm.(Zhou, 2020)Therefore, music education also has an irreplaceable uniqueness, which is related to various requirements such as hearing, melody, and rhythm. In an era where new media has not been widely applied, the teaching philosophy of music education in universities is mainly reflected in the focus on music skills and techniques, with a greater emphasis on the inheritance of knowledge at the skill level. And now, in the perspective of new media, music education in universities can undergo significant changes.(Liu, 2020)

Music has a great impact and influence on the psychology and mood of learners, and has



infinite charm for music learners. Due to the different personality traits and aesthetic values of music learners, rich and diverse new media have a subtle aesthetic influence on students, nourishing their souls and helping them establish correct and diverse music aesthetic orientations and values. (Li & Sun, 2023) The era of new media has put forward higher requirements for students' music literacy and music aesthetic ability, and music has more forms of presentation and dissemination compared to the period when there were fewer carriers in the past. New media is no longer limited to traditional paper and audio-visual media, but has achieved a sense of identification and experience for teachers and students in the face of music through the application of various advanced technologies.(Engeness, 2021)Through new media, it is more convenient to search for music, and the display forms of music knowledge are also more diverse. Music works and music culture can be presented to teachers and students in various ways.

RESEARCH METHODS

This study focuses on the population of university students at Henan Finance University in Zhengzhou, Henan Province. This study used Convenience sampling. Convenient sampling is conducted by surveyors at specific times and locations, with the consent of students, to participate in the questionnaire survey according to their wishes, in order to align with the research topic. The respondent voluntarily participates and becomes a member of the sample, providing relevant information to the investigators.

This was quantitative research using a cross-sectional survey design using questionnaire comprised of 24 items. The 24 questions in the survey questionnaire are divided into two parts. The first part is the Use of New Media section, which consists of 6 questions. The second part is the Music Aesthetic Ability section, which consists of 18 questions. In the Music Aesthetic Ability section, there are three dimensions: Music Literacy, Music Appreciation, and Music Performance, with six questions for each dimension.

Table 1. Survey questionnaire information

| Variable | Items | Total |
|-------------------------|--------------------|-------|
| Use Of New Media | Use Of New Media | 6 |
| Music aesthetic ability | Music Literacy | 6 |
| | Music appreciation | 6 |
| | Music Performance | 6 |

The counselor from Henan Finance University organized the students to complete a survey questionnaire after the class meeting. The participants were required to fill out the questionnaire truthfully based on their actual situation and were not allowed to miss any answers. After students use their mobile phones to scan the QR code to fill out the questionnaire, the counselor and researcher collect the electronic questionnaire and data. Through research and analysis of 130 collected questionnaire survey data, we aim to understand the current status of music teaching pedagogy in universities and the musical aesthetic ability of university

students, as well as the current situation of contemporary music teachers' use of new media in teaching. Studying the cultivation of music aesthetic ability among university students provides important practical theoretical basis for the construction of moral education in universities and the development of student work for educators. By studying and promoting the comprehensive and harmonious development of university students' physical and mental health, we provide ideas for the construction and development of aesthetic education courses in universities.

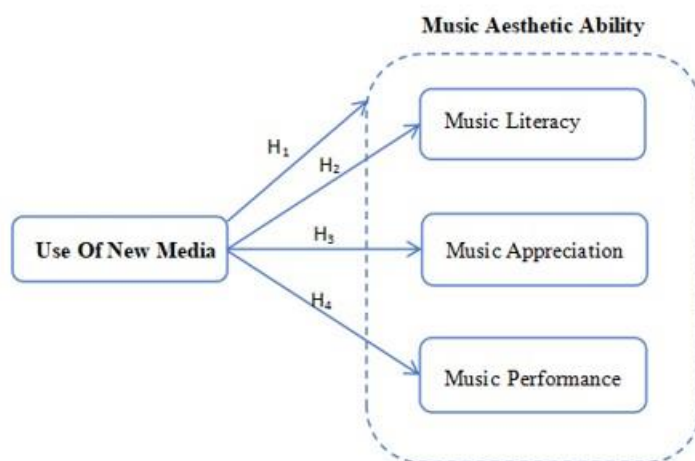


Table 2. Conceptual framework

Based on this, the present study puts forward the following hypothesis:

H₁:The influence Of Use Of New Media on students' Music aesthetic ability.

H₂:The influence Of Use Of New Media on students' Music Literacy.

H₃:The influence Of Use Of New Media on students' Music aesthetic Appreciation.

