



# Cultural Heritage Preservation: Utilization of Digital Technology for Learning Wayang Courses in Universities

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**Abstract.** Wayang can serve as material for scientific studies at universities. Wayang can be an effective artistic medium to develop the nation's noble cultural values, enrich cultural diversity, and strengthen national identity. This research aims: First, to describe the teaching of Wayang's subject at the Faculty of Philosophy, Universitas Gadjah Mada. Secondly, analyze Wayang courses in accordance with the current era of digital society. This research employs a qualitative approach using the case study method. This research conducts a case study on Wayang learning in higher education at the Faculty of Philosophy, Gajah Mada University. The data was collected through observation, in-depth interviews, and focus group discussions (FGDs). The data were analysed using media convergence theory. They were analyzed using media convergence theory. The research results revealed that the teaching of Wayang subject at the Faculty of Philosophy, Gadjah Mada University, has not been optimal. Wayang education should become engaging by leveraging digital technology that allows students to connect with this cultural heritage. Digital technology can assist in delivering the valuable content of Wayang's intangible cultural heritage academically. Digital technology can also support the preservation efforts of Wayang's intangible cultural heritage.

**Keywords:** Wayang, student, digital technology, subjects, ethics.

## 1 Introduction

Various studies have explored Wayang puppet theatre in an educational context [1]. Wayang imparts noble cultural values such as truth, justice, loyalty, duty, and responsibility. Additionally, Wayang can cultivate a deep love for one's country and pride in one's culture. Digital technology can facilitate academic puppetry education to foster students' character development. Academic learning about shadow puppets is crucial because it represents an effort to preserve, introduce, and appreciate Indonesia's ancestral cultural heritage. Technology has significantly preserved and evolved traditional cultural practices within Wayang, ensuring their continuity for future generations [2].

Students are a strategic group in preserving Wayang art in an era characterized by rapid and extensive information technology use [3]. Millennials have distinct traits

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from previous generations, including heightened creativity, innovation, adaptability, collaboration, and critical thinking. They also enjoy easier and broader access to information and knowledge sources through the Internet and social media. A pressing issue is capturing millennials' interest in Wayang while aligning with their contemporary lifestyle.

Numerous studies on intangible cultural heritage for educational purposes have been conducted by experts, including research authored by Anna Lobovikov-Katz et al. Their journal article "Tangible versus Intangible in e-Learning on Cultural Heritage: From Online Learning to On-site Study of Historic Sites" explores the interaction between e-learning and physical on-site learning and the study of historical buildings and sites, emphasizing their visual characteristics. The compiled results demonstrate that the application of the scientifically-based eLAICH e-learning platform, owing to its accessibility, can serve as the foundation for a pan-European pilot project examining the interplay between online and offline (mainly on-site) educational activities in e-learning, both in education in general and in heritage education specifically [4].

Another study conducted by Ruly Darmawan and published in a journal article titled "Publishing a Community-Based Knowledge-Transfer Device Within the Framework of Cultural Heritage Preservation, Management, Promotion, and Education" aims to investigate the provision of a knowledge-transfer device designed to unlock cultural knowledge, a crucial component for projects dedicated to successfully preserving, managing, promoting, and educating about cultural heritage. The research concludes that the tool is anticipated to be a knowledge-transfer resource for specific cultural heritage information. Such cultural education programs can serve as a reference point, enabling communities to benefit from their indigenous knowledge and preserve their local cultural heritage assets for future generations [5].

In contrast to previous studies, my research possesses distinctiveness and uniqueness. First, there has yet to be any prior research on using Wayang for academic purposes at universities. Secondly, researchers have yet to conduct a study on using digital technology to teach Wayang subject in university. Third, it is the first time to research how the intangible heritage content of Wayang can be preserved through academic studies at the university level. Hence, the authenticity of this research is assured.

Preserving Wayang's cultural heritage necessitates a comprehensive educational approach that blends humanistic and scientific studies [6].

There are two objectives in this study: First, to describe the teaching of Wayang's subject at the Faculty of Philosophy, Universitas Gadjah Mada. Secondly, analyze Wayang courses in accordance with the current era of digital society.

