Hindawi
Journal of Electrical and Computer Engineering
Volume 2023, Article ID 9865949, 1 page
https://doi.org/10.1155/2023/9865949

Retraction

Retracted: The Influence and Analysis of Multimedia Interaction on the Development of Dance

Journal of Electrical and Computer Engineering

Received 15 August 2023; Accepted 15 August 2023; Published 16 August 2023

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope

(2) Discrepancies in the description of the research reported

(3) Discrepancies between the availability of data and the research described

(4) Inappropriate citations

(5) Incoherent, meaningless and/or irrelevant content included in the article

(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] H. Wu and Y. Leng, "The Influence and Analysis of Multimedia Interaction on the Development of Dance," *Journal of Electrical and Computer Engineering*, vol. 2022, Article ID 6324992, 10 pages, 2022.

Hindawi
Journal of Electrical and Computer Engineering
Volume 2022, Article ID 6324992, 10 pages
https://doi.org/10.1155/2022/6324992

Research Article

The Influence and Analysis of Multimedia Interaction on the Development of Dance

Haijian Wu[1] **and Yan Leng**[2]

[1]*Art & Design, Guizhou Open University (Guizhou Vocational Technical Institute), Guiyang 550000, Guizhou, China*
[2]*Department of Educational Technology, Guizhou Electronic Commerce Vocational College, Guiyang 550000, Guizhou, China*

Correspondence should be addressed to Haijian Wu; 20111014@gztvu.com

Received 2 March 2022; Revised 13 April 2022; Accepted 25 May 2022; Published 21 June 2022

Academic Editor: Xuefeng Shao

Since ancient times, dance has been widely loved by people. The history of dance has a long history, and people's pursuit of dance has never stopped. However, with the development of modern technology, traditional dance has been unable to keep up with the pace of the times. Therefore, this article studies the influence of multimedia interaction on the development of dance. This article proposes that multimedia interaction has a great influence on the status quo of dance development. This article aims to study the role of multimedia interaction in dance development. In the eleven years since 2010, the technology of stage effects has developed rapidly. As you can imagine, not only the stage effects can bring a visual feast, but also the development space of dancers has been greatly improved. It can be seen that multimedia interaction is of great significance to the development of dance; with the rapid development of science and technology, multimedia technologies such as computer networks are widely used in all walks of life. The application in the field of dance art is gradually popularized, in which dance teaching and stage performance methods have undergone great changes with the in-depth popularization of multimedia. Therefore, this article must analyze the influence of multimedia interaction on the development of dance.

1. Introduction

With the development of science and technology, computer technology is used in all fields of people's life, especially the development of Internet technology, multimedia technology, and artificial intelligence technology has brought a huge impact on human beings. Interactive multimedia is the addition of interactive functions to traditional media, presenting information through interactive behavior and with multiple senses. Audiences can not only see and hear but also touch, feel, smell, and interact with it. It brings people a new experience and is a new form of media, brings advanced scientific and technological development achievements into the daily dance training environment, uses the rapid development of multimedia technology and communication technology to promote the development of modern dance, and gradually improves the single dance training method.

The rapid development of science and technology provides a broader prospect for the development of dance art. Traditional dance art can no longer meet people's aesthetic needs, so new media dance art begins to appear. With the help of dance artists and new media dance groups around the world, various new technologies are introduced into dance performances, and people can discover the new artistic charm of dance.

The innovations of this article are as follows: (1) it introduces the theoretical knowledge of multimedia interaction and dance development and uses human body recognition technology to analyze how multimedia interaction plays a role in dance development. (2) The human body recognition technology and support vector machine are expounded. Through experiments, it has been found that the multimedia interaction based on the human body recognition technology can bring beneficial effects to the development of dance.

2. Related Work

With the progress of the times, people's pursuit of dance is not limited to traditional dance. The aim of Cha's research was to develop a model of dance emotional competency to improve the ability of dance organizations. To this end, he established the concept of emotional competence in dance, and considered building a model of emotional competence in dance. He divided dance emotional ability into five levels and divided the elements of dance emotional ability into two aspects: recognition and adjustment. Although his starting point is to improve the ability of dance organization, he did not mention how to improve the ability of dance organization nor did he specifically elaborate on the five levels [1]. The purpose of the Choi study was to develop a scale to measure competitive performance stress in college dance majors. To do this, he prepared open-ended questions and examined their validity at expert meetings, followed by an exploratory factor analysis. Although he prepared open-ended questions, he did not specify what those questions were or how to check the validity of the method [2]. In order to improve the effect of dance teaching, Wang studied the teaching design and application of dance courses based on 3D holography technology and designed a dance teaching process based on 3D holography technology. He used 3D holographic technology to shoot dances, and based on completing the teaching design, he also carried out practical teaching. His research shows that 3D holography has great advantages in teaching more complex or important dance movements. Although he mentioned that 3D holographic technology will have great significance for dance, he did not explain the advantages of 3D holographic technology in detail [3]. Wang found that immunity is closely related to health. When the body's immunity is strong, the body will be very healthy; otherwise, various diseases will appear. Sports dance takes body movement dance as the necessary content and takes two people or group exercise as the main form of exercise. His research shows that long-term adherence to physical dance can significantly increase serum immunoglobulin levels. However, he has no specific experiments to prove his conclusion is correct [4]. Wu found that computer-aided translation (CAT) based on multimedia interaction is an effective method for translating massive multimedia applications, and it is an essential English learning tool for college students majoring in multimedia technology. English teachers need to improve students' English translation ability through reasonable curriculum settings and guide students to use CAT technology correctly. Although he mentioned that CAT technology can effectively translate English and improve students' English ability, he has no actual case to illustrate the feasibility of this technology [5]. Lam MC found that visual feedback of gesture-based interaction techniques can affect performance, making actions less precise. He studied two new interaction techniques in virtual environments, including visual feedback for grasping. Although he mentioned two new interactive technologies, he did not explain the concept of these two new interactive technologies [6]. Kiourexidou found that the Internet and network technologies have fundamentally changed the way users interact with museum exhibits and that websites and their related services play an important role in that interaction. The purpose of his research was to conduct a heuristic evaluation of usability experts at 47 medical and anatomical museum websites to identify the main characteristics and problems of effective museum website design. However, he has no actual data to illustrate the role of the Internet [7]. Yu found that vocational colleges have sent a large number of graduates majoring in finance and economics to society, but there are very few well-trained talents who can work independently. Aiming at the problems of single multimedia teaching form and unsatisfactory teaching effect in higher vocational finance and economics majors, he proposed an interactive multimedia teaching. This teaching mode can stimulate the interaction between teachers and students and make multimedia teaching more vivid and practical so as to achieve the purpose of improving the effect of multimedia teaching. Although he found that interactive multimedia teaching can improve the quality of teaching, he did not have specific experimental subjects to prove his point [8].

