

## The 2018 International Conference on Logistics and Business Innovation (ICLBI)



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The International Conference on Logistic and Business Innovation (ICLBI) was held on 26–28 September 2018, in Bali, Indonesia. This international conference was a part of CIRAE (International Multi-Conference on Innovative Research and Applied Engineering) and was organized by the Centre for Supply Chain, Centre for Customer Behaviour, and Institute for Community Research & Education and Continuing Education Center, Petra Christian University, Surabaya, Indonesia. The ICLBI conference aimed to bring engineers, economists, business people, academic scientists, and industry researchers to share their research and experience about innovation that are applied in logistics and business. ICLBI 2018 presented three honourable keynote speakers from representative countries: (i) Prof. Béla Pukánszky, Budapest University of Technology and Economics, Budapest, Hungary; (ii) Prof. Sunaryo, University of Indonesia, Jakarta, Indonesia; and (iii) Prof. Walter L. Bradley, Distinguished Professor Emeritus of Mechanical Engineering, Baylor University, Texas, USA (2012) and Professor Emeritus of Mechanical Engineering, Texas A&M University, Texas, USA (2000). After a rigorous selection process, the ICLBI's Scientific & Editorial Board decided to publish 20 selected manuscripts in the KnE Life Sciences Conferences Proceedings. Of the 20 selected manuscripts, nine manuscripts are joint researches between Indonesia and other countries such as Australia, the Republic of China, the Republic of Korea, and Malaysia. These proceedings were edited by professional editors from seven countries (Estonia, India, Indonesia, Latvia, Lithuania, Malaysia, and Sweden). The ICLBI's Scientific & Editorial Boards hope that these proceedings will bring new perspectives to researchers to enhance their research and make fruitful collaborations.

**Conference date:** 26–28 September 2018

**Location:** Holiday Inn Resort Baruna Bali, Kuta, Bali, Indonesia

**Editor in Chief:** Roy Hendroko Setyobudi (IDN)

**Board of Editors:** Hatane Samuel (IDN), Juris Burlakovs (EST), Maizirwan Mel (MYS), Olga Anne (LTU), Peeyush Soni (IND), Yahya Jani (SWD), and Zane Vincēviča-Gaile (LVA)

**Organizers:** Centre for Supply Chain, Centre for Customer Behaviour, and Institute for Community Research & Education and Continuing Education Center, Petra Christian University, Surabaya, Indonesia

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## Preface

# The 2018 International Conference on Logistics and Business Innovation (ICLBI)



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Selection and Peer-review under  
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(2018) Conference Committee.

Today logistics and business cannot just be run as usual to face fast-changing in recent years. Therefore, business practitioners, scientists, and engineers need to think and apply innovation. International Conference on Logistic and Business Innovation (ICLBI) was held on September 26--28, 2018, in Holiday Inn Resort Baruna Bali, Kuta, Bali, Indonesia. ICLBI 2018 collaborate with IC-AMME 2018 was a part of CIRAE (International Multi-Conference on Innovative Research and Applied Engineering), has been organized by Centre for Supply Chain, Centre for Customer Behaviour, and Institute for Community Research & Education and Continuing Education Center, Petra Christian University, Surabaya, Indonesia.

A primary goal and feature of it are to bring engineers, economist, business people, academic scientist, and industry researches to share their research and experience about innovation that are applied in logistics and business. We also hope that this conference can be used as a moment to discuss the practical challenges encountered and the solutions adopted.

ICLBI 2018 presented three honorable keynote speaker from representative countries: i) Prof. Béla Pukánszky, Budapest University of Technology and Economics, Budapest, Hungary; ii) Prof. Sunaryo, University of Indonesia, Jakarta, Indonesia; and iii) Prof. Walter L. Bradley, Distinguished Professor Emeritus of Mechanical Engineering, Baylor University, Texas, USA (2012), Professor Emeritus of Mechanical Engineering, Texas A&M University, Texas, USA (2000).