The expected results of this study cover several aspects:

1. Wayang learning in universities contributes to preserving, introducing, and appreciating Wayang as Indonesia's intangible cultural heritage.
2. Wayang learning at university will elevate the status of Wayang as a traditional art on the periphery to an art with a high status because it is the object of scientific study for scholars.

3. Digital technology will support the learning of puppet courses to attract the younger generation to learn Wayang.
4. Academic puppet learning can improve student character strengthening.

### 1.1 Theoretical Framework

This study uses a media convergence perspective to analyze the learning of puppet courses. It is under the art of puppet performance is a complex art. Wayang combines several elements of art, including karawitan art, sound art, dance art, literary art, fine art, and other arts related to puppet performance [7].

Media convergence refers to the process of unifying various forms of media, including text, sound, and images, into one platform or device [8]. It not only includes hardware, such as smartphones or tablets, but also touches on changes in how content is produced, distributed, and consumed. In his article, Jenkins exemplifies this change in consumption: "A teenager doing homework could be running four or five windows at once, surfing the web, listening to, and downloading MP3 files, chatting with friends, writing documents, and responding quickly to emails" [9].

In the digital era, media convergence significantly changes the information landscape [10]. This concept reflects the fusion of technology, the media industry, and consumers, significantly changing how we access, present, and interact with information.

Consumers are passive recipients, producers, and content disseminators through social media, blogs, and other participatory platforms [11]. Media convergence stimulates new creativity and innovation, enabling the merging of disparate elements to create richer experiences.

The application of media convergence also reaches the education and arts sectors. For example, using digital technology in traditional art courses like puppetry opens new opportunities for more interactive and immersive learning. YouTube has become a popular platform for learning arts performance. Several studies have explored the impact of YouTube on learning in various fields, including arts and culture [12].

## 2 Research Method

This research uses a qualitative approach using the case study method. This research takes a case study of wayang learning in higher education at the Faculty of Philosophy, Gajah Mada University. Data was obtained by conducting in-depth interviews and Focus Group Discussions. Both are done online. The data was collected during the Covid-19 pandemic in 2021. In-depth interviews were conducted with lecturers who teach Wayang subject and students who take Wayang subject. Meanwhile, the Focus Group Discussion also presented several participants consisting of Lecturers teaching Wayang subject; Wayang experts; SENAWANGI (National Secretariat of Indonesian Wayang); and PEPADI (Indonesian Puppeteers Association); Culturists; and government, among others: Directorate of Learning and Student Affairs, Directorate of Vocational Higher Education and Professions, Directorate of Cultural De-

velopment and Utilization, Directorate of Cultural Personnel, and Institutions. Literature studies supported primary data collected from both in-depth interviews and FGDs. Furthermore, the analysis used media convergence theory, which describes how digital technology has changed our media and cultural landscape, creating new opportunities and new challenges in interacting with media and cultural heritage.

### 3 Results and Discussion

Students are a strategic group in preserving Wayang art in an era characterized by information technology's rapid and widespread use [3]. According to statistical data, the number of students in Indonesia in 2022 is around 7.8 million people. This number comprises around 3.3 million students at public universities and 4.4 million at private universities (BPS, 2022). In Indonesia, many universities offer Wayang learning programs, including Indonesian Institute of the Arts Yogyakarta, Indonesian Institute of the Arts Surakarta, Indonesian Institute of the Arts Denpasar, the Faculty of Cultural Sciences at the University of Indonesia, and the Faculty of Philosophy at Gadjah Mada University. Each institutions have a unique approach to Wayang learning, influenced by their individual educational objectives and academic philosophies. Furthermore, these approaches are closely intertwined with the distinctive regional characteristics, which contribute to the diversity of Wayang education. In other words, local cultural backgrounds play a significant role in shaping the Wayang learning experience. The following section will describe Wayang's learning at the Faculty of Philosophy, Gadjah Mada University.

#### 3.1 Intangible Cultural Heritage Preservation

The Wayang subject plays a significant role in preserving the intangible cultural heritage of Wayang as a masterpiece. This subject is offered at the Faculty of Philosophy, Gajah Mada University, as part of the Culture and Religion subject family. It carries two credits under the Semester Credit System. Its compulsory elective status is an elective subject for students who have completed subject in Philosophy of Culture, Ethics, Aesthetics, Philosophy of Value, Metaphysics, and Epistemology. Wayang is mandatory for students pursuing the Philosophy of Religion and Culture. Seventeen students were enrolled in this subject (Discussion, November 12, 2020).

