



# The Influence of Technology in Wayang Golek Purwa Performances: Combining Tradition and Innovation

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**Abstract:** *Wayang Golek Purwa*, as one of the traditional cultural heritages of the Sundanese community, faces significant challenges in maintaining its existence amid the rapid development of modern technology. This research aims to analyse the influence of technology on *Wayang Golek Purwa* performances, especially in integrating tradition and innovation to attract a wider audience and be relevant to the digital era. This research uses a descriptive qualitative approach through direct observation, literature study, and audio-visual analysis of the performance. The findings show that the application of technology, such as visual projection, modern lighting, and digital sound, significantly enriches the aesthetic and dramatic dimensions of *Wayang Golek Purwa*. In addition, the integration of multimedia technology opens up new opportunities to introduce stories and characters that are relevant to the younger generation. However, the research also identified challenges including limited access to technology among performers in rural areas. The fusion of tradition and innovation through technology opens up opportunities for the preservation of *Wayang Golek Purwa* while strengthening its appeal in the era of globalisation. Recommendations are made to develop a model of collaboration between traditional artists and technology experts to maintain a balance between modernisation and preservation of traditional values.

**Keywords:** innovation, technology, tradition, *Wayang Golek Purwa*

## 1. INTRODUCTION

*Wayang Golek Purwa Sunda* is a traditional art that is rich in aesthetic, cultural and philosophical values. As a noble cultural heritage, this art is not only entertainment but also a medium for conveying the moral and social values of Sundanese society (Agisfi & Rabbil, 2023; M. A Salmun, 1961; Solichin, 2010). In the performance, aspects such as *Wayang* characters, gamelan music, and the interaction of the puppeteer with the audience create an authentic cultural experience. However, the digital era brings challenges for *Wayang Golek* to remain relevant in the midst of rapid changes (Ningsih, 2023). The question is how can technology be integrated without damaging the cultural roots that are its essence?

The development of communication and information technology has opened up new opportunities for the performing arts including *Wayang Golek*. Visual projection, dynamic lighting and digital audio technology provide new dimensions that enrich performances (Setiawan, 2018; Wardiana, 2022). Digital projection, for example, enables the creation of immersive dynamic backdrops and flexible narratives, giving the audience an immersive experience. (Irnanningrat, 2017). However, the use of this technology poses a dilemma: to what extent can innovation be applied without disrupting the traditional symbolism of *Wayang Golek*, which is full of philosophical and moral meanings (Surahman, 2013)



*Wayang Golek* as a traditional art has a deep symbolic structure that reflects the spiritual and social values of Sundanese society (Sulaksono, 1970). The biggest challenge is to balance technological adaptation with the preservation of traditional values (Riyanto, 2012). Technology needs to be used to support core aspects such as the moral and philosophical messages of *Wayang* characters rather than replacing the meanings contained therein (Ramdhani & Ahmad, 2017). With a careful approach technology can enrich the experience without compromising the substance of the narrative (Rukiah, 2015).

In addition to enriching the visual and auditory experience, technology can also help *Wayang Golek* reach a wider audience. Digital platforms allow these performances to be accessed globally, providing an opportunity to introduce Sundanese culture to younger generations who are familiar with digital media (Akbar et al., 2023; Listiani et al., 2019). This not only supports the preservation of *Wayang Golek* but also expands its influence internationally as a symbol of Indonesia's rich culture (Atmadibrata, 2006).

This research aims to answer how *Wayang Golek* artists can integrate technology for innovation without losing cultural substance. By maintaining traditional aspects such as moral messages and philosophy, technology can be a tool that enriches the performance experience while maintaining the sustainability of this art in facing the challenges of the times (Dharma, 2014). This integration must be done critically so that *Wayang Golek* remains a relevant, meaningful and respected art, both locally and globally (Sustiawati, 2019).