During publication processes, the ICLBI's Scientific & Editorial Board decided to publish 20 manuscripts in KnE Life Sciences Conferences Proceeding. Of 20 selected manuscripts, nine manuscripts were the result of joint researches between Indonesia and various countries such as Australia, the Republic of China, the Republic of Korea, and Malaysia. Each of the 20 manuscripts in KnE Life Sciences was reviewed by at least two experts using the double-blind system. The published manuscripts have passed all necessary improvement requirements in accordance to the KnE Publishing Platform, reviewer's comments, SI (*Système International d'Unités*), similarity tests by Turnitin program (with the highest threshold of 20 %), amount 90 % of references must be at least dated from 15 years, and reflected on Google, as well as editing procedure by professional editors from seven countries (Estonia, India, Indonesia, Latvia, Lithuania, Malaysia, and Sweden).

Finally, we would like to thank the members of the program committees, external reviewers, Scientific & Editorial Boards, RP Editage Services, and all of the organization staff for their contribution. They spent their valuable time give valuable suggestions for the authors to improve their paper. We also want to thanks all of the authors for contributing their research results to the conference. We also want to give special thanks to all conference partners (Binus University, Binus ASO School of Engineering) that provide valuable contributions to this conference. We hope that this conference brings new perspectives for all participants to enhance their research and collaboration among all researchers.

*I Gede Agus Widyadana*

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- Please provide a description of your conference peer review process, type (single-blind, double-blind, etc.), and state the total number of peer reviewers:
  - Double-blind: min. two independent reviewers per manuscript
  - ICLBI's Scientific & Editorial Board: 16 experts
- All the editors have taken all mandatory steps to ensure the quality of the manuscripts they publish, and their decision to accept or reject a manuscript for publication has been based only on the quality of the produced work.

Conference full title: International Conference on Logistic and Business Innovation (ICLBI - 2018)

Date: September 26–28, 2018

Place: Holiday Inn Resort Baruna Bali, Kuta, Bali, Indonesia

Chief Academic Editor Name:

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### Abstract

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Indonesia has one of the greatest diversities in the world as reflected by its many cultures, languages, customs, and beliefs. This diversity can be easily seen in the East Java region which, despite its Javanese ethnic majority, is also populated by other ethnics, sub ethnics, and mixed groups. Shadow puppet theatre is a form of public attraction long existing in Java, even before the era of the Majapahit Empire. It is usually performed at night and takes a considerable time. In this multidisciplinary paper, it is hypothesized that good time management will increase audience satisfaction and in turn contribute to the sustainability of the theatre and Javanese culture. Based on the analysis of the survey, using partial least square by java web start program, it is found that, first, shadow puppet attraction positively affects to time management as 0.720. Further, the attraction leads to audience satisfaction as 0.558. Lastly, time management affects audience satisfaction as 0.258.

**Keywords:** audience satisfaction; *wayang* attraction; *wayang* time management.

## Conference Paper

# The Effect of Time Management in Shadow Puppet Performance on the Audience Satisfaction

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## Abstract

Indonesia has one of the greatest diversities in the world as reflected by its many cultures, languages, customs, and beliefs. This diversity can be easily seen in the East Java region which, despite its Javanese ethnic majority, is also populated by other ethnics, sub ethnics, and mixed groups. Shadow puppet theatre is a form of public attraction long existing in Java, even before the era of the Majapahit Empire. It is usually performed at night and takes a considerable time. In this multidisciplinary paper, it is hypothesized that good time management will increase audience satisfaction and in turn contribute to the sustainability of the theatre and Javanese culture. Based on the analysis of the survey, using partial least square by java web start programme, it is found that, first, shadow puppet attraction positively affects to time management as 0.720. Further, the attraction leads to audience satisfaction as 0.558. Lastly, time management affects audience satisfaction as 0.258

