

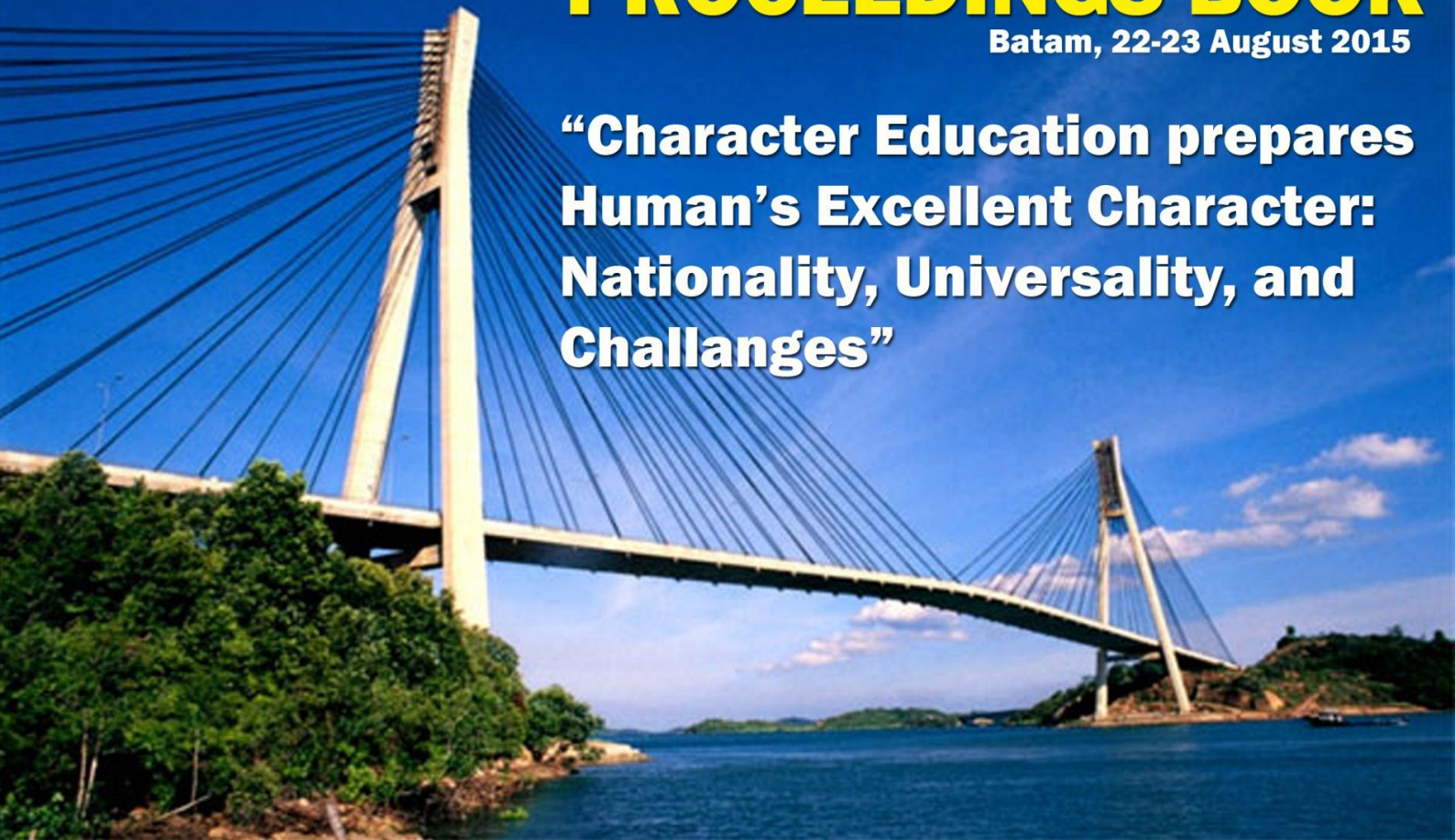
1st ICCE

Proceedings of the 1st International Conference on Character Education

PROCEEDINGS BOOK

Batam, 22-23 August 2015

**“Character Education prepares
Human’s Excellent Character:
Nationality, Universality, and
Challenges”**



Organized by:



