



# **Dance and the use of Technology**

**Historical Study Guide for  
Secondary School Student**

## Welcome

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Welcome to the Dance and use of technology.

In an era of rapid technological change, dance art's original ecological environment has been a fundamental change. For example, with the emergence of new media technology, dance is no longer performed and spread in the traditional square and theatre. It brings infinite possibilities for dance, but it also brings new opportunities and new challenges to the development and dissemination of dance. This study guide takes the new media as the new angle to research in the era of technology and art fusion, the influence of new media on the development of dance, and the change of dance mode.

## Overview

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This study guide explores the different uses of technology in dance development. It is organized into four main sections:

Section heading	Description
Video dance	In this section you will get in touch to learn about several types of video dance.
Mass dance digital entertainment	In this section you will link dance to our life, knowing that dance is an important part of our entertainment.
Integrate technology into dance	In this section, you will begin to understand how technology influence dance and provide dance more opportunities.
Digitalization of Dance Education Creation Mode	In this section, you will explore the creative help by using technology for teaching and learning dance.

## Video Dance

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There is no denying that today's first intimate contact with dance is increasingly taking place in television, projection, and online media. The development, history, and main characters of dance film video have greatly influenced the development of dance itself. The range of dance video and its speed far exceeds the stage's form, spreads the stage dance, promotes modern dance, and produces a new art form. The dance video's significance has long gone beyond recording dance and has become a unique observation involved in some choreography behavior and creative image angle.

There is a lot of talk about dance, and the famous Cologne dance film and video festival in Germany mentions the following statements about dance videos :

- Stage/studio recording- record the dance with one or two cameras without changing the dance itself or the choreography to keep the record authentic.
- Camera re-work - in order to fit the angle of the lens, cut and adapt original dance works.
- Screen choreography - for the purpose of filming ideas and choreography of dance, using the lens language of the thinking angle and interactive communication.

## ◆ Original Stage Recoding

Advances in technology, particularly film technology, have had an affect on the dance world for over one hundred years.

**1880s**



Etienne-Jules Marey (France),  
Eadweard James Muybridge (Great  
Britain) begin experimenting with  
sequential photographs to study  
animal motion.



**1894**



Thomas A. Edison films Ruth Dennis  
(later known as Ruth St. Denis) doing a  
skirt dance outdoors.

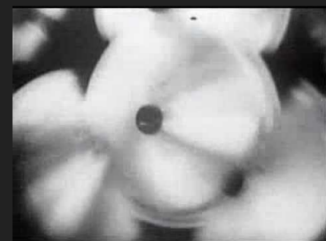
**1915**



Denishawn Dancers appear in D.W.  
Griffith's epic Intolerance.



**1924**



Fernand Leger makes Le Ballet  
Mechanique, his landmark avant garde  
film in which he experiments with  
camera-created motion and rhythm.

## ◆ Dance in the Film

As the dance became commercialized, dance began to be used for pure entertainment value in **1929** when Hollywood films began to incorporate large music and dance sequences into thinly plotted storylines. More dance video content are integrated into the content of the generalized dance video image. They are involved in Hollywood's cabaret films, inspirational dance films, dance films that introduce dances, dances in music and television, and projected images from dance works. Rehearsal videos in the dance rehearsal hall, dance video notes made for choreography and so on.

Name of Film	Featured Dance Style	Release Date
42nd Street	Tap dance	March 1933
Bathing Beauty	Ballet	July 1944
Singin' in the Rain	Tap dance	March 1952
A chorus line	Contemporary	July 1975
Center Stage	Ballet	May 2000
Billy Elliot	Ballet	Sept 2000
Save the Last Dance	Ballet & Hip-Hop	Jan 2001
Take the Lead	Ballroom	April 2006
Stomp the Yard	Street/Hip-Hop	Jan 2007
Fame	Jazz/Contemporary	Sept 2009
Black Swan	Ballet	Dec 2010

## ✧ Actitives

Choose your favorite movie and learn a piece from it.

## ◆ Dance in Reality Television

As dance again became popular as a subject of mainstream films, it also became a popular subject of entertainment on television.



1992, MTV, *The Real World*



1999, CCTV, *Dance World*



2000, CBS, *Survivor*

2005, FOX

*So you think you can dance*





2005, ABC

*Dancing with the stars*



2008, MTV,

*America's best dance crew*

## ◆ Creative Choreography

1945, Maya Deren, a pioneer of American experimental cinema, pioneered the production of the short film "Dance Video Choreography" with 16 mm film and the 1958 ballet-themed, inverse effect of "The Eyes of the Night", which pioneered dance video. Although she herself is more of a pioneering film character, the collaboration with the dancers, the production of silent dance images, the switch between scenes, the tacit relationship between movement and the lens, the dance in the house and the jump of the natural environment, are refreshing, is

indeed an inspiration. Maya, as a pioneer of American postwar art figures and a lo recumb of experimental films, has become an important classic text in the history of dance video.