3. Action Recognition Technology Based on Multimedia Interaction

The inheritance and development of dance as an art form need to use the human body as a carrier and through related movements, music, space, and choreography are combined with each other. Traditional dance has been extended in sacrificial rituals, religious beliefs, etc., to achieve further inheritance and development. After human society entered the twentieth century, science and technology have developed rapidly, and the form of dance art was not only limited to the past form [9]. The combination of multimedia interaction and dance is shown in Figure 1.

As shown in Figure 1, when dance art and media are combined with each other, it also makes the way of dance communication more diverse. Under the influence of the media, dance art can have a more varied and novel stage, breaking the limitations brought by time, space, stage, etc. [10]. In addition, dance art under the influence of media communication will be applied to a large number of virtual technologies, and the form of existence will also present a sense of beauty.

With the rapid development of computer technology, the interaction between people and computers has become a necessary part of all aspects of people's lives. Therefore, many researchers have focused on the areas of human-computer interaction, such as gaze tracking and gesture recognition [11].

In order to effectively obtain features, one must perform specific processing on the obtained target video to deal with redundant information originally mixed in the video; one of the most obvious redundant information in the video is the background [12].

3.1. Human Target Recognition Method. The human object recognition method based on depth image has become a research hotspot in the field of multimedia interaction [13].

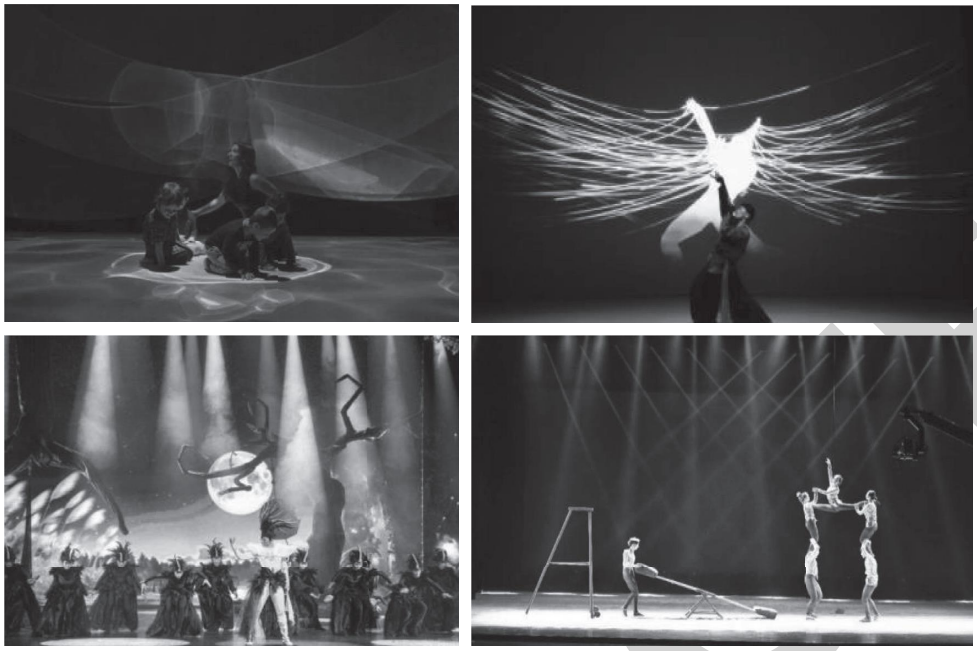

Figure 1: Multimedia interaction combined with dance.

The existing human body target recognition based on depth images needs to perform human body detection first and then recognize human body parts on this basis [14].

3.1.1. Background Difference Method. The background difference method is a general method for motion segmentation of still scenes. It performs the difference operation between the currently acquired image frame and the background image, obtains the grayscale image of the target moving area, and performs thresholding on the grayscale image to extract the moving area. In the background difference method, each frame of the extracted video has a background corresponding to the frame, and the background of the current frame is calculated by the following formula:

$$f_{bg}(a,b) = \sum_{i=0}^{n} k1(i) \times f_{pbg}(a,b,i) + k2 \times f_{po}(a,b). \quad (1)$$

Among them, $f_{bg}(a,b)$ in formula (1) represents the background of the current frame, and $k1(i)$ represents the weight of the background of the current frame and the background of the previous i frame in this background.

3.1.2. Interframe Phase Difference Method. The interframe difference method is a method to obtain the outline of a moving object by performing a difference operation on two consecutive frames of a video image sequence. When there is abnormal target movement in the monitoring scene, there will be obvious differences between two adjacent frames of images. Compared with the static background difference method, the interframe difference method has high adaptability to the rapidly changing video, and the foreground image obtained from the current frame picture is shown in the following formula:

$$f_f(a,b) = f_t(a,b) - f_{t-n}(a,b). \quad (2)$$

Among them, $f_f(a,b)$ is the foreground image obtained from the current frame image, and $f_t(a,b)$ is the original image of the current frame.