**Figure 1.** *Wayang Golek* show in ancient times (source from the internet)

The influence of technology on *Wayang Golek Purwa* performances represents a fascinating intersection of tradition and innovation. *Wayang Golek*, a traditional Indonesian puppet theater, has historically relied on manual craftsmanship and live performances to convey cultural narratives. However, the integration of technology into these performances has the potential to enhance audience engagement, preserve cultural heritage, and innovate traditional storytelling methods. One significant aspect of this technological influence is the incorporation of interactive technologies, which can enhance the appreciation of traditional puppetry. Zhao discusses how interactive technology can support the appreciation of traditional Chinese puppetry,

raising questions about the balance between preserving traditional skills and embracing digital innovations (Zhao, 2020).

This perspective is applicable to *Wayang Golek*, where technology can be used to create immersive experiences that attract younger audiences while maintaining the essence of the art form. Moreover, the use of digital tools in performance settings can facilitate new forms of storytelling. The application of virtual reality (VR) technology in stage performances has been shown to provide audiences with novel experiences that can complement traditional narratives (W. Liu, 2020). By integrating VR, *Wayang Golek* performances could allow audiences to engage with the stories in a more interactive manner, thus enhancing their emotional connection to the cultural narratives being presented.

Additionally, the adaptation of technology in *Wayang Golek* can serve as a means of cultural preservation. Cai emphasizes the importance of utilizing modern technological methods to preserve and inherit traditional cultural practices, such as puppet performances (Cai, 2023). This approach not only helps in maintaining the relevance of *Wayang Golek* in contemporary society but also ensures that the cultural heritage is passed down to future generations in an engaging format. Furthermore, the combination of traditional and modern techniques can lead to innovative performance styles that appeal to a broader audience. The blending of traditional puppetry with contemporary digital media can create a unique fusion that respects the original art form while also pushing creative boundaries.

This is echoed in the findings of Alsuwat and Young, who highlight the effectiveness of combining traditional and technology-based instructional strategies to enhance learning outcomes (Alsuwat & Young, 2016). Similarly, applying this concept to *Wayang Golek* could lead to enriched performances that resonate with diverse audiences. In conclusion, the integration of technology into *Wayang Golek Purwa* performances has the potential to transform the traditional art form by enhancing audience engagement, preserving cultural heritage, and fostering innovation in storytelling. By embracing both tradition and modernity, *Wayang Golek* can continue to thrive in a rapidly changing cultural landscape.

However, the application of technology in *Wayang Golek* is not free from challenges. One of the main gaps in the literature on traditional arts and technology is the lack of in-depth studies on how technology can be applied wisely without compromising the cultural values contained in the tradition (Orfanidis, 2024; Souliotou, 2021). While many studies have discussed the application of technology in modern art, few have touched specifically on how technology can be integrated in traditional art forms that have a thick structure and symbolism such as *Wayang Golek* (Warli Haryana, 2023). This research seeks to fill that gap by exploring how technology can be applied to enrich, rather than replace, traditional elements in *Wayang Golek* (J. Liu, 2022).

In addition to the aspect of artists and puppeteers in adapting technology, this research also focuses on how audiences respond to changes in *Wayang Golek* performances that incorporate technological elements. Audiences are an important aspect in the transformation process of performing arts. Their reactions and perceptions of technological innovations in *Wayang Golek* are the determining factors of whether these changes are accepted or perceived as a threat to existing traditional values (Nezha, 2014).

This research identified that the younger generation, who are more familiar with digital technology, tend to be more open to the application of technology in the performing arts. On the other hand, older audiences may be more conservative and more focused on authentic traditional experiences (Sambodo, 2020). Therefore, it is important to understand how technology can be accepted by these different audience segments, as well as how artists can create inclusive experiences without alienating audiences who may value the traditional aspects of performance more (Nanuru, 2017).

One of the main innovations in the use of technology in the performing arts world is its ability to expand the visual and auditory horizon that cannot be achieved with traditional media (Nasution & Kartajaya, 2018). In this case, technology can enrich the narrative and symbolism in *Wayang Golek*, which in turn can provide new interpretations of long-known *Wayang* characters (Herdini, 2014). For example, visual projections used in performances can depict more dynamic backgrounds or even create immersive visual illusions, thus enriching the audience experience. Similarly, the use of digital sound effects can create a more vibrant and immersive atmosphere, which previously could only be produced through gamelan instruments or natural sounds produced by the artists (Sustiawati, 2019).

