

ACM International Conference Proceeding Series

COUNTRY

United States



Universities and research
institutions in United States

SUBJECT AREA AND CATEGORY

Computer Science

- Artificial Intelligence
- Computer Networks and Communications
- Computer Vision and Pattern Recognition
- Human-Computer Interaction
- Software

PUBLISHER

Association for Computing Machinery
(ACM)

H-INDEX

123

PUBLICATION TYPE

Conferences and Proceedings

ISSN

-

COVERAGE

1996-1997, 1999-2020

INFORMATION

[Homepage](#)

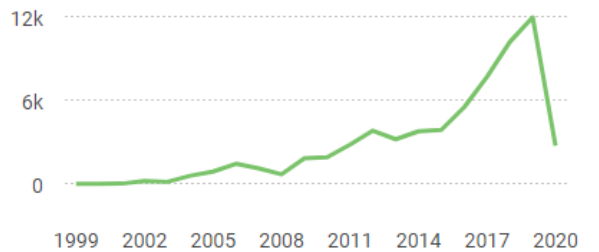
SCOPE

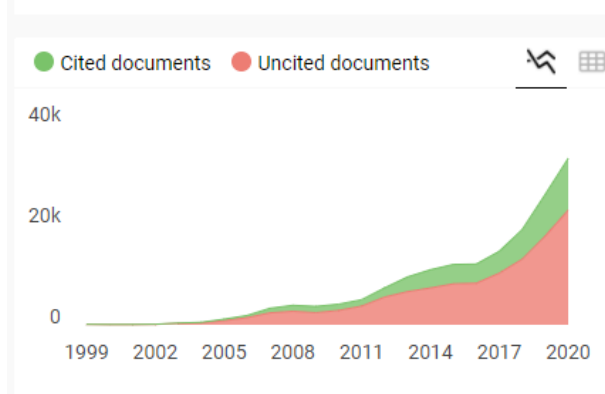
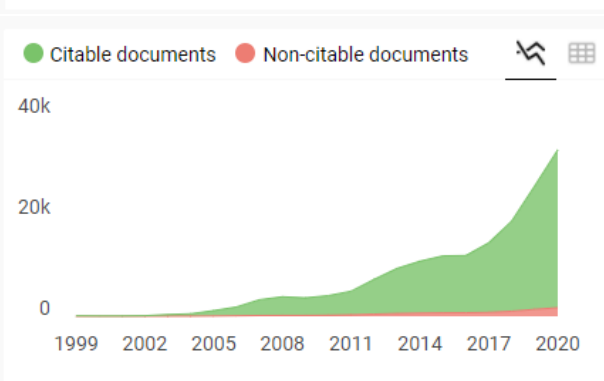
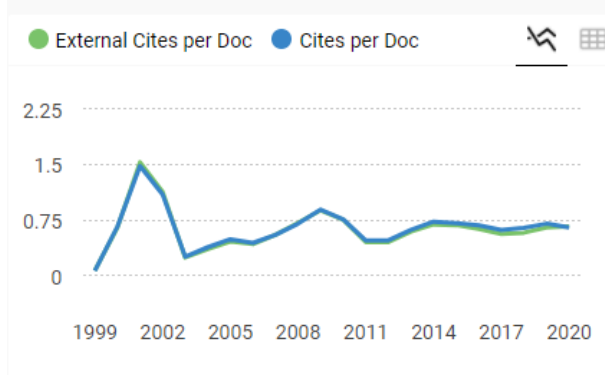
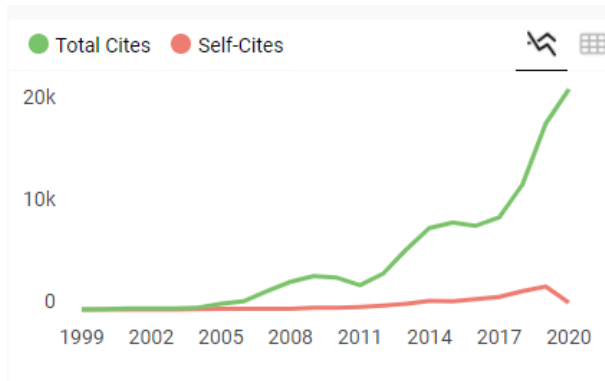
The ACM International Conference Proceeding Series (ICPS) provides a mechanism to publish the contents of conferences, technical symposia and workshops and thereby increase their visibility among the international computing community. The goal of this program is to enable conferences and workshops to cost effectively produce proceedings which provide maximum dissemination of the material through electronic channels, specifically, the ACM Digital Library.

SJR



Total Documents





ACM International Conference Proceeding...