**1968**, British animator Norman McClellan. McLaren's "double dance" is more of an animated illusion of photography and editing skills, but also with abstract simplicity, close to the nature of the action, similar to the night to feel the mysterious and temperature of the movement of the same style, deeply affected the dance world's visual concept of dance video.

In the **late 1990s**, Max Cunningham's Hand-painted Space, Bill E. T. Jones's "Soul Hunt" is the creation of a combination of updated computer technology works, action collection to three-dimensional animation, the work not only in the mind more and more far away, but also reflects the dance artists and technical engineers more close cooperation, sensitive to high-tech.

#### ◆ Dance in Dance Video Exhibition & Dance Film Festival

Country	Festival
American Dance Film Association	Dance on Camera
German	Cologne dance film and video festival
West Los Angeles	Dance Camera West
British	Dance on Screen

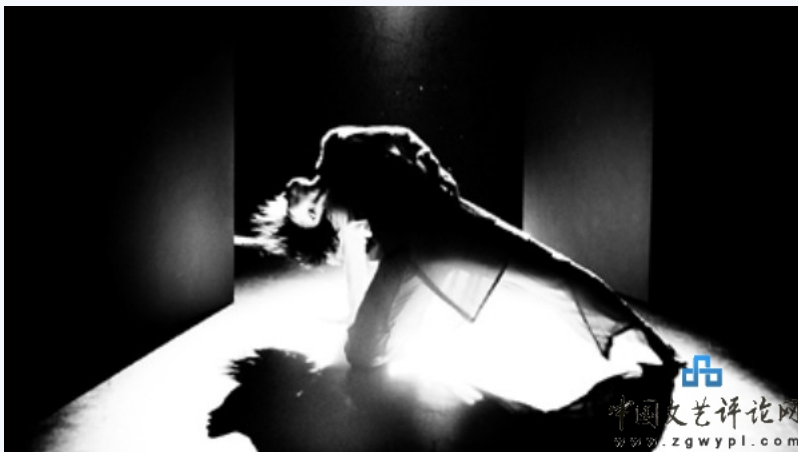


Netherlands	Cinedans Amsterdam international dance film festival
Vienna	International Emmy Award Competition

\*From 1990 to 2002 in Frankfurt, Lyon, Cologne, Monaco and other places held dance video competitions, and developed the Monaco Dance Video Forum and other series, the world tour held and displayed dance video art festival.

As society becomes more comfortable with and dependent on technology for everyday tasks, it becomes increasingly dependent on technology as a means of viewing entertainment. Many people enjoy being able to watch performances from the comfort of their own homes where they can record and watch them at their leisure, possibly on their large screen TVs, but also on their computers, iPads, and other devices.

The increasing use of technology does not mean that everyone is going to stop attending live performances; but it does mean that dance, like every other art form, exists in a rapidly changing technological environment. The popularity of dance, in films and television, often presented in the context of a competition, appears to be changing people's expectations. There is now a television audience expecting to see tricks — fancy jumps, spectacular turns, gravity-defying lifts and occasional crashes – almost as if dance had become sporting events.



*"I'm a Dancer-Series: One and The Other Half, (2017)*

## Mass dance digital entertainment

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With advances in electronic technology and the popularity of video games, dance is also through new forms of access to the public, through new media and mass dialogue.

### ◆ DDR (1998)

'Dance Dance Revolution' (DDR), a video game manufactured by the Japanese entertainment corporation Konami. In this game, arrows pointing in cardinal directions scroll across a monitor screen in time with the beat of a song. Players must match the pattern and speed of the arrows by touching their feet to sensors located on the dance floor. The 'revolution' in 'Dance Dance Revolution' is its combination of dance, physical exercise, music, and sophisticated graphics technology, united for the first time in a video. DDR can be read as the ultimate postmodern dance experience because the game displays various forms of dance imagery without stylistic or historical continuity.



## Integrating technology into dance

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### ◆ Interactive Performance Software

"Interactive space" is based on the multimedia technical environment, emphasizing the behavior of dancers in the technical environment settings and real-time state, emphasizing the interaction between people and technology theory. In the multi-media environment setting, the human body and music, lens, computer, projection and so on have a variety of relations, including accidental image effects, but also pre-designed image interaction. Moreover, this pre-designed effect is only arranged after the study of dance imaging software.

