

Exploring the Use of Shadow Puppetry As Instructional Medium in Remote Learning

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Abstract: *Remote learning amidst the pandemic presents various challenges in the delivery of instruction to the students. The study explored the use of shadow puppetry as an alternative instructional medium by examining its characteristics, elements, and capabilities as an interactive learning experience for students under remote learning conditions.*

The study was guided by the following research questions: (1) What are the distinct characteristics of shadow puppetry as an art form and as an instructional medium?; (2) What are the advantages and challenges of utilizing shadow puppetry as an instructional medium under the remote learning condition?; and, (3) What are the facets of shadow puppetry that make it an alternative medium for instruction in a remote learning condition? To address the research questions, the study investigated various experiences and studies on shadow puppetry as an art form and as an instructional medium. Results of the study indicate that shadow puppetry has the capabilities and characteristics of an alternative instructional medium in remote teaching and learning condition.

Keywords: *Shadow puppetry; instructional medium; remote learning*

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1. Introduction

Art is a part of our lives, and is an extension of human expression concerning his society. Art exists in all aspects of human society; it serves as the medium through which we express and communicate our thoughts, experiences, feelings, and emotions as well as our dreams and visions. Contrary to the prevailing canons of visual arts, dance, or music, art can be seen everywhere and represented in different forms such as traditional folk dances, chants or rituals, traditional crafts, and age-old puppetry.

Puppetry is an engrained art form that can be traced from the cultural history of China to India, Turkey, Europe, and Indonesia. It has been used to entertain, educate, and elucidate important aspects of their culture with its people and others. Puppetry encompasses all art forms because of its rich, vivid and detailed visual images, limitless theatrical movements, and melded traditional, classical, and contemporary music. Storytelling, as an integral part of puppetry, provides entertainment, imparts historical knowledge, and inculcates traditional values.

Performed in various stages such as in theaters, in galleries, on streets, or on makeshift stages, puppets evoke various characters in every production. A Character may embody a human being, a particular animal, a psyche or ideas that are expressed through various feelings and emotions, distinct gestures and movements of each character, and suggestive expressions during the performance (Canadian Museum of History, n.d.).

For centuries, puppetry has endured countless changes in society brought about by time, industrialization, and modifications, yet until now it has not lost its impact on its audiences. To this very day, the Chinese shadow puppetry (Zhang et al., 2012), the very popular *Wayang Kulit* (Prahmana, 2021) shadow puppetry in Indonesia and the well-known Vietnamese Water Puppetry which traces its origins in the rice fields of Vietnam (Hyde, 2018) continue to captivate various audiences. Their unique characteristics and craftsmanship rival that of the mainstream cartoon shows on TV as shown by the popular puppet shows such as Sesame Street, *Batibot*, and the famous Jim Henson's The Muppet Show. Recently, shadow puppetry has ventured into the mainstream media such as talent competitions (Asia's Got Talent, 2015; Pilipinas Got Talent, 2018), and has captured the audiences' attention.

At one time, there was a type of shadow puppet play in the Philippines called *carillos* akin to the Indonesian *wayang*. It was brought into the country by a Spaniard. Over the years, however, the tradition was lost (Valbuena, 1986). Presently, there are theater groups that utilize puppetry in their repertoire and one of these groups is the *Teatrong Mulat* based at the University of the Philippines. The theater group though utilizes 3D puppets similar to marionettes. This theater group which earned praises here and abroad was founded by Dr. Amelia Lapeña Bonifacio.

Likewise, *Anino* Shadow Play Collective, a group of young artists and professionals many of whom graduated from the Philippine High School for the Arts, has also been getting warm reviews here and abroad for their unique style of puppetry (Figure 1). The

group which was formed in the early 1990s has received numerous awards including the Gawad CCP for Alternative Film and the Mowelfund Alternative Film competition. Their productions are a mixture of education, values, culture, and entertainment.



Figure 1. Anino Shadow Play

1.2. Pandemic and Remote Learning

The COVID-19 Pandemic has greatly affected the education sector on a global scale. At least 1.5 million children were affected by school closures that brought difficulty in accessing vital learning materials and classroom dynamics that nurture them in various academic aspects (UNESCO, 2020). Remote learning became the norm for two years for students, and it was, and still is challenging for students to cope with learning away from the guidance of their teachers. Institutions such as UNESCO strived to reinforce various programs to ensure that learning continues. In this regard, this study sought to discuss the characteristics of puppetry, particularly shadow play, as an instructional medium for remote learning.