**Keywords:** Audience satisfaction; *wayang* attraction; *wayang* time management.

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## 1. Introduction

Indonesia is one of the largest multicultural countries in the world with multiple ethnicities, cultural groups, religious groups, languages, and customs [1]. East Java, one of its provinces, is a heterogeneous province although it is ostensibly inhabited by the dominant Javanese ethnic group. The Javanese in East Java comprise several sub-ethnic groups comparable to non-Javanese groups. In most general terms, the Javanese consist of *Jawa Kulon/Kilen* (Western Javanese) and *Jawa Etan/Wetan* (Eastern Javanese). Divided more specifically, the Javanese in East Java consist of *Mataraman*, *Arek*, *Pandalungan*, and *Osing* areas. In its most specific divisions, East Java can be divided into several *tlatah* (cultural areas) with their respective characters. They are *Jawa Mataraman*, *Jawa Panaragan*, *Arek*, *Samin*, *Tengger*, *Osing*, *Pandalungan*,

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*Madura Pulau, Madura Bawean, and Madura Kangean*. With the addition of Madurese, Chinese, Arab and others, East Java is a remarkably multicultural society.

The *Arek* area is located between the Mataraman area on the west, Pandalungan on the east, and Madura on the north. This cultural area covers Malang, Pasuruan, Sidoarjo, Mojokerto, Jombang, Lamongan, Gresik, and Surabaya regencies. It should be noted, however, as the capital of the East Java province, the city of Surabaya is effectively the miniature of East Java as the city is inhabited not only by the *Arek* sub-ethnic group but also other ethnic and sub-ethnic groups. As a result, unlike in Sidoarjo atau Mojokerto, the East Javanese style of shadow puppet is not 'the master of the house' in Surabaya.

The term East Javanese shadow puppet itself is rather problematic because not all cultural areas in East Java embrace this style. This label appears as a rather discursive differentiation to distinguish this style from its Surakartan dan Yogyakarta counterparts (in Central Java) and the type of style performed in the *Arek* area (in East Java). In reality, the Surakartan style is also well developing in the western parts of East Java, those geographically closer to Central Java such as Magetan, Ngawi, Madiun, Kediri, Tulungagung, etc. Those regencies are commonly known as parts of the Mataraman area because, culturally, they are close to the remnants of the Mataram Kingdom in Central Java. Therefore, their puppeteering style is more into Mataraman and different from that of the *Arek* area, which is called the East Javanese style.

The fact that Indonesians associate shadow puppet mostly with the Mataraman style indicates the marginalized status of the East Javanese style. The hegemony of the Mataraman style can be seen in Surabaya where the shows in this capital city of East Java are ironically dominated by the Mataraman style. The East Javanese shadow puppet is more dominant in villages and hamlets in the *Arek* regencies. In other words, it does not occupy "the main stage" of cultural life. This has encouraged the concerned East Javanese puppeteers to create a forum to nurture their art in such way that it can at least survive in their traditional area. Besides the stronger puppeteering style, time also changes people's preference for entertainment. The growth of popular arts through mass media also forced the East Javanese puppeteers to respond. Basuki and Setiawan [2] posited that the puppeteers under the auspice of FORLADAJA have begun to strengthen their competitive position. As a local cultural product, the East Javanese shadow puppet should become the cultural symbol of East Java. With a more egalitarian culture, the East Javanese society can nurture its shadow puppet to free themselves from feudal values associated with the Javanese society.