#### - MidiDancer (1987)

One of the dance companies at the forefront of the dance and technology field is Troika Ranch. Troika Ranch was formed in 1994 by Dawn Stoppiello and Mark Coniglio "to create dynamic, challenging artworks that fused traditional elements of dance, music, and theatre with interactive digital media" (Coniglio, "The Importance of Being Interactive"). The system created by Coniglio became known as MidiDancer.



*"In Plane" (1994)*



## - Isadora

Manipulate and transform live imagery and interacts with live performers through a mix of media, live editing, and live performers. This visual "environment" has relief, marginalization and other general filter effects, similar to the drawing software photoshop inside the special effects. Dancers use real-time effects software to appear in different shapes on the screen, and the dancer's image may be abstract, seeing only a group of dot matrix movements, or line movements. The dancer's movement and image filter have a delicate relationship, the action of the tail, hidden, deformed and realistic action forms an interesting double dance, thus further producing the meaning of reflection, in the action and technology, people and machines, people and another form of self to observe each other, to carry out fresh dialogue. "Isadora" can also control sensor system and music changes, after the development of dance software, more widely used in the performance of musical interaction.



*[R]evolutions by Dawn Stoppielo and Mark Cognilio. Screenshot by author (Troikaranch 16 [R]evolutions (2006).*

## Digitization of Creative Mode of Dance Education

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### ◆ Choreography Software - Dance Forms (1991)

From the legacy of Life Forms animation software, Credo Interactive. presents the first choreography software designed with dance teachers and choreographers. Dance Forms inspires you to visualize and chronicle dance steps or entire routines in an easy-to-use 3D environment. For choreography, interdisciplinary arts and dance technology applications.

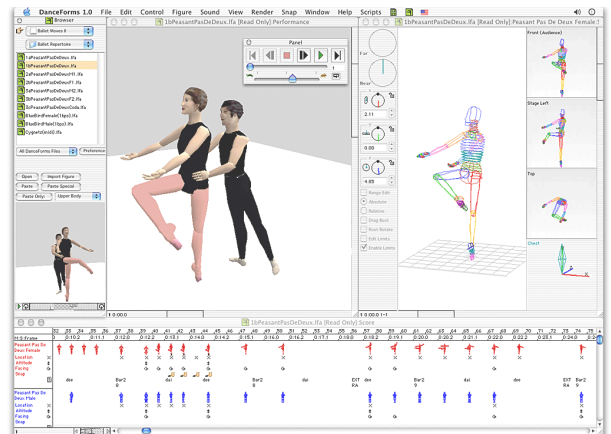
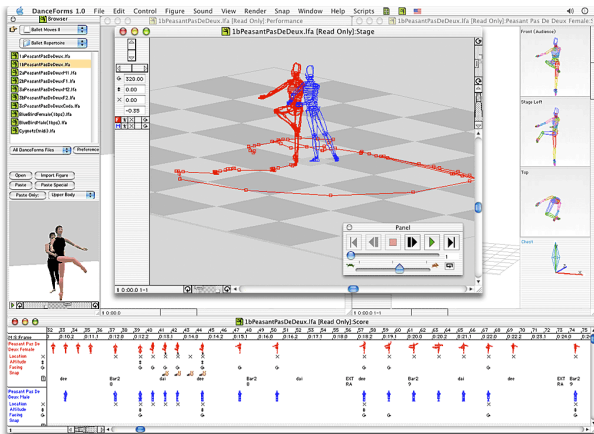
#### **Let Dance Forms bring your creativity to life:**

- Sketch out your choreographic ideas using an assortment of poseable dance figures.
- Save time by mixing, matching, and blending sequences from Dance Forms' existing libraries and palettes of dance movement.
- Animate single figures, or large groups.
- Use the many innovative features to bring your dance ideas to three-dimensional life

The "Ballet Moves" software collects the ballet move vocabulary of the Russian Ballet School, the British Ballet School, and the Italian Ballet School through a three-dimensional character collection. It provides different action styles and the most basic ballet techniques and even includes classic ballet repertoires, such as Sleeping Beauty, Giselle, Swan Lake with MIDI music. Dance students, dance teachers, and any learners can use the software to use the camera to push and pull, rotate, pan, and pitch in the software to understand movements, learn dance, and perform decomposition playback of movements, and compare different dance styles.

The "Modern Dance Moves" dance software concentrates on contemporary, new styles of modern dance techniques and movements. Simultaneously, interactive movement learning also provides dance history learning, scribbled dance experience and dance reviews, and simple dance choreography software functions.





The related dance software is suitable for dance movement learning and choreography and goes deep into the teaching of dance anatomy. They use three-dimensional software to observe the human body structure, joints, nerves, muscles, and the shape of the body structure and organs in the dance movement.

The tutorial guide to Dance Forms.



An example of Dance Forms animation software.