**Sekolah Tinggi Agama Islam
(STAI) Sultan Abdurrahman**



**Universiti Tun Hussein Onn
Malaysia (UTHM)**

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FOREWORD

It is our great pleasure to welcome you to 1st International Conference on Character Education (ICCE) 2015. The ICCE is an international conference, organized by PHD Students of Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia and STAI Sultan Abdurrahman Tanjung Pinang as the host in Batam. The theme for ICCE 2015 is "Character Education Prepares Human Excellence's character: Nationality, Universality and Challenges". This conference is the 1st International Conference in Riau Archipelago Province of Indonesia. It is to increase understanding and knowledge of concepts and practices of moral, values, citizenship and character education, and their application and development, national and universal. Promote and provide a forum for regional, national and global networking, collaboration and the exchange of ideas and perspectives in relation to character education through interdisciplinary and intercultural discussion. Disseminate research findings on character education approaches, projects and practices in various countries. Provide participants a glimpse of the practice of character education in Indonesia and other countries in South East Asia, and the challenges.

We would like to express our sincere gratitude to all the authors who submitted contribution for inclusion. We hope that you will find this program interesting and thought-provoking and that the conference will provide you with a valuable opportunity to share ideas with other researchers and practitioners from institutions among the participants.

Editors

Alpino Susanto & Hazriyanto

Message from Dean of Faculty of Technical and Vocational Education (UTHM)

I wish to express my heartiest gratitude to the ICCE team as part of UTHM Ph. D students of FPTV for organizing the 1st International Conference on Character Education. I would like to thank our strategic partners, STAI Sultan Abdurrahman, Universitas Riau Kepulauan, Universitas Batam, Universitas Putera Batam, Indonesian Government and all individual contributions towards the realization of this conference.

The theme for the 1st ICCE is *“Character Education prepares Human’s Excellent Character: Nationality, Universality, and Challenges “*

The highlight of this even is to increase understanding and knowledge of concepts and practices of moral, values, citizenship and character education, and their application and development, national and universal. Promote and provide a forum for regional, national and global networking, collaboration and the exchange of ideas and perspectives in relation to character education through interdisciplinary and intercultural discussion. Disseminate research findings on character education approaches, projects and practices in various countries. Provide participants a glimpse of the practice of character education.

I incerely hope that everyone will play an active role in dicusing, disseminating and sharing their insights and experiences on International conference on Character Education.

Regards,

ASSOC. PROF DR. RAZALI BIN HASSAN

Dean, Faculty of Technical and Vocational Education

Message from Chairman of International Conference on Character Education

Assalamualaikum Warahmatullahi Wabarakatuh.

It gives me great pleasure to invite you to the 1st International Conference on Character Education which held on 23 August 2015.

Education has been considered as the centre of excellence in preparing human's excellent characters. This belief drives every single person to be ready to face the global challenges. Now days, education is considered to be the best place to prepare the agent of change of the nation that will bring prosperous to others. Education institution is no longer a place to transfer knowledge only, but it is also a place to form youth's attitude, behaviour, character, and leadership. Thus, it is justifiable to reflect some basic value and character of one country and cultivate them to all young generation in the form of national character building through education.

Different countries may have its' own identity to build their nations character. In Indonesia context, Indonesia's president JokoWidodo and his Vice President JusufKalla designed a nine priorities agenda called "NawaCita" for his presidency in 2014 to 2019. The priority of the agenda for Indonesia's political sovereignty and independence in economy and culture. One of his nine priorities agenda is to revolutionize the nation's character through a policy of restructuring the national education curriculum with advanced civic education; to teach the history of the nation, the values of patriotism and to love the country, as well as to build the passion and character to defend the state through national education.

We look forward to welcoming researchers, academics, practitioners, leaders, educators and policy makers from all parts of Indonesia, and Malaysia to participate on this event.

We look forward to opening our doors to everyone to participate in the 1st ice 2015.