Research by Kim et al. [3] listed and described numerous tourism objects such as international film festival, native's celebration, cultural celebration, musical attraction,

carnival, children's museum, jazz concert, arts gallery, ballet, opera, park entertainment, history museum, musical concerts, knowledge and technology, and so on. Research in New Zealand categorized tourism objects into i) attraction, ii) entertainment, and iii) activity [4]. Attraction refers to i) buildings such as arts galleries, historic buildings, and museums; ii) tourism parks such as aquariums, farming lands, and zoos; iii) sports centres as well as park areas; and iv) natural attractions. Attraction further includes performed activities related to local cultures. Entertainment covers events and places like concerts, cinema, theatres, night clubs, entertainment centres, and shopping centres. Activity includes sky sports, water sports, land sports. It is an activity coordinated and performed in particular times such as carnivals, local cultural activities like shadow puppet shows, seminars, and so on. Shadow puppet show fits into the category because it describes local culture, provides entertainment to audience, portrays people's daily life, and educates the society. A research showed that the tourists' satisfaction in history tourism offered by a local government in Spain is determined by the service quality and the mood of the tourists [5].

## 2. Performance's time management

Shadow puppet shows usually receive great attention from communities living around show sites. In general, audience want to enjoy a rather complete story within an agreed time. Therefore, audience usually want an early start if a show is added with other scenes such as *tandakan* (dances) or *campursari* (songs). Shadow puppet shows usually begin at 08.00 PM [6]. The ideal start time for the majority of audience is at 09.00 PM. This means if a puppeteer wants to have a longer pre-story time, the show should start 08.30 PM at the latest. If there are many welcoming speeches, the story only starts around 10.00 PM. For the ending time, in general audience agree that the show must end by the islamic morning prayers call. As such, the puppeteer is in control from 10.00 PM to 04.00 AM or 04.30 AM. This means the puppeteer has 6 h to 6.5 h for the performance [7]. This span of time must be delicately managed because there are two intermissions for *campursari* or *lelagon*. A long *campursari* or *lelagon* forces the puppeteer to rush the story and the audience may lose the story development.

Due to its considerable length, and the fact that it is at night time, shadow puppet time needs to be managed effectively and efficiently. Research in [8] concluded that time management needs a detailed scheduling system in each activity. A research stated that an effective time use in a show would increase the number of audiences [9]. Audience usually have limited time to follow a whole show, so time management

is crucial. Factors to consider are that the time is sufficient, appropriate, as scheduled, and well-segmented.

### 3. Audience satisfaction

The audience of shadow puppet are those who understand Javanese culture and relatively high Javanese language, hence adults. The shadow puppet audience have been experiencing a steady decrease because people find it difficult to understand the language and there is no specific programme of the government to broadcast shadow puppet consistently via mass media like TV. Audience satisfaction in enjoying a cultural attraction will ensure the sustainability of the attraction because the audience will inform others that they are satisfied with the activity. Satisfaction can be defined as post-consumption evaluation that a chosen alternative fulfils or even exceeds customer expectation. Satisfaction and dissatisfaction in a product or a service will influence subsequent behaviour pattern [10]. If customers are satisfied, they are likely to purchase the same product or service. Satisfied customers are also likely to give good recommendation to prospective customers. In contrast, dissatisfied customers will return the product, or in extreme cases sue the product or service. Nevertheless, the real danger is the customers do not complain to the provider, but they shift to another provider that they think can give satisfaction. This shifting may render the provider unable to sustain the customers because it does not have information why they are not satisfied. Research in [11] revealed that facilities for disabled audience at attraction sites bring more audience satisfaction.

Research by Chi dan Qu [12] tried to comprehensively integrate destination loyalty and destination image, customer attributes and satisfaction. Customer satisfaction is a crucial business purpose because reorder is assumed to take place. Satisfaction is consistently measured as the basis for developing customer loyalty concepts because loyalty is the main predicate for deciding main customer expectations. The measured indicators for customer satisfaction variable are the profit gained against the expense, the satisfaction in the performed activity/tourism, the worthiness of the activity/tourism [5, 13], the right decision to visit the place, and the willingness to recommend to others [14].