The optical flow method uses the changes of pixels in the image sequence in the time domain and the correlation between adjacent frames to find the corresponding relationship between the previous frame and the current frame, thereby a method to calculate the motion information of objects between adjacent frames. Moving objects within an image can be inferred from the intensity of light, which is also optical flow. With some information about the light intensity gradient, the pixel at each point in the image is considered to be static [15,16].

Compared with the first two methods, since the optical flow method shows motion information in the image, a certain degree of motion information can be obtained even if the background is unknown [17].

3.1.3. Mixed Gaussian Model Method. The Gaussian mixture model uses the Gaussian probability density function to quantify things accurately [18]. It is a model that decomposes things into several models based on the Gaussian probability density function. In the assumption of the Gaussian model, it considers that each pixel in a frame image is independent and completely unrelated to other pixels, such as the following formula:

$$P(A_t) = \sum_{i=1}^{k} w_{i,t} \times \eta\left(a_t, \mu_{i,t}, \tau_{i,t}\right), \quad (3)$$

where $\eta(a_t, \mu_{i,t}, \tau_{i,t})$ is the ith Gaussian distribution, and $\mu_{i,t}$ is the mean of the ith Gaussian distribution.

After obtaining the foreground image of the current frame, it is necessary to perform the corresponding binarization operation on the foreground image [19]. Because only converted into the corresponding binarized image, some more obvious features will be found; the binarization process is shown in Figure 2.

As shown in Figure 2, binarization converts grayscale images into binary images. The pixel grayscale greater than a certain critical grayscale value is set as the grayscale maximum value, and the pixel grayscale less than this value is set as the grayscale minimum value, thereby realizing binarization. The angle, length, and other information will not be affected by some unnecessary factors; the formula for binarization is as follows:

$$R(a,b) = \begin{cases} 0, & f_f(a,b) \le T, \\ 1, & f_f(a,b) > T. \end{cases} \tag{4}$$

Among them, $R(a,b)$ represents the processed binarized image and T represents the threshold of binarization.

Due to the great difference in time and space of human posture, the definition of human posture is different, and it is generally divided into two categories: static recognition and dynamic recognition [20]. Static recognition refers to the figure formed by a series of fixed points in space when the human posture remains stationary. Dynamic recognition refers to the action of the human body, which is a series of motion trajectories generated by the human body moving in the space model with time changes [21]. The basic classification of human action recognition is shown in Figure 3:

As shown in Figure 3, the application of human motion recognition is mainly used in public places, hospitals, security, and other aspects. The applications of gesture recognition are mostly used in smart home control, perception applications, education and learning, and the expression of people who are not limited by ability. The human body is actually a very complex combination of multisensor data acquisition and information fusion. It can obtain the results wanted to analyze by quickly calculating the data collected by external acquisition systems such as eyes, nose, and hands in various complex and changeable external environments through the brain [22]. The performance of the human body is unmatched by any precision instrument, so it is very complicated to analyze the human body, and a human body model must be established reasonably, as shown in Figure 4.

As shown in Figure 4, when building the model, the human body is divided into several rigid bodies, and the rigid bodies are connected by hinges. The design of the rigid body model has a very large degree of freedom, which can be set according to own needs [23]. Figure 5 is a multirigid body model. The human body is divided into fifteen rigid bodies, and the rigid bodies are connected by hinges. By measuring a certain rigid body, the motion information of the corresponding limb can be obtained [24].

3.2. Dynamic Time Warping Algorithm. Dynamic Time Warping (DTW) is a nonlinear warping technique that combines time warping and distance measure calculation.

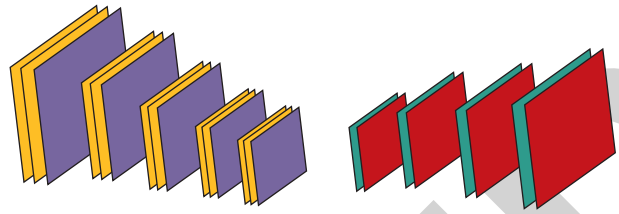

Figure 2: Binarization process.

This algorithm performs well in the recognition of single-action sequences.

DTW distance weakens the strict time requirement of Euclidean distance to a certain extent but maintains the phase similarity, which allows the sequence to be elastically transformed and shifted for identification. It is relatively accurate to use it for classification, as shown in Figure 5.

As shown in Figure 5, it allows the sequence to be elastically transformed and shifted for identification, and it is relatively accurate for classification. in most disciplines, time series is a common representation of data. For time series processing, a common task is to compare the similarity of two sequences. In the time series, the lengths of the two time series that need to compare the similarity may not be equal, and in the field of speech recognition, different people speak at different rates.

3.3. Construction of Human Gesture Recognition Algorithm Based on Support Vector Machine. As a supervised machine learning method, Support Vector Machine (SVM) has been widely used in many pattern recognition scenarios. It includes the last layer of training classification applied to the deep learning network after the automatic feature extraction is completed. It is a very mature learning classification algorithm in the method of supervised classification learning for data points. Its main purpose is to find a segmentation hyperplane on the hyperplane and complete the hyperplane segmentation of two types of samples. The expression formula of the hyperplane is as follows:

$$f(a) = \omega^T a + y. \tag{5}$$

SVM is a classifier based on the maximum separation hyperplane, which can ensure that the classification results have high reliability. And it has good adaptability to unknown samples.

When the classification problem is nonlinear, it needs to be mapped to make it linearly separable after mapping. The process is shown in Figure 6.