Regards

DR. CHABLULLAH WIBISONO

Chairman of International Conference on Character Education 2015

REVIEWERS

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The Role of Information Communication & Technology as enabler of Knowledge Management Process to Bring Innovation in Creative Industries (Batam Case)

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ABSTRACT

Information Communication & Technology (ICT) plays an important role as a catalyst to enable and facilitate the implementation of the development, transfer, and utilization of knowledge, which subsequently may contribute to the improvement and innovation. This research intends to analyze how ICT competency directly influences knowledge management, how knowledge management directly influences innovation, and how ICT competency indirectly influences innovation through knowledge management. The research is limited to the case of the five sectors of the creative industries in the island of Batam, Indonesia. Those five sectors are television, radio, publishing, IT software and computer services, and architecture. The data are collected via questionnaire from a sample of 150 respondents. A structural equation model is established to study the interrelationship among those variables. At the end, the research concludes that ICT competency has positive effect on knowledge management, as well as on innovation via knowledge management, and knowledge management mediates the relationship between ICT competency and innovation.

Keywords: creative industries, information and communication technology, knowledge management, innovation

1. INTRODUCTION

Innovation is important to maintain company competitiveness [1]. It is not only for competitiveness but also to pursue long-term advantages [2,3]. Economists often cite innovation as a critical element for growth [4]. Given the importance of innovation, researchers from a variety of disciplines have focused on the answers to the critical question: "what can be done to improve innovation?", e.g., [4--7]. With the emergence of knowledge management and intellectual capital as new disciplines [8--10], scientific articles are starting to appear that add these constructs to the long list of possible antecedents of innovation, e.g., [11-13]. Along with the increasing study of knowledge management, information technology (IT) has closely been associated with the development of the great majority of knowledge management initiatives [14].

Previously, a number of scientific articles has discussed the importance of ICT competency for knowledge management, and the importance of knowledge management for innovation [14-16]. However, it is remaining a question whether an indirect relationship exists between IT competency and innovation. In work, we intend to study the indirect effect of ICT competency on innovation. Firstly, we analyze the direct relationship between ICT competency and knowledge management, and then, analyze the direct relationship between knowledge management and innovation. Finally, we establish the indirect relationship between ICT competency and innovation.

2. INNOVATION

Innovation is generally accepted as meaning the development and implementation of new ideas [17]. Various typologies of innovation have been discussed in the literature. For example, innovation can occur at various levels within an organization: with products (what is produced), processes (how it is produced) and organizational forms (where it is produced) [18]. Alternatively, innovations can range from radical to incremental or market-pull to technology-push.

The distinction between incremental and radical innovation is important given the different effects each type of innovation is likely to have on an organization. Most innovations are incremental and will present themselves as either line extensions or modifications of existing products [19]. The ideas for these innovations are likely to come from the marketplace and so will be based on market research among current and potential customers and possibly also information about competitors and industry trends. Thus, incremental innovations are usually classified as market-pull innovations.

By contrast, a radical innovation is likely to be competence destroying, often making existing skills and knowledge redundant [20]. Additionally, radical innovations often require different management practices [21]. These innovations are more likely to originate from scientists and so are classified as technology-push innovations [22]. Radical innovations often put the business at risk because they are more difficult to successfully commercialize. However, they are considered important for long-term success as they involve the development and application of new technology, some of which might change existing market structures [23]. Radical innovations are also likely to open up opportunities for follow-on incremental improvements [24].

3. KNOWLEDGE MANAGEMENT

Following the conceptual framework of Lopez et. al [14], knowledge management is composed of three main processes, which are namely: knowledge generation, knowledge transfer, and knowledge codification and storage.

Knowledge generation can be defined as the process by which the firm obtains knowledge, either from outside the company or generated internally [25,26]. The objective is to obtain new and better knowledge that helps the organization improve its competitiveness [27]. Thus, knowledge generation is not just about generating new contents, but also about replacing, validating and updating the firm's existing knowledge [28].

Knowledge transfer refers to the process by which an organization shares knowledge among its units and members, promoting new understanding [27,28]. It is essential for the firm to develop an adequate design of informative interaction networks that allow individuals of diverse specialties, cultures, and geographic locations, not only to access the same information but also to come together through the network to undertake a particular project. Moreover, for the transfer of tacit knowledge, which requires more interaction between the individuals, the firm must develop mechanisms that encourage dialogue and interaction [29].