## 4. Research theoretical framework

The East Javanese shadow puppet is The production department is understood as the objective relation system a place where the value of work and the trust to the value are produced. Cultural production as a concept was developed by Bourdieu who tried to reconcile structure-oriented theories and agency-oriented theories [15]. In structure-based theories, meaning is determined by structures so that individuals are caught in the structure they are subject to. In this respect, as meaning in the structure is determined by those in power, the powerless are immersed in the meaning unconsciously instilled into them. On the other hand, in agency-oriented theories, individuals are seen to have power and freedom to decide their meaning. Individuals have freedom and can overcome the structure so that the existence of structure is realised but can be relativised.

Shadow puppet show provides entertainment for audience by showcasing puppeteers' specific set of skills. Puppeteers also provide information to audience regarding current national and local situations. Puppeteers try to make audience understand what is being discussed through performed criticisms and solutions to existing problems. Shadow puppet show as a tourist attraction requires limited show location and show time [9]. The performance which is well represented by the human resources will surrender similar objectives for the development of the organization [16]. Puppeteers' performance in shadow puppet show determines audience satisfaction. In the long run, audience satisfaction in shadow puppet show will conserve Javanese culture and language. Based on the whole review above, the following research framework is proposed (Figure 1). Based on the research model, there are three research hypotheses:

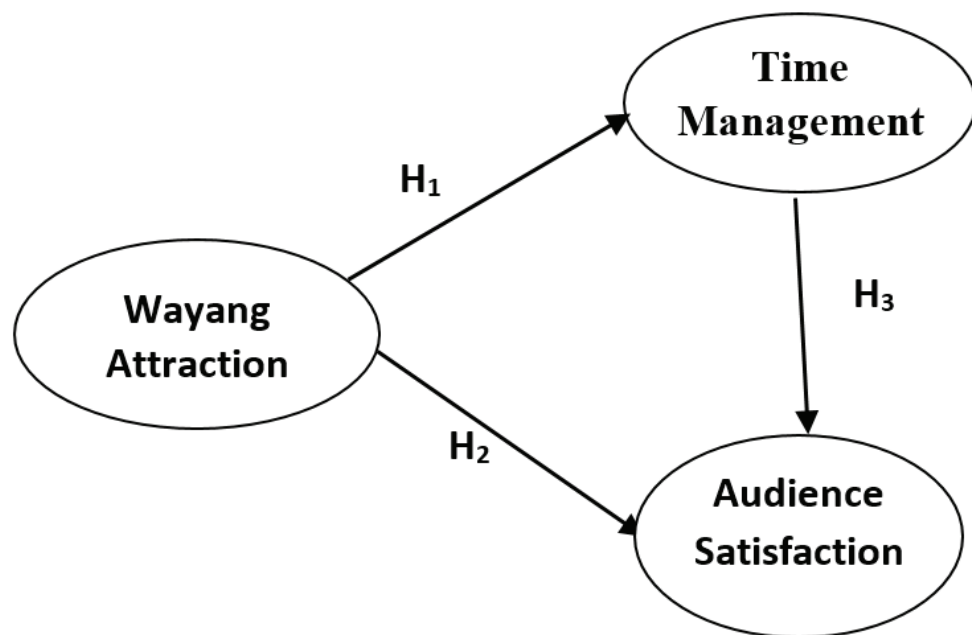
First hypothesis ( $H_1$ ): Shadow puppet attraction affects show time management.

Second hypothesis ( $H_2$ ): Shadow puppet attraction affects audience satisfaction

Third hypothesis ( $H_3$ ): Time management affects audience satisfaction.

## 5. Research method

The research is an explanatory research which aims at analyzing relations between one variable with another in which explanatory means causal relationship. The analysis is carried out using quantitative approach which involves questionnaire distributions to knowing *wayang* audience and SmartPLS software. The research population is those who have watched *wayang* show at least twice. The analysis units or respondents are



**Figure 1:** Research model for audience satisfaction on *Wayang* attraction

106 individual audience members. Out of 106 respondents, 93 return the questionnaires and 80 fill them out appropriately. Therefore, the response rate is 86.02 %. The responses are designed using Likert scale, in which there are five types of responses ranging from 1 (strongly disagree) to 5 (strongly agree).