As shown in Figure 6, SVM is a classifier based on the maximum separation hyperplane, which can ensure that the classification results have high reliability. Moreover, it has good adaptability to unknown samples. Nonlinear classification of support vector machines: in addition to linear classification, SVMs can also efficiently perform nonlinear classification using the so-called kernel trick, which implicitly maps its input into a high-dimensional feature space.

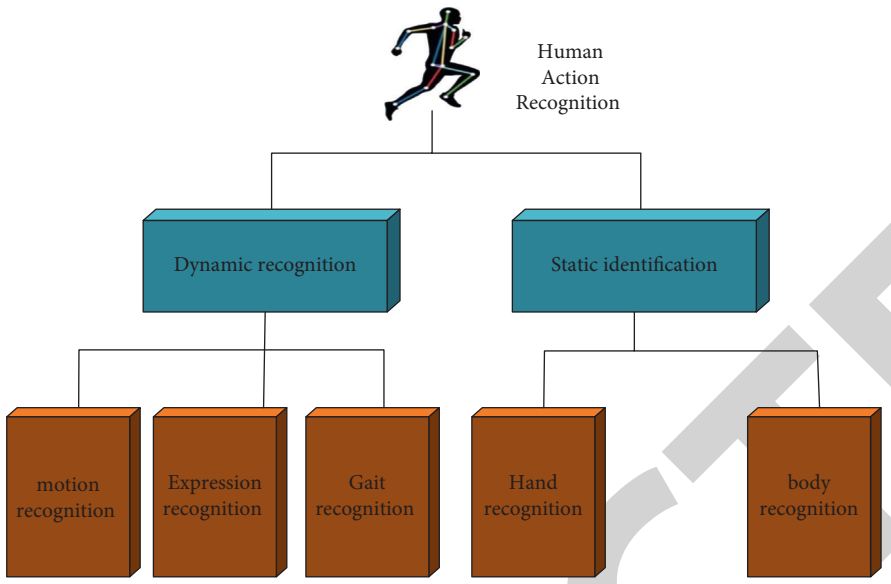

Figure 3: Basic classification of human action recognition.

The Gaussian function has five important properties that make it particularly useful in early image processing. These properties show that the Gaussian smoothing filter is a very effective low-pass filter in both the spatial domain and the frequency domain and has been effectively used by engineers in practical image processing,

In summary, it can be found that in addition to the linear kernel function, the other two types of kernel functions have kernel function parameters that can be adjusted. In addition, since SVM is a classification method for minimizing structural risk, there is a penalty factor that can be adjusted for each type of SVM to control the influence of singular points on hyperplane classification.

3.4. The Influence of Multimedia Interaction on Dance Development. "Interactivity" is an important feature of new media dance art, part of which is produced through the interactive fusion of new media technology and dance art; these works are also called "multimedia dance." Without physical dance, imagery is meaningless, and without video imagery, the structure of dance cannot be established. The two are indispensable, and the relationship between them is complementary. The interactivity of new media dance is shown in Figure 7.

As shown in Figure 7, the fusion between media communication and dance art is of epoch-making significance. The emergence of media, such as television and the Internet, has Injected vitality into the development of dance and has also broken the limitations brought by traditional stage sets. With the help of advanced media technology, choreographers can imagine and design dances that cannot be performed on the traditional stage with more confidence. On the whole, the emergence of media and the nature of its dissemination have brought many benefits to the development of dance art.

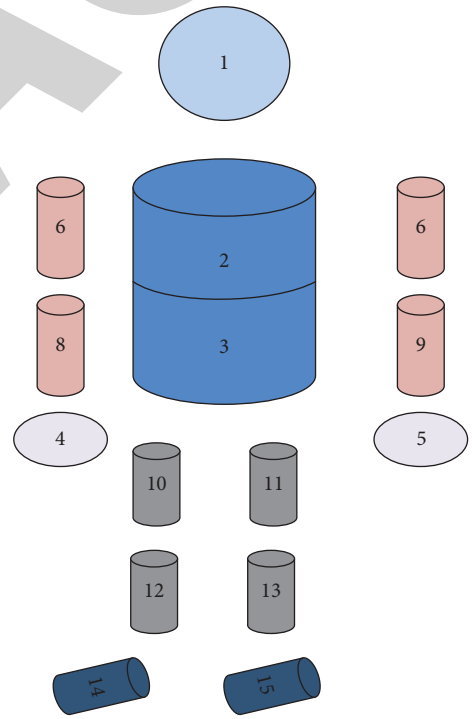

Figure 4: Multirigid body model.

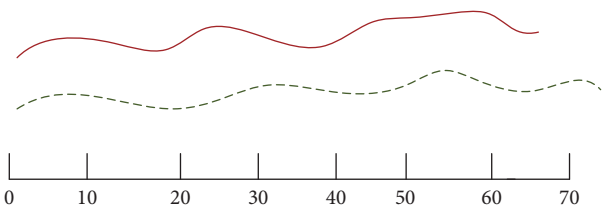

Figure 5: Time series curve.