1.3. Developing Shadow Puppetry, a Folk Medium, as Instructional Medium for Remote Learning

Folk media refers to the vehicle or medium that people or an indigenous group employs to communicate traditions, beliefs, and practices embodied in folklore and mythology. As channels of communication, they could be defined as “ those verbal, action, aural and visual forms which are known or familiar to the folk, are accepted by them, addressed and performed by them, for them for entertaining, informing, enlightening instructing and educating themselves and others” (Valbuena, 1980). As a means of transmitting a culture’s heritage, folk media is something related to people’s past, present and future, providing them with “glimpse of reality that results in education” (Cholmondeley, n.d.).

Thus, folk media embraces a wide range of traditional communication channels, including storytelling, theater, song, and dance (Cholmondeley, n.d.).

Lent (1982; as cited in Casino,1999 and Rosales,1997) stated that folk media is intimate with the masses, relished by different age groups and sexes, rich in variety, affordable, traditional and has great potential for persuasion and allows instant feedback.

Coseteng (as cited inValbuena, 1980) stresses that folk media, like all forms of communication or expression, are dynamic. They are subject to changes and adaptation such as the study of Damanik (2021) wherein they developed animated video on movement learning for physical education based on folk games. They take in new ideas, forms, methods, and techniques, dropping those which are no longer meaningful or functional to society.

Philippe Van der Stichele (2000) through a workshop held in Malawi, observed how the FAO Research, Extension and Training Division utilized folk and traditional media for rural development. Stichele (2000) stated in his article that instead of tapping into the talents of local artist groups to produce development messages through their performances, extension workers taught villagers to apply their local media and ceremonial traditions to package and pass on messages the way that they understand their implications within their community.

During the mid-80s, Decock and Van Poelje (as cited in Stichele, 2000) put together a package called “A Participatory Methodology to Produce Traditional and Popular Media” based on population communication experiences in Africa. The artist groups were brought together in a workshop environment to share and discuss thematic development issues of concern to the organizers. The artist would then conceptualize appropriate development messages and interpret them using performing arts (music, theater, dance, and skiffle bands).

From these experiences emerged puppet productions, theater performances, storytelling, traditional music, and various small-scale folk media which have turned into very important educational entertainment formats in many underdeveloped and developing countries and cultures, especially those rural areas not reached by technology. Education using folk media has proven to be very effective especially in educating small communities, particularly on issues concerning health, agriculture, and the environment.

What is Shadow Puppetry?

Shadow puppetry is a traditional art form, a folk medium that utilizes mostly flat images called shadow puppets and flat background set designs. In other countries it is referred to as shadow play.

Its origins are traced from the traditional Wayang Kulit of Indonesia, the shadow puppetry of India (Lopes, 2016). Depending on the topic, content, or story of the shadow puppetry presentation, images range from human figures, animals, landscapes, and background designs. These are cut out from flat surfaces, from animal skins and wood of the Wayang Kulit to any found objects of contemporary shadow plays/puppetry.

Puppets are also constructed by joints for movements within the screen area. These images are then projected on a screen using any light source. The shadow puppets are manipulated individually or by a group of puppeteers assigned to a specific task such as handling the main characters or changing the background theme during the performance. These images are then combined with background music and a live narrator that completes the whole production.

Recognizing the tremendous benefit of using shadow puppetry in the instruction under remote learning, the study explored the use of shadow puppetry as an alternative instructional medium by examining its characteristics, elements, and potential in providing an interactive learning experience for students under remote learning conditions.

In this regard, this study focused on the potentials and upsides of puppetry shadow puppetry as one of the ways how learning gaps could be addressed under a remote learning as brought by the current pandemic.

2. Methodology

The study is qualitative and descriptive. It addressed the following research questions: (1) What are the distinct characteristics of shadow puppetry as an art form and instructional medium?; (2) What are the advantages and challenges of utilizing shadow puppetry as an instructional medium under the remote learning condition?; and, (3) What are the facets of shadow puppetry that make it an alternative medium for instruction in a remote learning condition?