The competency objectives of the Wayang Philosophy subject are designed to cultivate a scholarly personality in students, encompassing religious, humanist, nationalist, democratic, and just qualities. These objectives include mastery of fundamental philosophical concepts, comprehension of the elements of Wayang performances, the ability to identify and articulate the values inherent in Wayang, and the capacity to research and communicate the significance of these values within the context of community life (Discussion, November 12, 2020).

Wayang lectures at the Faculty of Philosophy encompass various aspects, including explaining Javanese shadow puppet performances and introducing the concept that Wayang is a puppet show with supporting elements. Students also delve into the

history and evolution of Wayang. Furthermore, in the Philosophy of Wayang subject, students are trained to analyze and appreciate the philosophical values embedded in the performance elements and the narratives within Wayang performances.

Ariani, a lecturer in the Philosophy of Wayang subject, explains that the essence of learning Wayang Philosophy lies in studying and discussing the philosophical values that manifest in Javanese shadow puppet performances. This subject covers the intricacies of Javanese shadow puppetry and its historical development. It equips students to grasp the philosophical underpinnings present in the performance elements and narratives within puppet shows (Interview, September 28, 2020).

An important issue related to puppetry learning material revolves around choosing between puppet performances or texts as the object of study. If Wayang is approached as the study of Wayang Performance, the focus will be on the art of puppetry, encompassing all elements of puppet performances. However, if the emphasis is on the text-based, Wayang learning will involve sources of written material or reading about Wayang. At the Faculty of Philosophy, University of Gajah Mada, the current emphasis is still on textual sources such as manuscripts, written accounts of Wayang stories, and various internet resources.

Wayang learning in university must continue the study of puppet performances as a holistic art form. As Sari, a student at the Faculty of Philosophy, remarked regarding the Wayang Philosophy subjects at the University of Gajah Mada: "As an introduction for students unfamiliar with Wayang art, it is quite adequate. However, for the study of plays, puppet types, and detailed insights into the practical aspects, there is still room for improvement" (Discussion, November 12, 2020).

Therefore, the focus should be on Wayang performances as a complete art form rather than solely relying on textual or written accounts about Wayang. Solichin defines Wayang as a Wayang Performance that encompasses all art elements that support it, including sound art, literary art, dramatic art, stage art, motion or dance art, and other supplementary artistic elements [13].

In transmitting the intangible cultural heritage of Wayang, the role of lectures becomes crucial. These educators significantly influence the success or failure of Wayang's development in higher education. Hence, lecturers must possess creative and engaging teaching skills when delivering Wayang subjects.

The teaching of Wayang subjects in higher education can be viewed through the lenses of preservation and sustainability for future generations (Isa et al., 2018). In terms of preservation, the academic study of Wayang plays a pivotal role in maintaining the authenticity of this extraordinary intangible cultural heritage. Regarding sustainability, Wayang's performances represent a practice of intangible heritage passed down from one generation to the next [14].

Teachers of Wayang subjects also need to be sensitive to the diversity of their students since Indonesian society is multicultural. As a multicultural society, Indonesia grapples with challenges related to social, economic, and power disparities among identity groups. Multicultural education, as reflected in policies and school curricula, must translate into practical teaching approaches [15].

University campuses generally comprise students from diverse religious and ethnic backgrounds, each with unique cultural preferences [16]. Therefore, when delivering

Wayang lectures, educators should consider accommodating students who may not be familiar with puppetry, as not all participants in Wayang subjects hail from Java or have prior exposure to Wayang. Sensitivity to pluralism is essential, as it enables instructors to impart intercultural appreciation and convey the universality of cultural values, fostering a positive learning environment for Wayang subject.

### 3.2 Transforming Wayang Lectures through Digital Technology

Wayang learning in university still needs help, including a lack of interest among many students. This lack of student interest stems from the language constraints in Wayang, which predominantly uses Javanese. However, it is worth noting that the student body consists of individuals from diverse ethnic backgrounds, not all of whom understand Javanese [17]. Digital technology can serve as a valuable bridge between the traditional art of Wayang and Indonesia's pluralistic society.