H₄:The influence Of Use Of New Media on students' Music aesthetic Performance.

RESULTS

In this study, the most commonly used Cronbach's alpha coefficient was used to examine the reliability of each dimension of the pre-test questionnaire. It is generally believed that the acceptable lower limit of Cronbach's alpha coefficient is 0.6. When the Cronbach's alpha coefficient is higher than 0.8, it indicates that the data is highly reliable.

Table 3 Results of the reliability analysis

| Variables | Correction Item Total Correlation (CITC) | Item deleted α coefficient | Cronbach α Coefficient |
|-------------------------|--|-----------------------------------|-------------------------------|
| Use of new media | 0.870 | 0.851 | 0.889 |
| Music Aesthetic Ability | 0.921 | 0.960 | 0.964 |



Confirmatory factor analysis (CFA) tests the construct, convergent and discriminant validity of the questionnaire data. For the test of construct validity, the following indicators are commonly used: it is a statistic to test the degree of similarity between the sample covariance matrix and the estimated covariance matrix, which is generally required to be <3 ; RMSEA represents the Root Mean Square of the Approximation Error, with the value ranging from 0-1, and usually less than 0.08 indicates a reasonable fit; the values of CFI (Comparative Fit Index), IFI (Incremental Fit Index), TLI (Tucker-Lewis Index) are ranging from 0-1, and the closer to 1 indicates a better fit. These indices take values between 0 and 1, and the closer to 1 indicates a better fit. The results, as shown in the table below, are within a reasonable range for each index, indicating that the construct validity of the questionnaire is very good.

Table 4 Results of construct validity

| Model fit | Recommended values | Measurement model |
|-------------|--------------------|-------------------|
| χ^2 | - | 1573.379 |
| df | - | 1065 |
| χ^2/df | >3 | 1.477 |
| RMSEA | <0.08 | 0.061 |
| CFI | >0.9 | 0.907 |
| IFI | >0.9 | 0.908 |
| TLI | >0.9 | 0.902 |

Convergent validity refers to the fact that test indicators that measure the same underlying traits (constructs) will fall on a common factor. It is generally measured using Construct Reliability (CR) and Average Variance Extracted (AVE). It is generally accepted that the questionnaire has good convergent validity when CR is greater than 0.7 and AVE is greater than 0.5. The results are shown in the table below, the CR and AVE of each dimension are within a reasonable range, indicating that the questionnaire has good convergent validity.

Table 5 Results of convergent validity

| Variables | Coef | Std. Error | p | Std. Estimate | CR | AVE |
|-------------------------|----------|------------|---|---------------|-------|-------|
| Use of new media | <u>1</u> | - | - | 0.916 | 0.918 | 0.652 |
| Music Aesthetic Ability | <u>1</u> | - | - | 0.941 | 0.970 | 0.643 |

Discriminant validity is an indicator that characterizes the discriminatory nature of the dimensions. The questionnaire is considered to have good discriminant validity if the AVE value under the root of each latent variable in the structural equation model is greater than the correlation coefficient between itself and other latent variables. As the results are shown in the



table below, the AVE value under the root sign of each latent variable is greater than the value of the correlation coefficient between itself and other latent variables, which proves that the questionnaire has good discriminant validity.

Table 6 Results of discriminant validity

| | Use of new media | Music Aesthetic Ability |
|-------------------------|------------------|-------------------------|
| Use of new media | 0.807 | |
| Music Aesthetic Ability | 0.445 | 0.802 |

Linear regression

According to the results of the linear regression analysis, we found that "Use of new media" had a significant impact on "musical aesthetic ability". Specifically, the F statistic of the model was 29.614 and the adjusted R square was 0.182, suggesting some explanatory power of the model. Among them, the coefficient of "Use of new media" was 0.433 and the t value was 5.442, and the p value reached the significance level, indicating that the use of new media had a positive impact on the aesthetic ability of music.

Table 7 Results of linear regression about Musical Aesthetic Ability

| Variable | Non-standardized coefficients | | Standardization coefficient | t | p |
|-------------------------------|-------------------------------|----------------|-----------------------------|-------|---------|
| | B | standard error | Beta | | |
| Constant | 32.566 | 6.433 | | 5.062 | 0.000** |
| Use Of New Media | 1.302 | 0.239 | 0.433 | 5.442 | 0.000** |
| R² | 0.188 | | | | |
| Adjusted R² | 0.182 | | | | |
| F | 29.614 (p=0.000) | | | | |

Dependent variable: Musical Aesthetic Ability

*p<0.05 **p<0.01

Next, we further discuss the ability of "Use of new media" to explain the three sub-dimensions of "musical aesthetic ability". The three sub-dimensions are Music Literacy, Music Appreciation and Music Performance.