Technology has significant potential to enrich and expand the scope of *Wayang Golek Purwa* performances, provided it is applied wisely. The use of technology must be directed to support the sustainability of this art, rather than threatening its preservation. By maintaining a harmonious balance between tradition and innovation, *Wayang Golek Purwa* can not only maintain its relevance in the future, but also maintain and strengthen the cultural values inherent in it.

## 2. METHODS

In this research a descriptive qualitative approach is used to explore and analyse the influence of technology in *Wayang Golek Purwa* performances. This approach was chosen because it is able to provide an in-depth understanding of the phenomena that occur in traditional art practices which are not only measurable but also require in-depth exploration of aesthetic and creative aspects (Alhazmi, 2023).

Data collection techniques were carried out through participatory observation of several live performances, providing the opportunity to directly observe the implementation in a real context to gain a comprehensive perspective on the influence of technology applied in the performance. (Sugita & Tilem Pastika, 2021). In addition, to enrich the data documentation studies were also conducted by analysing video recordings of performances, which allowed the researcher to assess in more detail how the influence of the technology was presented and received by the audience. (Nilamsari, 2014).

The data collected was then analysed thematically to identify emerging patterns and themes and to understand the influence of technology in *Wayang Golek* puppetry. (Bowen, Glenn, 2009). This method is expected to provide new insights into the dynamics between tradition and innovation in *Wayang Golek Purwa* and its contribution to traditional performance aesthetics in the modern era.

### 3. RESULTS AND DISCUSSION

#### 3.1 Result

##### *The Impact of Technology on Visual and Audio Aspects*

One of the most striking aspects of the integration of technology in *Wayang Golek Purwa* performances is the transformation that occurs in the visual and audio aspects. *Wayang Golek*, which basically uses wooden puppets as a representation of the characters in the story, has been renewed through the use of visual technology that allows projection of digital images or backgrounds. This digital projection provides visual depth that was previously unattainable using conventional backgrounds. The use of these projections also gives a new dimension to the story being told such as showing natural scenery, changes in time, or special effects that accompany changes in the situation in the story. The influence of technological innovation in the performing arts is evident in various *Wayang Golek* performances. *Wayang Golek* performers are now increasingly utilizing visual technology as part of the renewal of the performance. One concrete example of the application of this technology can be found in the Giri Harja 3 Putra art group under the leadership of puppeteer Yogaswara Sunandar Sunarya. In their performances, visual technology is consistently used to support the aesthetics and appeal of the show.



**Figure 2.** Yogaswara Sunandar Sunarya's *Wayang Golek* Performance Utilizing Visual Aspects. (source: research documentation)

Dalang Yogaswara Sunandar Sunarya not only utilizes visual technology in his *Wayang Golek* performances, but also significantly optimizes audio technology. The use of audio technology has an important role in strengthening the aesthetic quality of the performance. Previously, *Wayang Golek Purwa* performances only relied on gamelan as accompaniment music that was integrated with the narration. Now, with the use of digital music, sound effects, and electronically generated background sounds and the use of a more adequate sound system to support the performance, it is able to present a more varied and impressive sound. The musicality of *Wayang Golek Purwa* performances becomes richer with additional layers of sound that can be adjusted to the emotions of the developing story. For example, natural sounds such as the roar of the wind, rain, or footsteps can be harmonized with certain scenes to give a stronger emotional impact on the audience.



**Figure 3.** Use of more supportive and adequate sound  
(source: research documentation)

### **Lighting: Setting the Scene and Directing the Focus**

Lighting in *Wayang Golek Purwa* performances serves as a very effective tool to create a certain atmosphere as well as to direct the audience's attention to certain aspects of the performance. In some important scenes, for example, darker or dimmer lighting is used to create an atmosphere of mystery or suspense while brighter lighting is used to highlight the characters in a particular scene. This lighting arrangement also has the function of differentiating between real space and symbolic space in the performance. Brighter light may be used to highlight characters speaking or acting while darker areas are used to give the impression that the characters are in a larger world beyond human control.