To provide the answer to these queries, the study utilized data gathered through online questionnaires sent to artists, teachers, and students who had experiences as members of shadow puppetry groups. There were 18 respondents to the online questionnaires, quite more than the number expected considering that full-time shadow puppetry advocates/enthusiasts are few. In the online questionnaires, the respondents were asked the following important aspects based on what they have experienced as members of the shadow puppetry production:

1. The distinct/unique characteristics of shadow puppetry that interest the audience
2. The age group that is suited for shadow puppetry
3. Perceptions on why shadow puppetry is suited to a particular age group
4. Advantages of utilizing shadow puppetry in remote learning conditions
5. Challenges of mounting shadow puppetry in remote learning conditions
6. Comparison between shadow puppetry and technology in remote learning conditions

Furthermore, data were also gathered from studies that focused on the use of shadow puppetry in various contexts, especially as an instructional medium. These include academic works, unpublished writing, monographs, essays, newspaper articles, audio/video documentation, online questionnaires, and puppetry productions that the author developed and produced for academic purposes.

3. Discussion

To provide the answer to the first question, the study sought the perspectives of the respondents on specific characteristics of shadow puppetry focusing on its attributes and how it is employed.

The *second* research question centers on the advantages and challenges of utilizing

shadow puppetry in general specifically in a remote learning environment. To respond to this specific question, the study examined the experiences of the author, puppeteers, teachers, and students who were able to mount a shadow puppetry production before and during the current pandemic situation.

Lastly, the *third* research question examines the effectiveness of shadow puppetry as an instructional medium. To address the question, the study investigated related studies that have been done and the overall experiences of shadow puppetry advocates and students.

3.1. Characteristics of Shadow Puppetry

The respondents of the study stated that shadow puppetry shows 5 characteristics that stand out. First are the images of the shadow puppets that emphasize their intricate designs, and details suggesting a particular character that each of the shadow puppets represents. Second is the choreographed movement of the shadow puppets including the presentations of background and scenery during the show. Third are their distinct movements that project their characters with each sequence of the story. The fourth characteristic of shadow puppetry that makes it unique is its interactive nature even in a remote setting. Fifth are the distinct movements that puppets and their puppeteers follow synchronized to various sounds and dialogues based on the context of the story. The story is an integral element of a shadow puppetry repertoire because it is where all the other elements revolve, and it is the main idea or the message that the production shares with the audience (see Figure 2).



Figure 2. Kwento ng Aray

As an art form, shadow puppetry is visually rich and enticing in terms of colorful and stylistic images and figures in portraying specific characters. Possibilities are endless when playing with different images, especially when used as an instructional tool in the classroom.

The age-old folk art puppetry is touted as the synthesis of the arts: sculpture, design, music, mime, dance and theater, and the puppet itself. Just like all performance arts, it is at once every man with no limitation; it is the crystallization of the imagination and magic of the puppeteer (Sahoo, 2003).

As such, this folk medium educates both rural and urban audiences in an atmosphere that is very conducive to learning, and at the same time, attractive and entertaining even in an age when high technology has invaded the learning landscape. Puppetry takes instruction away from long and dull classroom paradigms of one-way instructional communication, and transforms it into one where information flows interactively (Nori Art and Puppetry Center, 1997).

3.2. Advantages of Utilizing Shadow Puppetry in Remote Learning

According to the respondents, the main advantages of using shadow puppetry in remote learning are the following:

Shadow puppetry provides an avenue for a collective creative experience for all the puppeteers involved. The creative process fosters collaborative interaction among members. Puppetry promotes collectivism, a general concept centering on the idea that creative action is not isolated to an individual but is shared by different persons with various personalities and backgrounds (Roman, 2013).

Moreover, shadow puppetry is for everyone regardless of age and can be performed by anyone. The whole experience does not restrict to a specific gender, age group, or particular person. Anyone can be part of a shadow puppetry production as a puppeteer, musician, writer, or narrator to name a few.