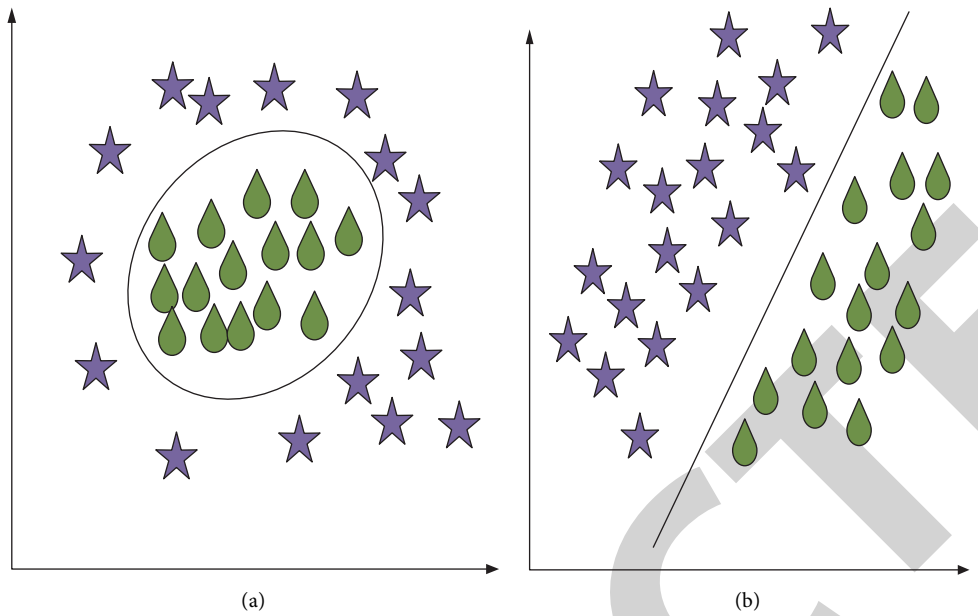

Figure 6: SVM mapping diagram. (a) The original space is linearly inseparable. (b) The mapped space is linearly inseparable.

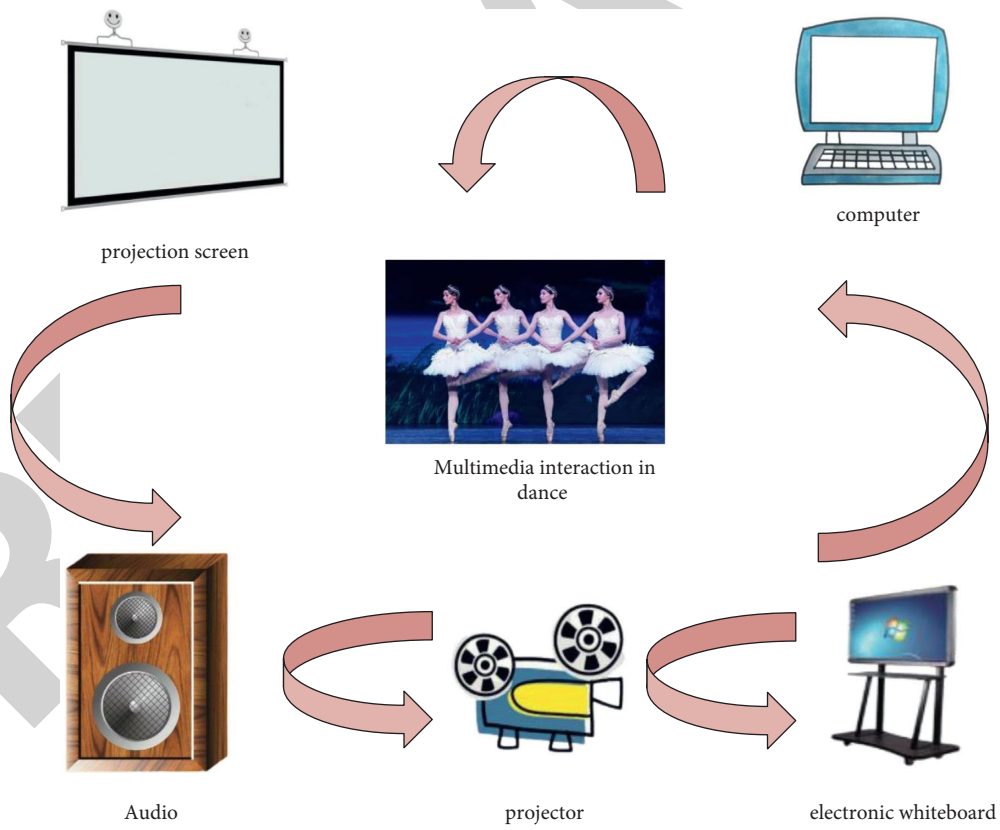

Figure 7: Interactivity of new media dance.

Both digital technology and artistic practice have made certain progress in today's society, and the two have merged with each other in the process of continuous development. Purely from the perspective of artistic development, the influence of digital technology on dance art has gradually deepened, and the traditional dance form has undergone qualitative changes.

4. Experiment and Analysis of the Influence of Multimedia Interaction on Dance Development

4.1. Disadvantages of Traditional Dance and Benefits of Multimedia Dance. The emergence of multimedia and network communication media cannot be replaced by traditional media because they have their own significant advantages. For example, images, video, and audio can be integrated together, and at the same time, it has strong interaction and inheritance, which will also make the effect of cultural communication better.

In the process of dance art dissemination, the full use of multimedia technology can make the atmosphere on the stage better and bring another impact to the audience, which cannot be achieved by traditional media. This article investigates 5 dance artists, and their own situations are shown in Table 1.

As shown in Table 1, 4 of the 5 dance artists are female and one is male. It shows that most of the women who learn dance are in the age range of 28–40 years old, and the age range in dance of the five dance artists is between 5 years and 22 years.

This article summarizes and analyzes the benefits of learning dance according to 5 experts, as shown in Table 2.

As shown in Table 2, five experts believe that the benefits of learning dance are: it can improve flexibility, stretch various parts of the body, enhance flexibility and coordination, and increase muscle strength and improve body shape. Among them, 5 experts gave the score range of improving physical flexibility in the range of 7.4 points to 7.9 points. The score range for enhancing flexibility and coordination of the body is 7.3–8.3 points, and the long-term insistence on dancing can increase lung capacity, enhance physical resistance, and reduce the risk of chronic diseases in the score of 8.2–9.1 points.

This article analyzes the problems existing in the development of traditional dance and the characteristics of new media dance, as shown in Figure 8.