## 6. Analysis and discussion

Data analysis starts by assessing the validity of the research indicators and the reliability of the research variables. The results are as follows: first, the reliability of wayang attraction variable is 0.868; the indicator validity which results from loading factor of wayang attraction as local culture (attrac1) is 0.820; the indicator validity of wayang as an entertainment is 0.757; wayang as a representation of everyday life (attrac3) is 0.785; the indicator validity of *dalang* (puppeteer) with good competence and skill (attrac4) is 0.801 and the indicator validity of wayang as a carrier of educative values (attrac4) is 0.595. Second, the reliability of time management variable is 0.796; the validity of time management indicator by time used for watching wayang loading factor is sufficient on 0.671; the validity of wayang attraction time corresponds on 0.637; the validity of designed time attraction schedule is 0.786; and the validity of attraction sessions is satisfactory on 0.712.



The dependent variable is the satisfaction audience with reliability score of 0.856; with the validity indicator of profit against the cost of *wayang* show production of 0.633; the validity indicator of satisfaction on *wayang* attraction as a tourism object at 0.753; the validity indicator of good object of tourism at 0.844; the validity indicator of satisfaction on *wayang* attraction at 0.676; and the validity indicator of recommendation to go to *wayang* attraction to other tourists at 0.767. Based on the result of reliability assessment, it fulfils the requirement since the score is above 0.700 and validity assessment of all indicators fulfils the requirements loading factor score of above 0.5. The research hypothesis test carried out by inner model assessment is a research model assessment by testing R-square to measure Q-square as predictive model. The result is that the Q-square is  $0.96 > 0$ , so that is has predictive relevance. By data analysis using inner model, the path coefficient estimation score with the value of t-statistic  $> 1.96$ ; for  $\alpha = 5\%$ . Hypothesis is accepted when its t-statistic value is above 1.96.

TABLE 1: Inner Model Analysis Result

Effect Variable's	Original Sample Estimate	Mean of Subsamples	Standard deviation	T-Statistic
Attraction -> Time	0.720	0.729	0.071	10.208
Attraction -> Satisfy	0.558	0.559	0.145	3.835
Time -> Satisfy	0.258	0.269	0.133	1.962

As seen in Table 1, the result of inner model analysis is that the first hypothesis is accepted with *wayang* attraction gives impacts to *wayang* attraction time management. This gives insight that to the audience, *wayang* performance needs good time management in terms of scheduling and duration. The second hypothesis can be accepted in that *wayang* attraction gives satisfaction to the audience with t-statistic score of 3.835  $> 1.96$ ; which shows that *wayang* attraction gives satisfaction to the audience. They state that *wayang* performance is a good past time to consume. The third hypothesis can accept with t-statistic score of 1.962 above 1.96. It informs that *wayang* performance time management is satisfactory, with performance time management which is faithful to the schedule. Further, the performance is well arranged in that the sessions (scenes) are done well so that the audience take *wayang* as a good tourism event and they recommend it to others.

## 7. Conclusion

This research tests three hypothesis related to *wayang* attraction. Based on the results of the analysis, the three hypotheses can be accepted with, first, the fact that

*wayang* attraction gives impacts to performance time management. It explicates that both *wayang* performance shows local culture and the *dalang* in the performance is competent and able to carry out good time management. Second, it shows that *wayang* attraction gives audience satisfaction. It gives impacts to the audience so that they recommend *wayang* to other people. Furthermore, the audience states that *wayang* performance is a good tourism event to engage in. Third, the good time management gives satisfaction to the audience. This research is still limited to the response of the respondents who came to the performance. With the fast-changing development of tourism attraction today, further research in the form of content analysis of *wayang* performance or the effort of the conservation of *wayang* as national heritage need to be conducted.

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