According to Sahoo (2003), children relate to puppets easily from their earliest years because they are used to making inanimate characters come to life. Children are puppeteers themselves from the first time they pick up a toy to play with, a squeezed-out half orange, or a hairbrush to make it move or talk. The puppet can be whatever the puppeteer and/or the child makes it to be. Despite the special relationships between puppets and children, puppets, too, speak to adults. The roots of puppetry are deeply connected with mystery, symbolism, and religion. The earliest adventure stories were instructional, advising people on the right way to live (National Council for Science and Technology Communication, 2003).

The respondents also pointed out that shadow puppetry can be integrated or utilized in any specific topic or content. Based on their experiences, they have developed and performed shadow puppetry productions focusing on history, science, local mythology, or society in general. Shadow puppetry can be used in education or various advocacies (Wijayanti, 2019; Prahmana, 2021).

Lastly, the respondents indicated that the advantage of shadow puppetry lies on the use of visual elements particularly in the designs of the shadow puppets as well as the background images. These visual designs capture the attention and imaginations of their

audience, which when combined with other elements, music, story/theme, and the puppeteers, provide an interactive experience for everyone.

3.3. Challenges of Using Shadow Puppetry in a Remote Learning Condition

When asked about the challenges of mounting or producing shadow puppetry repertoire for remote learning, the majority of the respondents agree on three of the following difficulties:

First, the main challenge under the remote learning condition is coordinating with all the members of the shadow puppetry production. Each person involved has his/her challenges (connectivity, gadgets, etc.) in terms of remote collaboration with other members. Second, the respondents stated it is difficult to stage the performance under the remote learning condition because of the logistical requirements and communication gaps although it can still be done. Third, the respondents indicated that producing shadow puppetry is time-consuming because of the amount of time needed in constructing shadow puppets and the time for coordinated rehearsals. Furthermore, puppets and their whole production may require some space and physical materials. Lastly, another challenge is that not all subjects or contents can be incorporated into a puppetry production.

4. Facets of Shadow Puppetry as Alternative Medium for Instruction in Remote Learning Condition.

This section presents various studies and projects that have been developed and administered and thus have supported the idea of shadow puppetry as an instructional medium. Furthermore, respondents were asked to compare the use of shadow puppetry and technology as an instructional medium for remote learning.

Prahmana (2021) explored the use of Javanese Shadow Puppets in ethnomathematics and found out that could be used to reduce the gap of formal mathematics with the closest context the students could understand. By using this context, mathematics would be more interesting. Vela (2006), recognizing the difficulties of students in far-flung communities of the provinces, developed, produced, and administered shadow puppetry on primary school students. Merging science, traditional beliefs, and character-building using shadow puppetry helped students gain a better understanding of ideas and concepts presented in the lesson compared to the traditional classroom instruction of science ideas and concepts.

Javier (1990) in his MA thesis in art education, proposed the use of puppetry for educational instruction in Filipino subjects. He stressed the use of puppetry as an innovation for teaching Filipino subjects. The results of the study using hand puppets validate the claim that puppetry helps in nurturing the attitude of the students, stimulates the students to study, and adds to the development of the total person.

L.V. Wall and C.A. White (1965) emphasized that puppetry is indeed an art, an interactive art, which may be a purely individual expression and accomplishment or, among groups of people. Puppetry has a very strong appeal not only to the young but even to adults. Given these qualities and many other possibilities for development, instructors

preparing or attempting to use puppetry as a teaching-learning tool stand to discover a happy medium for teaching children in a way that will help them to remember what otherwise might soon be forgotten even after repetitive training or drill exercises.



Figure 3. Author's Shadow play class production, pre-pandemic

Further, retention of concepts, vocabulary, and indirectly instilling proper manners is made possible by the puppets and puppetry performance. The varying intensity of facial expressions that theater or film actors cannot seem to perform as well as puppets, keep the imagination of the audience continuously stimulated (Wijayanti & Sulaksono, 2018; Dunn, 1966) as well as the storytelling, music score, or sound background.

In addition to this engaging quality of puppetry, Arnott (1999) concluded that puppetry also possesses the advantage of portability. In these days of rising stage costs, any method that assists audiences remote from chief theatrical centers to become acquainted with the masterpieces of puppetry is warmly received.

4.1. Respondents' Perspectives in Using Shadow Puppetry Production Under the Pandemic Situation Compared to the Use of Technology

The following are the perspectives of the respondents on the use of shadow puppetry in remote learning, verbatim:

“Shadow puppetry's output is crude, spontaneous, and contains the human element. Digital media is too "perfect"”.