Finally, knowledge codification and storage is a very important aspect in the effective management of knowledge [30,31]. The existing knowledge must be captured, codified, presented and put in stores in a structured way, so it can be reused later [32]. However, it is vital to remember that organizational knowledge is dispersed and scattered throughout

the organization. It is found in different locations, in people's minds, in organizational processes, and in the corporate culture, embedded in different artifacts and procedures, and stored in different mediums such as print, disk and optical media [33].

5. ICT COMPETENCY

This study defines ICT competency as how the firm uses these technologies to manage its information effectively [14,34]. While ICT is a generic term fundamentally used to refer to programs, computers and telecommunications, the term ICT competency is broader and refers to the use of these technologies to satisfy the firm's information needs [35]. This study differentiates between three dimensions of this concept: IT knowledge, IT operations, and IT infrastructure.

IT knowledge. Knowledge is information combined with experience, context, interpretation and reflection, so knowledge has a tacit component that is difficult to quantify [36]. Taylor [37] defines technical knowledge as the set of principles and techniques that are useful to bring about change toward desired ends. Thus, the current study defines IT knowledge as the extent to which the firm possesses a body of technical knowledge about elements such as computer systems.

IT operations. This concept refers to the IT-related methods, processes and techniques that may be needed if these technologies are to create value [38]. In the context of the current study, IT operations is defined as the extent to which the firm uses IT to improve its effectiveness and decision making.

IT infrastructure. The IT infrastructure acts as an enabler, and to a large extent is responsible for the growing interest in the production and dissemination of information [39]. IT infrastructure refers to the artifacts, tools and resources that contribute to the acquisition, processing, storage, dissemination and use of information. According to this definition, the IT infrastructure includes elements such as hardware, software and support staff.

5 HYPOTHESIS DEVELOPMENT

No industry, no company can stay on top without keep innovating [1]. Innovative efforts include the search for, and find, test, and development of new technologies, new products or services, new production procedures, and the new organizational structure. Innovation is about doing ideas [40]. Favorable Innovation procedure depends on the knowledge, particularly on tacit knowledge [41]. The new and valuable knowledge is created and turned into products, services and procedures [42], by converting general knowledge into specialized knowledge. In general, it can be affirmed, knowledge management, can affect the performance of the organization in a number of different ways [43]. Innovation is one of the main results of knowledge management. On the other side, ICT competency has become a central topic in the knowledge management's literature [44]. It is estimated that nearly 70% of the publications in knowledge management's focus on the design of IT systems. If innovation is one of the main results of knowledge management and ICT competency has become a central topic in knowledge management, meaning there is indirect relationship only between the ICT competency to innovation. Based on the above facts, the hypothesis:

H1. IT competency has a positive effect on the knowledge management processes

H2a. Knowledge management processes has a positive effect on innovation

H2b. Knowledge management processes mediate the correlation between IT competency and innovation.

6. METHOD

6.1 Sample and Data Collection

The first step in testing the above hypotheses is to choose the population object of analysis. This study focuses on five sub-sector of creative industry: architecture, radio, TV, IT software & computer services and publishing. We used Structural Equation Modeling (SEM) to analyze the data. For the model of Structural Equation Modeling (SEM) with a variable number of construct up to five, and each construct is described by three or more indicators, the number of sample data is considered adequate 100-150 [45]. The number of samples based on the opinion of Hair, et.al [46] in Ghozali [47], the multivariate data analysis using SEM, methods of estimation using maximum likelihood estimation (MLE). MLE will be effective on the number of samples between 150- 400. The number of samples can also be determined by 5-10 per parameter [48]. In this study, there are three constructs with a total of 28 parameters. Based on the above explanation, the minimum number of samples taken in this study was $5 \times 28 = 140$, and after the calculation of the percentage of each sub-sector, then we took 150 samples.