As shown in Figure 8, the problems existing in the development of traditional dance are as follows: the technical means are not advanced enough, and the sense of innovation is not strong enough. At the same time, economic factors are also an important factor restricting the development of dance. Among them, the score of technical means is between 3.2 and 4.6, the score of innovation consciousness is between 2.8 and 4.9, and the score of economic factor is between 4.3 and 5.2, all of which are very low.

New media dance is a real-time, interactive, and experiential art. This article compares the development trends of traditional dance and dance based on media interaction from 2015 to 2020, as shown in Tables 3 and 4.

Table 1: Basic information of 5 dance artists.

Object of investigation	Gender	Age	Years in dance
A	Male	32	5
B	Female	28	8
C	Female	40	22
D	Female	37	14
E	Female	35	16

Table 2: Benefits of learning dance.

Object of investigation	Body flexibility	Flexibility	Improve body shape
A	7.8	8.3	9.1
B	7.4	7.3	8.6
C	7.9	7.9	8.9
D	7.6	7.5	8.4
E	7.5	8.0	8.2

As shown in Tables 3 and 4, the development trend of traditional dance from 2015 to 2020 is generally declining. In the development trend of traditional dance, the popularity of traditional dance has dropped from 53% in 2015 to 30% in 2020, and among the proportion of people who learn traditional dance, the proportion of people who learn traditional dance has dropped from 61% in 2015 down to 19% in 2020. The percentage of growth showed a negative trend. The popularity and percentage of dance trends based on media interaction in 2015 are not as high as those of traditional dance. But since 2016, the development trend of dance based on media interaction has surpassed the development of traditional dance.

4.2. The Development of New Media Dance. The development of new media dance is constrained by science and technology. Under the premise of technological development, the impact of new media on dance development from 2010 to 2021 is reflected in the following aspects—especially the stage effect and development space, as shown in Figure 9.

As shown in Figure 9, the features of human-computer interaction features are more obvious. The development of real-time human-computer interaction and real-time processing technology is gradually improving, and new media dance is gradually becoming the main form of modern dance.

The stage effect is more three-dimensional and delicate. Now mature display technology is being developed, and electronic screens are also appearing. With the advancement of holographic projection technology, the virtual image effect of sci-fi movies is gradually being realized on the stage.

The development space is large. With the development of choreography software and network technology, the popularization of new media dance art is an inevitable trend. With the help of specific platforms, amateurs can also create virtual dance works and publish them on the Internet.

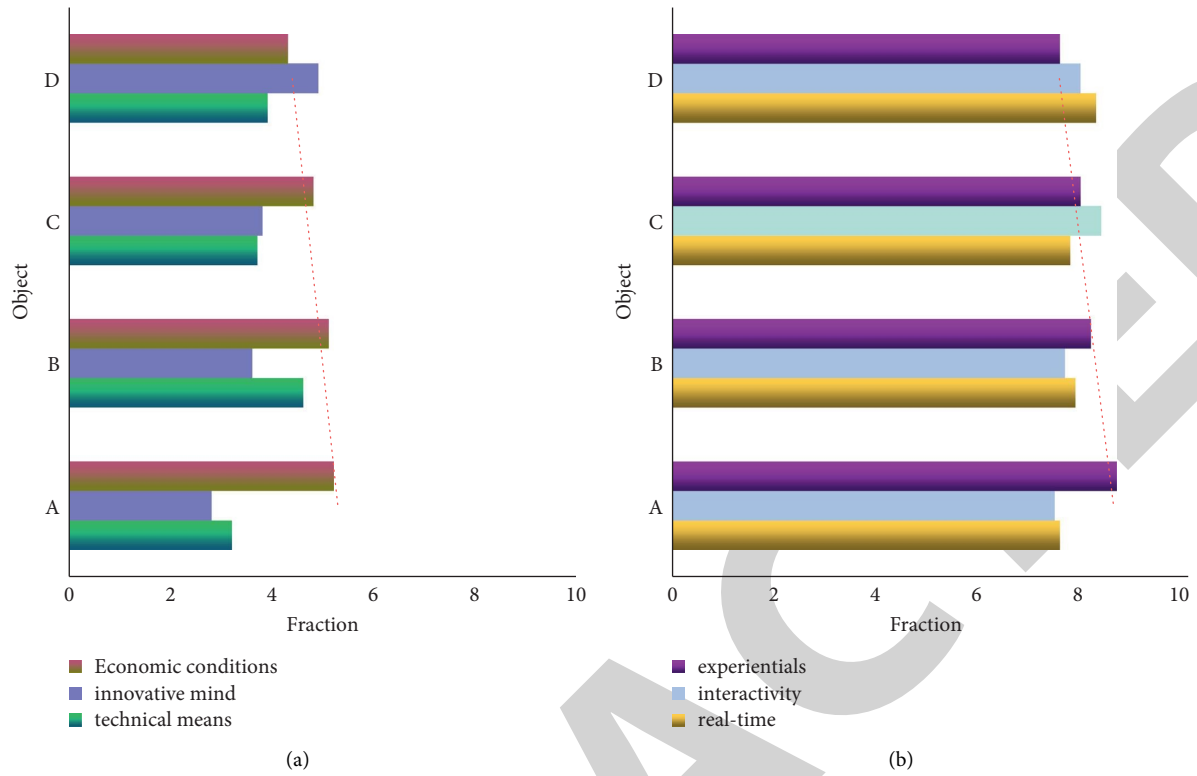

Figure 8: Problems in the development of traditional dance and characteristics of new media dance. (a) Problems existing in the development of traditional dance and (b) characteristics of new media dance.