“It brings more of a challenge because it makes use of traditional art/media, tactile materials and construction. There's not ctrl+z (undo button) should there be any mistakes. But the outcome feels much more rewarding because it's made by hand. And it creates pleasant surprises because despite the limitations when done by hand, the output still wows people”.

“Shadow play is the combination of all artforms specially the live performance and has direct impact on the audience compared to technology based creative output”.

“In shadowplay, you have that organic element which is light and shadow. It's very challenging to do it remotely since you're missing the collective interaction which i think is an integral part of shadowplay. In digital media, you are more "in control" of your images. In shadow puppetry, there's a lot of experimentation involved, in order to come up with your desired visuals”.

“Medium is accessible given the right guidance”.

“Shadow puppetry leads in dynamism. Including the effort and resources spent in sourcing appropriate materials and location for the performance. Digital media cannot compare to the discipline involved in a purist type of shadow play production. The only downside of actual shadowplay is the many resources needed, whereas digital based plays can be done single handedly and individually”.

“I would compare the two by shadow play having a process which involves a collective that can have a shared experience throughout the process. Preparing shadow play shows with my friends/classmates was one of my favorite activities to do because of the shared experience and hands on work that we get to do. Though, digital media and technology is also a part of that process in some way however, I prefer to have work thats hands on and push me to make mistakes and learn from them, which I can apply to digital media in a way”.

“The effort involving the creation of materials is a learning in itself than reliance on the bounds of digital media that is not available to most”.

“Compared with digital media, shadow play/puppetry requires collaboration among all players. Each player contributes to the successful execution of the storytelling. This could be especially exciting for children and teenagers, as it could give them a sense of accomplishment for while also having fun”.

“There is improved learning in physical space with tactile and tangible tools and materials. This I think, is the biggest advantage of shadow play, as opposed to say, digital animation”.

“I would say Shadow Play has a more classic approach to it, compared to digital-related art. Compared to digital, puppetry requires a lot of work and practice, but is incredible when pulled off well”.



Figure 4. Shadow play/puppetry rehearsals

5. Conclusion

Shadow puppetry could be an effective alternative instructional medium that can bring about imparting and sharing of knowledge and skills among students, especially in a remote setting. It can be a good instructional material for motivation and interactive learning in various academic subjects. It can provide a venue where learning, interaction, and fun are experienced by the learners and their families. The rediscovery of art forms and folk media as a possible alternative tool for instruction may yet get teachers rethinking the use of newer but more expensive high technologies for the classrooms.

Shadow puppetry helps motivate students to learn by translating complex ideas/concepts into vibrant visual images, music, and movement. Projected images are likely to reach out to the imaginations of the learners and leave a lasting mark on them long after the presentation. As observed by the researcher during one of his presentations, students continued humming the tune of the music after each puppet presentation. Similarly, most of them also quite easily remember the concepts and the lessons presented through these visual images.

The Implications of the Study

The goal of instruction is to facilitate learning by preparing the venue and instructional information for the learners (Heinich *et al*, 1993). The task is the responsibility of the instructors and instructional media designers. All forms of education aim to promote and achieve learning. But learning is more than the acquisition of knowledge and skills (Casino, 1999). Learning comes in many forms, not only in classrooms but also from the environment and everyday life experiences of the students.

To Theory

One of the imperative aspects of any learning environment is the instructional media which is the carrier of the message. Art as instructional media enhances the presentation of concepts of the subject matter. Art, when used in the classroom, provide entertainment, creativity as well as a learning experience. As Goodlad (1976) stated, *the arts widely used in schools offer a means of creating and sharing commonly held experiences*. According to Maslog (1999), *an enlightened instructional media producing quality material would indeed enhance, reinforce and hasten value education*.

This study provided relevant information regarding the use of shadow puppetry as a medium of instruction. The study showed that there are alternative venues and learning experiences for students using traditional folk media. The use of shadow puppetry in this study strengthened the premise that traditional folk arts can be used as alternative instructional media if carefully and properly designed for remote learning.