The results showed that "Use of new media" had a significant positive effect on Music Literacy (B = 0.450, p < 0.01). The standardized coefficient of Beta is 0.402, indicating that for every unit increase in "Use of new media", the score of Music Literacy will increase by 0.402 units. The R² of the model was 0.162, indicating that "Use of new media" explained 16.2%

of the variance in Music Literacy. The overall model is significant ($F = 24.726$, $p = 0.000$), i.e. “Use of new media” explains 16.2% of the variation in Music Literacy.

Table 8 Results of linear regression about Music Literacy

| Variable | Non-standardized coefficients | | Standardization coefficient | t | p |
|-------------------------|-------------------------------|----------------|-----------------------------|-------|---------|
| | B | standard error | Beta | | |
| Constant | 9.869 | 2.436 | | 4.052 | 0.000** |
| Use Of New Media | 0.450 | 0.091 | 0.402 | 4.973 | 0.000** |
| R2 | 0.162 | | | | |
| Adjusted R2 | 0.155 | | | | |
| F | 24.726 ($p=0.000$) | | | | |

Dependent variable: Music Literacy

* $p < 0.05$ ** $p < 0.01$

The results showed that “Use of new media” also has a significant positive effect on Music Appreciation ($B = 0.420$, $p < 0.01$), with a standardized coefficient of Beta of 0.412. This means that For every unit increase in “Use of new media”, the rating of Music Appreciation increases by 0.412 units. r^2 value is 0.170, which means that “Use of new media” explains 17% of the variance in Music Appreciation. The model is significant ($F = 26.143$, $p = 0.000$), supporting the significant effect of “Use of new media” on Music Appreciation.

Table 9 Results of linear regression about Music Appreciation

| Variable | Non-standardized coefficients | | Standardization coefficient | t | p |
|-------------------------|-------------------------------|----------------|-----------------------------|-------|---------|
| | B | standard error | Beta | | |
| Constant | 11.330 | 2.209 | | 5.129 | 0.000** |
| Use Of New Media | 0.420 | 0.082 | 0.412 | 5.113 | 0.000** |
| R2 | 0.170 | | | | |
| Adjusted R2 | 0.163 | | | | |
| F | 26.143 ($p=0.000$) | | | | |

Dependent variable: Music Appreciation

* $p < 0.05$ ** $p < 0.01$

The results showed that “Use of new media” also showed a significant positive effect ($B = 0.432$, $p < 0.01$), with a standardized coefficient of Beta of 0.437, indicating that each increase in “Use of new media” has a significant effect on Music Appreciation. The standardized coefficient of Beta is 0.437, indicating that for every unit increase in “Use of new media”, the Music Performance score will increase by 0.437 units. The R^2 of the model was 0.191, indicating that “Use of new media” explained 19.1% of the variance in Music Performance. The model as a whole was significant ($F = 30.276$, $p = 0.000$), i.e., “Use of new media” explained 19.1% of the variance in Music Performance in a statistically significant way.



Table 10 Results of linear regression about Music Performance

| Variable | Non-standardized coefficients | | Standardization coefficient | t | p |
|------------------|-------------------------------|----------------|-----------------------------|-------|---------|
| | B | standard error | Beta | | |
| Constant | 11.367 | 2.109 | | 5.390 | 0.000** |
| Use Of New Media | 0.432 | 0.078 | 0.437 | 5.502 | 0.000** |
| R2 | 0.191 | | | | |
| Adjusted R2 | 0.185 | | | | |
| F | 30.276 (p=0.000) | | | | |

Dependent variable: Music Performance

*p<0.05 **p<0.01

In summary, the linear regression results indicate that “Use of new media” statistically significantly and positively affects the three sub-dimensions of “musical aesthetic ability” - Music Literacy, Music Appreciation, and Music Performance. The linear regression results show that “Use of new media” statistically significantly and positively affects the three sub-dimensions of “musical aesthetic ability”-Music Literacy, Music Appreciation, and Music Performance, and has the strongest explanatory power for Music Performance, followed by Music Appreciation, and finally Music Literacy.