Table 3: The development trend of traditional dance from 2015 to 2020.

years	Welcome (%)	Percentage of learners (%)	Growth percentage (than the previous year) (%)
2015	53	61	10
2016	50	58	−3
2017	42	40	−18
2018	47	32	−8
2019	39	27	−5
2020	30	19	−8

Table 4: The development trend of dance based on media interaction from 2015 to 2020.

years	Welcome (%)	Percentage of learners (%)	Growth percentage (than the previous year)
2015	40	48	2
2016	58	52	4
2017	63	65	13
2018	69	82	17
2019	72	88	6
2020	80	90	2

4.3. Existence Value of Dance Art in the Context of Media Communication

4.3.1. Providing All-Round Multiangle Visual Experience. The society we live in now has the characteristics of quick success and instant benefits, and the dance art under the background of media communication has become more tense, which is very consistent with the aesthetic needs and psychology of the current audience. Under the influence of media communication technology, the new dance forms such as virtual dance and installation dance presented by dance art are more vivid, unique, and diversified as a whole.

4.3.2. Breaking the Limitations of the Traditional Stage. With the help of the media, dance will not only be limited to dance halls and performances on the stage but will break the limitations of traditional stage. After the broadcast and

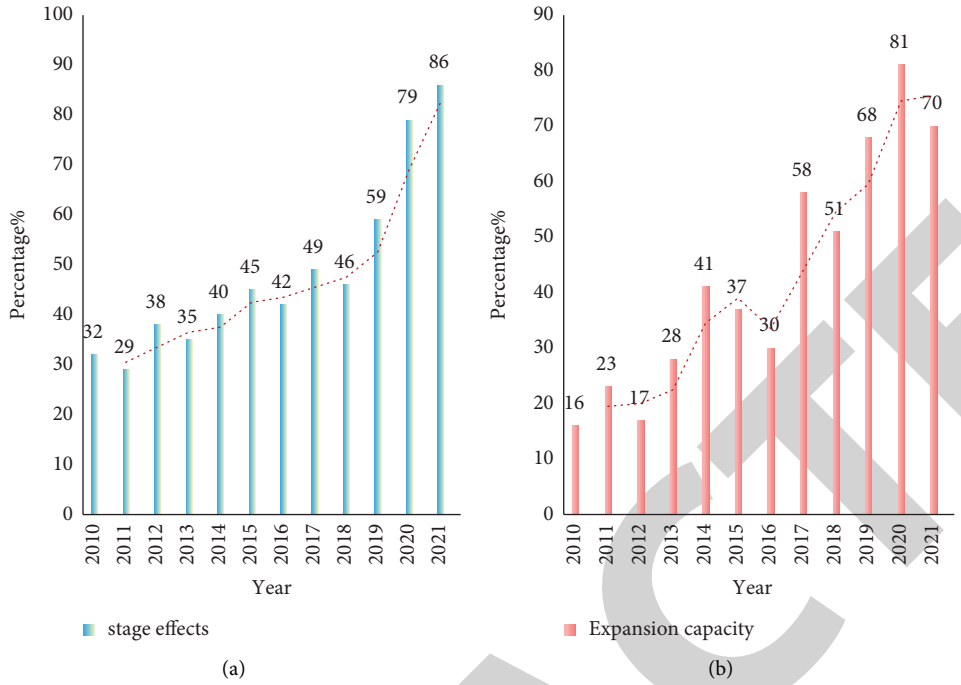

Figure 9: The impact of new media on dance development from 2010 to 2021. (a) The impact of new media onstage effects from 2010 to 2021 and (b) the impact of new media on development space from 2010 to 2021.

dissemination of the media, the dissemination and coverage of dance will be more extensive, which can be enjoyed by hundreds of millions of audiences at the same time.

4.3.3. Realizing the Integration of Technology and Dance. At present, the inherent form of dance is gradually broken. Under the influence of media communication, dancers not only have the single attribute of performance onstage but also need to learn how to integrate with some media technologies. For example, in "Shadow Dance," an organic combination of dancing, sound, and light effects is required.

5. Discussion

This article discusses how to analyze the influence of the current situation of dance development based on multimedia interaction, describes the theoretical knowledge related to multimedia interaction and dance development, and focuses on the development of dance. This article explores the method of analyzing the influence of the current situation on dance development and discusses the effect of multimedia interaction on dance development through experimental analysis. Finally, it is found that multimedia interaction can promote the development of dance.

This article also makes reasonable use of human body recognition technology. The application range of human body recognition technology is not only becoming more and more extensive but also its importance has been paid attention by scholars. Human body recognition technology plays an important role in multimedia interaction, which can make human body recognition more accurate. From the experimental analysis of this article, we can know that the development of multimedia interaction promotes the development of dance, and the reasonable application of multimedia interaction to dance can play an important role in dance.

6. Conclusions

With the development of the economy, people's pursuit of spiritual level is getting higher and higher, and dance, as an elegant movement, can not only make people's temperament better but also enhance their physical fitness. However, traditional dance methods can no longer meet the public's aesthetics, so modern dance based on multimedia interaction is the way to meet people's needs. This article describes the basic concepts of multimedia interaction and dance and proposes an algorithm for action recognition technology based on multimedia interaction. The method part is described in detail around the algorithm of action recognition technology, which leads to the significant impact of multimedia interaction on the development of dance. In the experimental part, the shortcomings of traditional dance are firstly analyzed, and then the dance combined with multimedia interaction is analyzed. It is found that the dance that integrates multimedia interaction not only satisfies people's visual pursuit but also enables the audience to have a better experience. At the same time, the body movements of dance suitors have also been greatly improved, and dancers are no longer limited to traditional dance movements. Therefore, dance based on multimedia interaction not only meets the needs of the audience but also promotes economic development.

Data Availability

No data were used to support this study.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

Acknowledgments

This research was supported by the Humanities and Social Science Project of Higher Education Department of Guizhou Province, Project No. 2020ZC122.