To Practice

The study broadens the perspective of the new concept/theories in education (such as the behaviorist, constructivist or cognitivist approach) and sets aside old traditional methods and practices in classroom instruction. Shadow puppetry embraces various art fields such as visual arts, literature, theater arts, and music, which provide entertainment and creativity that are not often observed in a regular traditional classroom. The use of shadow puppetry in the classroom presents an innovative approach to teaching. The presentation of the lessons (Vela, 2006) with shadow puppetry as an instructional medium includes music, colorful visual aids, and theatrical acts magnified by the puppets. Thus, the lesson becomes more appealing and entertaining. Lessons learned in an entertaining and creative manner are more likely remembered and stored in the long-term memory bank.

Moreover, based on the results of Vela's (2006) research, teachers affirmed that the use of shadow puppetry as an instructional medium will interest and motivate students to learn inside the classroom. With these elements, shadow puppetry can also be developed and used as an educational tool for the students in schools without enough facilities and resources for learning and by teachers who do not have enough access to higher technologies. In this way, shadow puppetry as an alternative medium of instruction could encourage practitioners/educators to constantly search, find or devise and utilize various instructional means and content delivery techniques in providing appropriate learning venues to students.

To Research

This study serves as an affirmation that traditional folk arts can be explored and extensively used as alternative instructional media. This study is useful as a reference in the area of educational research focusing on creating, developing, and designing

instructional materials and its evaluation of its effectiveness in instructional settings. The study opens possible areas for concern with the creation of materials that facilitate learning and finding ways to justify their sustained use in instructional events. Related topics such as creativity, innovation, and invention among players in teaching and learning can be issues worth pursuing in further and future research.

References

- Alejandro, Clemente W. Philippine Education into the 21st Century. Quezon (1996)
- Anonas-Carpio, A Dynamic Digital Teaching. An article from the Starweek magazine (1995)
- Andrion, J.A. Effectiveness of Conscienti-accion for Environmental Awareness Unpublished Thesis. Institute of Development Communication, U.P. Los Baños (1993)
- Aquino, Gaudencio, et al. Principles of Teaching and Educational Technology. National Book Store, Inc. (1988)
- Asia's Got Talent. El Gamma's Touching Tribute to Mother Nature. Retrieved from El Gamma's Touching Tribute To Mother Nature | Asia's Got Talent Grand Final 1 - YouTube (2015)
- Bago, J.M. . Integration of Ethnic and Mainstream Education: The Maguindanaoan Ma Ahad. Unpublished doctoral dissertation, University of the Philippines , Diliman Quezo (1991)
- Baird, Bil . The Art of Puppet. New York : The Macmillan Company (1965)
- Bachelder, Marjorie . The Puppet Theater Handbook. New York and London : Harper and Brothers Publisher. (1947)
- Bramall, Eric and Somerville, Christopher. Expert Puppet Technique. Boston : Publishers PLAYS, INC. (1963)
- Canadian Museum of History, The Art of Puppetry. Retrieved from <https://theatre.historymuseum.ca/narratives/details.php?lvl2=4812&lvl3=4826&language=english> July 2022
- Casino, Ma. Rovilla . Conscienti-Accion Through Theater as Alternative Approach to Education. Unpublished Master's Thesis, University of the Philippines, Diliman Quzon City (1999)
- Currel, David . The Complete Book on Puppetry. Boston : Publisher PLAYS, INC. (1974)
- Cruikshank, Bainer and Metcalf . The Act of Teaching. New York : McGraw-Hill, Inc. (1995)
- Damanik, Suryadi, and Abdul Hakim Siregar. "Development of Animation Video Media for Basic Motion Learning Based on Folk Games and Traditional Games in Children 10-12 Years." *6th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2021)*. Atlantis Press, (2021).
- Dissanayake, Ellen. *What is art for?*. University of Washington Press, (2015).
- Dee, Anderson. *Amazingly Easy Puppet Plays*. Chicago and London : American Library Association (1997)
- Dunn, C.J. . The Early Japanese Puppet Drama. London : Lubac and Company, Ltd. (1966)
- Ebisa , Roberto M. Radio Drama as Support Medium for Teaching the Sacrament of the Holy Eucharist in Archdiocese of Cebu. Unpublished Thesis nstitute of Development Communication, U.P. Los Baños (1996)