Modern lighting and audio technology has also had a significant impact on the way stories are told. In traditional *Wayang Golek Purwa* performances the lighting usually relies on candles or oil lamps which create a distinctive dim atmosphere. But with the application of more sophisticated modern lighting such as LED lights and more modern lighting and light projection, puppeteers and performers can now set the atmosphere more precisely and dynamically. This lighting allows for faster changes in atmosphere for example from a mysterious nighttime mood to a sunny morning in a matter of seconds adding dramatic depth to each scene.

Dynamic lighting is often used to reinforce changes in mood or conflicts that occur in the story. For example, when a character experiences a dramatic change in emotion such as a transition from happiness to sadness, changing lighting can provide visual emphasis to the emotional change. Nowadays, the use of modern lighting technology is increasingly applied in *Wayang Golek* performances. This phenomenon reflects the rapid development of technology that has influenced various aspects of *Wayang Golek* performances including Dalang Yogaswara Sunandar Sunarya's careful utilization of this lighting making it one of the most effective tools in strengthening the emotional nuances in *Wayang Golek Purwa* performances.



**Figure 4.** More Modern Use of Light by Dalang Yogaswara Sunandar Sunarya (source: research documentation)

### ***Innovation in Storytelling and Delivery***

Technology has not only affected the visual and audio aspects of *Wayang Golek Purwa* performances but also the way stories and messages are conveyed. Multimedia technology has given room for experimentation in narration both in terms of storytelling techniques and character development. In traditional performances the narrative tends to be linear and follow a certain pattern but with the help of technology the story in *Wayang Golek* can now be presented in a more dynamic and unlimited way. For example, the use of a large screen to show snippets of the story introducing characters or events happening in parallel can give the audience a wider view of the whole story. This provides the opportunity to add visual elements that enrich the narrative and expand the understanding of the story world.

The use of technology also allows the creation of new characters that do not rely solely on traditional wooden puppets. Through animation and graphic design, characters that were not physically presentable can now appear on stage in digital form. For example, characters with extraordinary abilities or forms that are impossible to portray using physical puppets can now be depicted in a more imaginative way through digital animation or illustration techniques. This opens up opportunities for puppeteers and artists to explore new themes or present mythological figures in a more modern way while still respecting the cultural roots of *Wayang Golek* itself.

In the past, *Wayang Golek* often conveyed moral and social values in a more implicit way through symbolism in the stories and characters. With the help of technology these messages can now be conveyed in a more explicit or even more interactive way. For example, the use of interactive technology allows the audience to participate in the storyline by choosing certain decisions that will change the course of the story or the way the characters act. This opens up the possibility for *Wayang Golek* performances to further engage the audience making it a more personalized and relevant experience.

### ***Audience Reaction to the Fusion of Tradition and Innovation***

One of the most interesting things about the use of technology in *Wayang Golek Purwa* performances is the audience's reaction to the merging of tradition and innovation. In

some cases the audience showed a sense of awe and fascination with the creativity and ability of technology to deliver a more immersive and memorable experience. They perceived a change in the intensity of emotions evoked from the performance thanks to the more dynamic visual and audio elements. For younger audiences who may be more familiar with digital media, the use of technology makes *Wayang Golek* performances more relevant and interesting. It gives them a sense that *Wayang Golek* is not an art trapped in old traditions but one that continues to evolve over time.

While many audience members have enthusiastically embraced these technological innovations, there are also many who feel alienated by the changes. Some audience members, especially the older ones or those who are used to traditional *Wayang Golek* performances, feel that the use of technology in some aspects of the performance diminishes the symbolic power and philosophical depth usually contained in each puppet movement or musical accompaniment. They argue that technology can distract the audience from the main essence of the performance which is the wisdom and values taught through the stories of *Wayang Golek*. This discussion shows that although technology can bring progress the integration of tradition and innovation in the performing arts still requires caution in maintaining a balance between the two.