Local languages used in puppet shows can be translated into various foreign languages through digital technology media. Some Wayang performances on platforms like YouTube have been translated into foreign languages, including English, German, French, Russian, and others [18]. Digital technology has brought about extensive interactivity in Wayang learning, making it more engaging for all higher education students. It serves as a bridge between the traditional art of Wayang and Indonesia's pluralistic students.

In the digital era, we witness the phenomenon of media convergence involving the interconnection of information and communication technology, computer networks, and media content. Media convergence is a direct outcome of digitization and the widespread use of the Internet [19]. The phenomenon of media convergence in Wayang learning at the higher education level implies that Wayang subject now need to be supported by digital technology. Conventional face-to-face teaching between lecturers and students is no longer the sole mode of instruction. Digital technology plays a pivotal role in enhancing the delivery of Wayang subject content.

Rahayu, a Faculty of Philosophy student, highlighted this digital approach: "Wayang has the power of creativity and innovation that has allowed it to endure over time. Therefore, it is essential for lecturers to update the learning system, such as incorporating motion graphic videos that facilitate students' understanding of Wayang plays and stories. This way, the subject can attract students through new innovations" (Discussion, November 12, 2020).

At the Faculty of Philosophy, Gajah Mada University, the Philosophy of Wayang subject is specifically designed for students who have completed epistemology, ontology, and axiology subject. However, integrating with students across various study programs may make it challenging for majors outside of philosophy. Creating Wayang Philosophy subject content that is easy to access for students and relevant to their everyday lives is essential. In the context of Wayang philosophy, learning in everyday life translates to practical philosophy or ethics [20].

Approaching the teaching of Wayang's Philosophy from the perspective of media convergence theory involves packaging it with digital technology support to make it

more engaging and comprehensible for students across all departments and study programs.

In today's information-driven society, learning and media convergence are intertwined. Universities are adapting to the new media-training ecosystem, transforming higher education structures and processes [21]. One practical approach to developing Wayang subjects with digital technology is to utilize interactive digital learning media such as applications, websites, videos, games, or virtual reality that offer materials, animations, simulations, quizzes, or exercises related to the art of Wayang.

Interactive digital learning media that can be employed for Wayang subject, such as Progressive Web Apps (PWAs), represent websites that provide application experiences to mobile browser users. An example of this is the user experience of the Omah Wayang Klaten (OWK) website, which integrates Progressive Web Application (PWA) technology [22]. This website exemplifies the application of media convergence theory within education and learning, maximizing the use of diverse media to convey information and knowledge about Wayang.

Media Convergence can also be achieved through interactive learning applications using a Problem-Based Learning Approach with Wayang. Android-based applications provide a vast platform for Wayang material utilizing a problem-based learning approach [23]. In this approach, students are encouraged to engage in moral considerations rationally and critically by observing the attitudes and actions of puppet characters. This application can include animated videos, quizzes, and games related to Wayang.

Virtual reality can also be developed for Wayang subject instruction. Virtual reality represents an implementation of media convergence theory that can transform the visual and auditory aspects of Wayang performances into digital experiences. This system offers students an immersive and interactive encounter, even without a live Wayang performance. Virtual Reality Wayang also facilitates collaborative multi-user experiences, where each user enjoys a unique perspective and can interact with others in the virtual realm [24]. This advancement in Virtual Reality technology enhances the entertainment value of Wayang performances and contributes to the preservation of intangible cultural heritage [25].

## 4 Conclusion

Based on the discussion above, it can be concluded that Wayang learning at the Faculty of Philosophy UGM is not optimal because it has not been presented attractively. Wayang learning can be captivating by adapting to contemporary needs. The incorporation of digital technology for puppetry education is imperative. Wayang can be presented using interactive digital learning platforms such as applications, websites, videos, games, or virtual reality, which offer materials, animations, simulations, quizzes, or exercises related to Wayang art. Integrating digital technology in teaching Wayang can also contribute to preserving Wayang as an invaluable intangible cultural heritage of humanity. Moreover, fostering collaboration among universities, puppet-

eers, maestros, and Wayang organizations is essential for advancing Wayang education in universities.

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