6.2 Measures

This section describes the scales used to measure IT competency, knowledge management and innovation. All the variables were measured on Likert 5-point scales ranging from 1 = strongly disagree to 5 = strongly agree.

IT competency. This scale was adapted from ref. [34] scale including 11 items to measure the dimensions of IT knowledge, IT operations and IT infrastructure. Items about the firm's knowledge, skills and experience in the use of IT measure the first of these dimensions. For the second dimension, the items measure the use of collaboration technologies, as well as the tools and systems available in the firm to acquire and store information that is useful in the decision making. Finally, to evaluate the firm's infrastructure, the scale includes items considering whether the firm develops software tailored to its own needs, the allocation of funds to acquire new equipment, or the existence of a person or department in charge of IT.

Knowledge management. Respondents were asked to indicate the level of agreement on each of the 11 items measuring various aspects of knowledge management processes including knowledge generation, knowledge transfer and sharing, and knowledge codification and storage. The scale was generated using some of the items from the scales proposed by [14].

Innovation. The original [49,15] typology of innovation is used in this paper. Here, innovations are categorized as new to the world, new products to the firm, additions to existing product lines, improvements or revisions to existing product lines, cost reductions to existing products, or repositioning of existing products. New to the world innovations are typically characterized as radical innovations while the other categories are incremental innovations.

7. ANALYSIS AND RESULT

7.1 Psychometric Properties of Measurement Scales

Measurement model. first the authors tested the construct validity of the measures employing confirmatory factor analysis (CFA) using AMOS 21.0.0 on each variable.

Based on construct validity using confirmatory factor analysis (CFA), there are some indicators with loading factor < 0.5 should be eliminated/dropped from construct. We concluded the measurement model, model fit using *goodness of fit index* and find that all the results meet the good fit values.

Structural Model. Second step of SEM is Structural Model, consists of Full Model, Normality, Outliers, Construct Reliability, and Discriminant Validity. Full Model combined all of three constructs as proposed in hypothesis development (**Figure 1**):

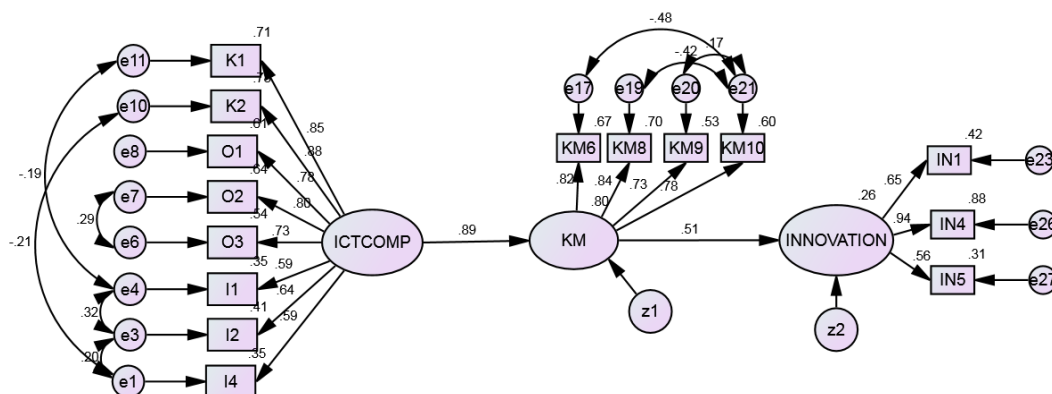


Figure 1 Full Model

Table 1 Goodness of fit index test Full Model

Based on the **Table 1**, Goodness of Fit Full Model is reasonable with the Chi-Square of 127.420 and probability (P) <0.05 is 0.001 but the values of DF, GFI, TLI, CMIN/DF, and RMSEA has met the recommended value, only AGFI has marginal value (0.857) slightly below the recommended ≥ 0.90 .