References

[1] E.-J. Cha and B. S. Ahn, "A study on dance emotional competence model development," *The Korean Journal of Physical Education*, vol. 56, no. 4, pp. 537–550, 2017.

[2] J.-H. Choi and J. M. Lee, "A study on a competitive performance stress measure development for a university dance students," *Korean Journal of Sports Science*, vol. 26, no. 2, pp. 861–876, 2017.

[3] Y. Wang, "Development and application of 3d holographic technology in dance teaching," *IPPTA: Quarterly Journal of Indian Pulp and Paper Technical - A*, vol. 30, no. 8, pp. 488–492, 2018.

[4] A. Wang and C. Wang, "Research on the application of sport dance in colleges and universities in the healthy development of sports," *Revista Brasileira de Medicina do Esporte*, vol. 27, no. 5, pp. 464–467, 2021.

[5] H. Wu, "Multimedia interaction-based computer-aided translation technology in applied English teaching," *Mobile Information Systems*, vol. 2021, no. 5, 10 pages, Article ID 5578476, 2021.

[6] M. C. Lam, H. Arshad, A. S. Prabuwono, S. Y. Tan, and S. M. M. Kahaki, "Interaction techniques in desktop virtual environment: the study of visual feedback and precise manipulation method," *Multimedia Tools and Applications*, vol. 77, no. 13, pp. 16367–16398, 2018.

[7] M. Kiourexidou, N. Antonopoulos, E. Kiourexidou, M. Piagkou, R. Kotsakis, and K. Natsis, "Websites with multimedia content: a heuristic evaluation of the medical/anatomical museums," *Multimodal Technologies and Interaction*, vol. 3, no. 2, p. 42, 2019.

[8] Z. Yu and J. Huang, "Exploration on reform of multimedia teaching of finance and economics major from perspective of interaction," *Agro Food Industry Hi-Tech*, vol. 28, no. 1, pp. 3166–3169, 2017.

[9] H. Bozorgian and E. Fakhri Alamdari, "Multimedia listening comprehension: metacognitive instruction or metacognitive instruction through dialogic interaction," *ReCALL*, vol. 30, no. 1, pp. 131–152, 2018.

[10] H. S. Min, "Exploration of coordination among admission, education, career development for sustainment of dance department in korea," *The Korean Journal of Dance Studies*, vol. 63, no. 1, pp. 67–85, 2017.

[11] J. S. Kang, "A study on the development of K-pop dance emotion model using laban's BESS movement theory," *Journal of the Korea Entertainment Industry Association*, vol. 12, no. 3, pp. 249–266, 2018.

[12] H. J. Jang and J. S. Hee, "A study of the development of practical skill assessment index of Korean dance in college," *The Journal of Korean Dance*, vol. 36, no. 3, pp. 187–213, 2018.

[13] Y. Zhang, Q. He, Y. Xiang et al., "Low-cost and confidentiality-preserving data acquisition for internet of multimedia things," *IEEE Internet of Things Journal*, vol. 5, no. 5, pp. 3442–3451, 2018.

[14] H. Song and M. Brandt-Pearce, "A 2-D discrete-time model of physical impairments in wavelength-division multiplexing systems," *Journal of Lightwave Technology*, vol. 30, no. 5, pp. 713–726, 2012.

[15] I. L. Y. wookyungkim, "The development and validation of satisfaction scale in dance participant," *The Journal of Korean Dance*, vol. 35, no. 2, pp. 25–46, 2017.

[16] A. T. Moldakhmetova, G. T. Zhumaseitova, L. V. Kim, G. Saitova, and R. V. Kenzikeev, "Dance movements of baksy as a paradigm of development of the Kazakh dance art," *Rupkatha Journal on Interdisciplinary Studies in Humanities*, vol. 10, no. 3, pp. 38–57, 2018.

[17] L. K. Eun, "Design-based research for development of somatic improvisation dance program," *Korean Journal of Dermatology*, vol. 18, no. 2, pp. 83–96, 2018.

[18] G. Suryanarayana, K. Chandran, O. I. Khalaf, Y. Alotaibi, A. Alsufyani, and S. A. Alghamdi, "Accurate magnetic resonance image super-resolution using deep networks and Gaussian filtering in the stationary wavelet domain," *IEEE Access*, vol. 9, pp. 71406–71417, 2021.

[19] I. S. Yuk, J. O. Jeong, and C. H. Seong, "Components exploration and scale development of the competitive self-efficacy in DanceSport," *Korean Journal of Sport Psychology*, vol. 31, no. 2, pp. 73–87, 2020.

[20] J. Y. Kim, I. S. Park, and S. J. Lim, "The development and validation of a dance career development competency inventory for dance majors; viewpoint of the social cognitive career theory," *The Korean Journal of Physical Education*, vol. 56, no. 2, pp. 461–475, 2017.

[21] S. H. Kim, J. H. Lee, and A. L. Jung, "Investigate research on rapport through community dance; focused on the development of scale," *Korean Journal of Sports Science*, vol. 29, no. 2, pp. 687–701, 2020.

[22] R. Briggs, "The development dance: how donors and recipients negotiate the delivery of foreign aid by haley J. Swedlund ithaca, NY: cornell university press, 2017. Pp. 188 $23.95 (pbk)," *The Journal of Modern African Studies*, vol. 57, no. 1, pp. 178-179, 2019.

[23] S. Bronner and I. Urbano, "Dance functional outcome survey: development and preliminary analyses," *Sports Medicine International Open*, vol. 2, no. 6, pp. E191–E199, 2018.

[24] M. M. Jung and S. H. Kim, "Development of elderly health exercise application contents for mibyung control: applying oriental medicine and Korean dance," *The Korean Journal of Physical Education*, vol. 58, no. 1, pp. 229–235, 2019.