### **Challenges and Opportunities**

The integration of technology in the *Wayang Golek Purwa* performance art certainly presents its own challenges both from a technical and cultural perspective. One of the main challenges is how to maintain the traditional values contained in *Wayang Golek* while adopting technology that can change the structure and style of the performance itself. Technology can offer many opportunities to enrich the aesthetic experience of the audience but overuse of technology can also obscure the message that is being conveyed through the art. In this case the puppeteers and artists need to ensure that technology is used as a supporting tool not as a substitute for the core aspects of *Wayang Golek*.

On the other hand, the use of technology in *Wayang Golek* also opens up many new opportunities both in terms of creativity and audience development. Technology allows artists to collaborate with other disciplines such as graphic design, animation, and digital music, to create more interesting and varied performances. This not only gives *Wayang Golek* a new feel but also opens up opportunities to reach a wider audience including those who may not have previously been interested in traditional performing arts. Thus, technology not only provides challenges but also great opportunities for the development of *Wayang Golek* in a more progressive and sustainable direction.





**Figure 5.** Today's *Wayang Golek* performances that have been influenced by technology look more modern (source: research documentation)

Behind these challenges lie great opportunities for interdisciplinary collaboration. For example, the merging of digital fine art, animation and lighting technology involving graphic designers and hardware engineers provides an opportunity to create a more dynamic and multimedial *Wayang Golek* performance. This collaboration can pave the way for the development of *Wayang Golek* which is not only limited to the traditional stage but can also be introduced in a digital form that can be accessed globally. In this connected digital era, *Wayang Golek* can expand its audience not only in Indonesia but also abroad so that this traditional art can still be appreciated by various groups including the younger generation and international audiences. In addition, technology also enables the development of digital archives of *Wayang Golek* performances that can be used as a means of learning and cultural preservation. Through digital platforms, videos or recordings of performances can be accessed, studied and used for research. This provides an opportunity for future generations to learn the puppeteer's techniques and ways of storytelling in greater depth without being limited by time and place. The development of this digital archive can also serve as a more permanent preservation effort that ensures that *Wayang Golek*'s cultural heritage is preserved even as the world continues to rapidly evolve.

#### **Future Perspectives: Sustainable Development in *Wayang Golek***

Facing this digital era, the sustainable development of *Wayang Golek Purwa* performances must consider a more harmonious integration between tradition and technology. The challenge ahead is to create an ecosystem that supports both aspects. This includes training a new generation of puppeteers who not only master traditional arts but also have skills in technology and multimedia. The training process should include various disciplines that can enrich their knowledge in visual arts, music, design and information technology.

It is important for art managers and *Wayang Golek* performance groups to collaborate with various parties including educational institutions, government and the private sector, to create opportunities for better development and access to technology. This kind of collaboration can be a strategic step to ensure that *Wayang Golek* not only survives but also develops and

adapts to the demands of the times. Technology can be utilized to bridge the gap between traditional culture and an increasingly homogenous global culture.

In this context, it is also important to develop digital platforms that allow *Wayang Golek Purwa* performances to be accessed by more people both in Indonesia and abroad. Such platforms can not only broadcast live performances but can also be a space for discussion and further development of *Wayang Golek*. For example, discussions on how to maintain the essence of tradition in the ever-evolving world of performing arts or how to utilize technology without sacrificing existing cultural values. In this way, *Wayang Golek* can bridge the past and the future, combining the beauty of tradition with the unlimited potential of the digital world.

In the era of rapid technological development, *Wayang Golek Purwa* Sundanese performances are now undergoing a significant transformation. Technology has become an important aspect that supports every performance, allowing puppeteers and artists to combine tradition with modern innovation. This collaboration not only enriches the essence of culture but also presents a more dynamic, attractive and spectacular performance. In this context, the use of technology such as modern lighting, advanced audio technology, and visual technology provides a new dimension that captivates cross-generational audiences while maintaining the relevance of *Wayang Golek* in the midst of modernization.

The influence of technology in Sundanese *Wayang Golek Purwa* performances is no longer limited to one art group but has expanded significantly among the puppeteers and artists. The use of technology has become a common practice presenting new approaches that strengthen the appeal and aesthetic complexity of the performance. This phenomenon reflects the adaptation of traditional art to the demands of the times where technology not only functions as a supporting tool but also as a medium that enriches the artistic expression of *Wayang Golek Purwa* Sunda.