Goodness-Of-Fit Index	Cut-off Value	Model Result	Remarks
Chi-Square	< 101,88	127,420	Bad Fit
Probability	$\geq 0,05$	0,001	
GFI	> 0,90	0,905	Good Fit
AGFI	$\geq 0,90$	0,857	Marginal Fit
TLI	$\geq 0,95$	0,962	Good Fit
CFI	$\geq 0,95$	0,964	Good Fit
RMSEA	$\leq 0,08$	0,063	Good Fit
CMIN/DF	$\leq 2,0$	1,593	Good Fit
DF	> 0	80	Over Identified

Maximum Likelihood Estimation with observed variables requires the assumption of multivariate normality meet. Therefore, it is necessary to test to see the level in multivariate normality of the data used in this study. Evaluation of multivariate normality with Amos 21.0.0 done using the criteria of the critical ratio (cr) of Multivariate on kurtosis, if they are in the range between - 2.58 and 2.58 means that the data are multivariate normal distribution. The assessment of normality in this study results -1.790.

Outliers are observations or data that has unique characteristics, which looks very different from the observations of others and appear in the form of extreme value, either

for a single variable or combination of variables [47]. Detection of multivariate outliers done by looking at the value of Mahalanobis Distance. In this study shows that the data observations have mahalanobis d-squared value below 37.70 (DF 15, $p < 0.001$) meaning of the research has met the requirements there are no multivariate outliers.

The consistency of measuring instruments now tested. Cut-off value from Construct Reliability (CR) ≥ 0.70 and Cut-off Value Extracted (VE) ≥ 0.50 [49]. All measures have a composite reliability greater than the recommended level.

7.2 Hypothesis Tests

Hypothesis testing is performed using the value of the *t-value* with a significance level of 0.05, *t-value* in AMOS 21.0.0 is Critical Ratio (CR) on Regression Weights of fit model (Full Model). If the value C.R. $> 1,967$ or probability value (P) < 0.05 , H_0 is rejected (the research hypothesis is accepted). The results provide clear support for hypotheses H1, H2a, and H2b. The findings show that IT competency has a positive effect on knowledge management processes (C.R.=7.098, $P=***$), Knowledge management processes has a positive effect on innovation (C.R.=4.618, $P=***$), and Knowledge Management mediates the relationship between ICT Competency and Innovation (indirect effect =0.453).

8. DISCUSSION

Based on the definition of creative industry, as those industries which have their origin in individual creativity, skill and talent, in the context of knowledge management, we can conclude that the creative industries are more dealing with the tacit knowledge. Knowledge and creativity have always played a relevant role in the economy [50]. As pointed out by Cunningham et al. [51], the creative industries are a high-growth sector, positively affecting jobs and economic growth. The industries of the twenty-first century will depend increasingly on the generation of knowledge through creativity and innovation [52]. But few researchers who conduct research knowledge management and innovation in the field of creative industries. This current work analyzes how the relation between knowledge management and innovation in creative industries.

Innovations emerge in this study is a radical innovation in the form of product, program or service that has never existed, or in the form of incremental innovation or such conduct improvement or improvements to the products, programs or services that already exist.

This study provides information of ICT competence factors such as IT knowledge of IT technical support staff, computer-based technical expertise, the use of IT to analyze customers, the use of decision support systems, formal MIS department, and customizable software applications will role in supporting knowledge management in the creative industries.

9. CONCLUSION, LIMITATION

To summarize, this study contributes empirical data to the predominantly theoretical literature on knowledge management, IT competency and innovation. It is, to a certain extent, common sense that IT has a positive impact on knowledge management and knowledge management has a positive impact on innovation. This paper takes an important step forward by analyzing how IT competency influences knowledge management directly, how knowledge management influences innovation directly, and how IT competency influences innovation indirectly through knowledge management.

The findings of the research also have important implications for managers. Managers should not only focus on allocating sufficient resources for IT investments. Firms must focus their attention on intervening processes such as knowledge management in order to bring innovation in creative industries. Managers also need to pay more attention to the factors that can drive knowledge management, such as IT competency that will make creative industries more innovative.

The analysis described here may provide some insight into the relations between information technology competency, knowledge management, and innovation, but it suffers from some limitations. Possibly the most important limitation is the fact that the study is not providing a detailed analyze how IT affects each of the individual processes (knowledge generation, knowledge transfer, and knowledge codification and storage) in three dimensional separately.

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