DISCUSSION

Comprehensive use of various teaching methods, adopting multimedia teaching methods and music appreciation teaching methods combining music theory and time, to create a positive and harmonious classroom atmosphere. Cultivate university students' music literacy, music perception ability in music appreciation, and music performance in music art practice. (Orange, 2022)Applying new technological advancements in the 21st century to promote the development of music education and keep up with the trend of the times. In the teaching process of music teachers, emphasis is placed on building innovative music teaching systems driven by new media and intelligence. Fully utilize various modern technological means in the classroom to carry out music education and teaching activities.(Jiang, 2020)

Research and analysis have shown that the use of new media has a significant impact on students' music aesthetic ability. In the current innovative music teacher teaching system, emphasis is placed on utilizing intelligent teaching systems such as new media to comprehensively enhance and rationally transform the music teaching mechanism. Teachers make full use of the developed multimedia music computer software for classroom music teaching to improve teaching effectiveness.(Liu, 2020)Timely introduce the latest music teaching content through learning platforms such as new media, optimize students' music appreciation process, and focus on combining music theory in Music Literacy with music performance in music practice. The use of new media by teachers has the greatest impact on students' music performance. Secondly, it has also had a certain impact on students' music



appreciation. (Creech, 2020) Finally, in the study of music literacy courses, teachers can transform dull music literacy knowledge into three-dimensional, vivid, audio-visual teaching content through multimedia display, which will affect students' learning enthusiasm and improve teaching efficiency.

Through multimedia playback, students have gained a new understanding of classical music that they are not usually fond of, such as "the piano can still be played this way", which has stimulated their interest in learning classical music. (Wang, 2022) The effect of multimedia is beyond the reach of conventional teaching in the past. Contemporary university students are deeply influenced by new media on the internet, and with abundant online resources, students can easily enjoy many high-quality course resources both domestically and internationally. Therefore, dull classroom lectures are not easy to satisfy contemporary university students. Optimizing classroom teaching and innovating teaching methods are effective ways to enhance university students' aesthetic abilities. In the preparation of the music appreciation course, it is carefully designed with the intention of allowing students to happily master dry theoretical knowledge and guide their music practice activities in a simple and understandable way. (Gülñihal, 2023)

At the same time, actively expanding the space and platform for students to obtain music knowledge information. Teachers use new media to teach music theory knowledge, comprehensively improving and enhancing students' musical aesthetic ability in a good environment. The use of computer information networks to guide students in online learning and music creation has also become a trend. (Engeness, 2021) Teachers utilize the application advantages of new media to construct a "audio-visual combination" course that integrates new media teaching technology with music appreciation teaching, thereby guiding students to broaden their music learning space, grasp the cutting-edge information of music art in real time, and comprehensively enhance students' musical aesthetic ability. Music educators strive to absorb the nourishment of new technology and apply it to their music education work.

CONCLUSION

In the era of new media, the focus of education and teaching reform in universities is to adjust the traditional teaching mode. Universities and universities consciously guide music teachers' interest in new media teaching, carry out relevant course training, and music teachers can comprehensively improve their level of new media technology practice. Using new media teaching to broaden students' exposure and enhance their interest in learning. (Liu, 2020) In the actual stage of music teaching, our teachers need to actively transform traditional educational concepts and clarify the advantages of new media resources. Through the process of teaching music theory courses, anecdotes of famous figures in music history are interspersed to fully stimulate students' learning of music theory knowledge and help teachers impart music theory knowledge. (Li & Sun, 2023) Teachers have a positive impact on the music teaching process by using different new media technologies (Jong & Tan, 2021) In the future development of work, students will possess a certain level of musical literacy and aesthetic ability, becoming well-rounded talents with comprehensive qualities.



From an aesthetic perspective, the teaching methods of music teachers and new media teaching methods have certain influencing factors on students' musical aesthetic ability. Music appreciation teaching cannot be separated from professional music equipment, which provides support for students to perform and perform music. (Creech,2020)However, some music appreciation classes have incomplete teaching equipment, which directly affects the quality of music appreciation teaching. Music teachers should be able to enrich current teaching methods and constantly innovate teaching methods, keep up with the pace of the times, use new media and other teaching methods to enhance students' ability to appreciate music, cultivate students' rich imagination and good creativity, and thus improve students' musical aesthetic ability. As a result, multi-level, multi domain, multi subject, and diversified music interaction have further developed and improved the teaching philosophy of music education in universities. (Gülñihal, 2023)

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