### 3.2 Discussion

Technology in *Wayang Golek Purwa* performances brings significant changes to the visual and audio aspects. Digital projection and lighting provide a new dimension and enrich the audience experience with dynamic backgrounds and a more emotional atmosphere. These innovations enhance the performance and increase audience engagement but it is important that the traditional essence of *Wayang Golek* is not lost. Technology also has significant potential to enrich and expand the scope of *Wayang Golek Purwa* performances provided it is applied wisely. The use of technology must be directed to support the sustainability of this art rather than threatening its preservation. By maintaining a harmonious balance between tradition and innovation, *Wayang Golek Purwa* can not only maintain its relevance in the future but also maintain and strengthen the cultural values inherent in it (Gunawan et al., 2016).

Innovation is also seen in storytelling such as the introduction of characters that allow for freer creative expression. However, it is important to maintain a balance between traditional and modern aspects and ensure that the moral message contained in *Wayang Golek* is maintained. The main challenge is maintaining authenticity and traditional values in the face of technological change and cost constraints. Great opportunities also exist with technology allowing

*Wayang Golek* to reach a wider audience through digital platforms and introducing Sundanese culture to the international world, especially among the younger generation (Hidayatullah, 2024).



**Figure 6.** The shape of *Wayang Golek* is more elegant and beautiful (source from the internet)

Audience reactions were divided between positive acceptance from the younger generation and caution from older audiences who were concerned that technology was diminishing cultural values. A balanced approach between tradition and innovation is essential to maintain the essence of culture. Through synergistic collaboration between artists, technology experts and the community, *Wayang Golek Purwa* has a great opportunity to continue to develop as an adaptive performing art while being able to provide a deep and meaningful aesthetic experience for future generations.

#### 4. CONCLUSION

This research shows that the influence of technology in *Wayang Golek Purwa* performances has a significant impact on technical and aesthetic aspects. The use of visual, audio and multimedia technology opens up a space for innovation that enriches the audience experience, especially the younger generation who are more familiar with digital media. Digital projection, modern lighting, and digital music and sound effects make performances more dynamic and immersive, allowing more complex and expressive narratives to be conveyed to a wider audience. Despite the many advantages the merging of tradition and technology presents challenges in maintaining a balance between cultural authenticity and innovation. Some audiences feel that the use of technology can detract from the philosophical and symbolic meaning of the story. Therefore, artists and puppeteers must wisely choose technology that supports rather than replaces the core aspects of the performance. Limited access to technology and technical skills is also a challenge especially for traditional arts groups with limited resources. Adequate training and education support is necessary for artists to utilize technology effectively. Collaboration between the government, educational institutions and the private sector is essential to create an ecosystem that supports the development of technology in the performing arts. Despite the challenges the opportunities that technology offers for

the development of *Wayang Golek* are immense. Technology can expand audience reach allowing performances to be witnessed globally through digital platforms and introducing Indonesian culture to the world. Technology opens up opportunities for collaboration between various art disciplines creating more varied and interesting performances, technology also contributes to the preservation of *Wayang Golek* culture. Digital archiving of performances allows future generations to learn and appreciate this art despite not being physically witnessed. Technology can also be an educational tool that introduces *Wayang Golek* to the younger generation through interactive platforms. Overall, technology has great potential to enrich and expand *Wayang Golek Purwa* performances provided it is used wisely. Technology must support the sustainability of this art, not threaten its preservation. By maintaining a balance between tradition and innovation, *Wayang Golek Purwa* can remain relevant in the future while maintaining its cultural values. With close collaboration between artists, technology, and society, *Wayang Golek Purwa* can continue to grow and provide a deep aesthetic experience for future generations.

## AUTHOR CONTRIBUTION

The first author's contribution was to initiate this research and conduct observations and search for data. The second and third authors are data processors and conduct literature studies related to the topic to be written. In the process of data analysis, the three researchers shared the task of describing the findings and discussion.

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