- Frias, Cesar M . Two Dimensional Visual Aids and Cognitive Learning in Elementary Science. Unpublished Thesis, College of Education U.P. (1996)
- Gagne, R. The Conditions of Learning(4th Ed.). New York: HoH, Rinehart and Winston.(1985)
- Hyde, Amanda Vander, "Vietnamese Water Puppetry: The Practical Development of the Structure and Form" Honors Senior Theses/Projects. 155. (2018).
https://digitalcommons.wou.edu/honors_theses/155
- Javier, D.U. Ang Papetri Bilang Instrumento sa Pagtuturo ng Filipino . Unpublished master's thesis, University of the Philippines , Diliman Quezon City (1990)
- Kemp and Smellie . Planning, Producing and Using Instructional Technologies. New York : Harper Collins College Publishers. (1994).
- Kopania, K. Dolls and Puppets as Artistic and Cultural Phenomena (19th and 21st Centuries). The Aleksander Zelwerowicz National Academy of Dramatic Art in Warsaw The Department of Puppetry Art in Białystok Sienkiewicza 14 Str. 15-092 Białystok, Poland. (2016).
- Lin, Min, et al. "eHeritage of shadow puppetry: creation and manipulation." *Proceedings of the 21st ACM international conference on Multimedia*. (2013)
- Lopes, R. O. "A New Light on the Shadows of Heavenly Bodies: Indian Shadow Puppets: From Still Paintings to Motion Pictures". in *Religion and the Arts*, 20 (1-2), 160–196. (2016)
- Luen, L. C., Cheng, G. E., & Ta, M. Conceptual Puppetry in Malaysia. *International Journal Academic Research Business and Social Sciences*, 9(1), 1175–1185. (2019)
- Maslog, Crispin C . Philippine Communication: An Introduction 1100 Quezon City: New Day Publishers. (1993)
- Mundy, Paul, and Megan Lloyd-Laney. "Indigenous communication." *Appropriate Technology* 19 (1992):1-1
- Ortiz, M.A. A. et al.. Art: Perception and Appreciation. University of the East: JMC Press, Inc. (1976)
- Osnes, Beth. *The shadow puppet theatre of Malaysia: A study of wayang kulit with performance scripts and puppet designs*. McFarland, (2014).
- Prahmana, R.C.I.; Istiandaru, A. Learning Sets Theory Using Shadow Puppet: A Study of Javanese Ethnomathematics. *Mathematics* 2021, 9, 2938. <https://doi.org/10.3390/math9222938>
- Polk, Emily. "Folk Media Meets Digital Technology for Sustainable Social Change: A Case Study of the Center for Digital Storytelling." *Global Media Journal* 9.17 (2010).
- Sahoo, N. Advantage of puppetry as a Communication Medium. Retrieved from <https://www.scribd.com/document/372550752/Puppets-and-Communication> (2003)
- Segel, Harold B.. Pinocchio's Progeny. Baltimore and London: The John Hopkins University Press. (1936)
- Tiongco, C.L . Selected Aspects of Bagobo Art for art Teaching in the Elementary Schools of Davao City. Unpublished master's thesis, University of The Philippines, Diliman Quezon City. (1987)

- UNESCO. Education: From School Closure to Recovery. Retrieved J from <https://www.unesco.org/en/covid-19/education-response>. (2022)
- Valbuena, V. T. Philippine Folk Media in Development Communication. Singapore : Parklane Press. AMIC. (1986)
- Valdez. E.M . Integrating Media Education in the Reading Program . Two Case Studies. Unpublished MA thesis. College of Education, U.P. Diliman (1999)
- Vela, J.D. Exploring Shadow Puppetry as Alternative Instructional Medium Unpublished Master's thesis University of the Philippines, Diliman (2006)
- Wall, L.V. and White, C.A. (1965). The Puppet Book. Boston : Publisher PLAYS, INC.
- Wijayanti, Kenfitria Diah, and Djoko Sulaksono. "Character Building for Early Childhood Learners Through the Shadow Puppet-Based Javanese Language Manners." *Third International Conference of Arts, Language and Culture (ICALC 2018)*. Atlantis Press, (2019).
- Zhang, Hui, et al. "Chinese shadow puppetry with an interactive interface using the Kinect sensor." *European Conference on Computer Vision*. Springer, Berlin, Heidelberg, (2012).