Not yet assigned quartile

SJR 2020
0.18

powered by scimagojr.com

← Show this widget in your own website

Just copy the code below and paste within your html code:

```
<a href="https://www.scimagojr.com" data-bbox="715 768 865 780">
```

[HOME](#)
[ABOUT](#)
[AUTHORS](#)
[SUBJECTS](#)
[AFFILIATIONS](#)
[SOURCES](#)
[REGISTRATION](#)
[FAQ](#)
[AUTHOR LOGIN](#)

Author Profile

ZEPLIN JIWA HUSADA TARIGAN
Universitas Kristen Petra
Magister Manajemen
SINTA ID : 26861
Subjects/Areas:
Enterprise Resources Planning

14.66 Overall Score	10.13 3 Years Score
1396.5 Overall Score V2	773.5 3 Years Score V2
4703 Rank in National	3085 3 Years National Rank
11 Rank in Affiliation	2 3 Years Affiliation Rank

[Overview](#)
[Books](#)
[IPR](#)
[Network](#)
[Rama Documents](#)
[GS Documents](#)
[WoS Documents](#)
[Research](#)
[Scopus Documents](#)

[Journal](#)
[Proceeding](#)
[Book](#)
[Other](#)
[All](#)

Page 1 of 3 | Total Records : 29

Quartile	Publications	Citation
Q2	The role of top management commitment to enhancing the competitive advantage through ERP integration and purchasing strategy International Journal of Enterprise Information Systems vol. 16 issue : 1 2020-01-01 Journal	11
Q2	Enterprise resources planning project manager competency on improving organizational performance through process design and quality performance ACM International Conference Proceeding Series vol. 1 issue : 1 2018-07-05 Conference Proceedin	3
Q1	The effects of strategic planning, purchasing strategy and strategic partnership on operational performance Uncertain Supply Chain Management vol. 9 issue : 2 2021-01-01 Journal	3

[Browse](#)
[About](#)
[Sign in](#)
[Register](#)

[Journals](#)
[Magazines](#)
[Proceedings](#)
[Books](#)
[SIGs](#)
[Conferences](#)
[People](#)

[Advanced Search](#)

[ACM Proceedings](#)
[Conferences when & where](#)
[ICPS Proceedings](#)

[Home](#) > [ICPS Proceedings](#) > [ICEMT '17](#)

ICEMT '17: Proceedings of the 2017 International Conference on Education and Multimedia Technology

2017 Proceeding

Conference Chairs: [Maode Ma](#), [Cheolil Lim](#)

Publisher: Association for Computing Machinery, New York, NY, United States

Conference: ICEMT 2017: 2017 International Conference on Education and Multimedia Technology • Singapore Singapore • July 9 - 11, 2017

ISBN: 978-1-4503-5293-2

[Recommend ACM DL](#)

ALREADY A SUBSCRIBER? [SIGN IN](#)

ICEBT 2018

2018 2nd International Conference on E-Education, E-Business and E-Technology



July 05-07, 2018
Beijing University of Technology, Beijing, China



**The Association for Computing Machinery
2 Penn Plaza, Suite 701
New York New York 10121-0701**

ACM COPYRIGHT NOTICE. Copyright © 2018 by the Association for Computing Machinery, Inc. Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers, or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from Publications Dept., ACM, Inc., fax +1 (212) 869-0481, or permissions@acm.org.

For other copying of articles that carry a code at the bottom of the first or last page, copying is permitted provided that the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, +1-978-750-8400, +1-978-750-4470 (fax).

ACM ISBN: 978-1-4503-6481-2

Table of Contents

Proceedings of 2018 2nd International Conference on E-Education, E-Business and E-Technology (ICEBT 2018)

Preface.....	vii
Conference Committees.....	viii

• *Session 1- E-Education and Computer Education*

On-Demand Virtual Lectures: Promoting Active Learning in Distance Learning	1
<i>Lei Li, Rong Guo and Meng Han</i>	
A Study on Teaching Methods of the Second Classroom for Engineering in Applied University	6
<i>Xue Sun and Chao-Chin Wu</i>	
Research on the Application of Mind Map in "Artificial Intelligence" Teaching	12
<i>Gao Wenchao, Zhao Ruijie, Zhang Guoying and Qian Xu</i>	
Using learning analytics to promote student engagement and achievement in blended learning: An empirical study .	19
<i>Lilin Gong, Yazhao Liu and Wei Zhao</i>	
Research on the effect of MOOC in the ideological and political education course in China	25
<i>Tingting Duan</i>	
Formative Feedback in Online and Blended Learning Based on Internet Environment	32
<i>Yanyao Deng</i>	
Developing an Arduino Simulation-based Learning System and Evaluating its Suitability	38
<i>Lai Ah-Fur, Chen Chien-Hung and Lai Horng-Yih</i>	
Knowledge Points Extraction of Junior High School English Exercises Based on SVM Method	43
<i>Like Wang, Yuan Sun and Zhen Zhu</i>	
Research on Mobile Learning and Micro Course in the Big Data Environment.....	48
<i>Hong Dai, Ye Tao and Tian-Wei Shi</i>	
Proposing an Integrated Conceptual Framework for Understanding the Behavior of Using WeChat-Based EFL Learning Apps	52
<i>Yang Chen</i>	

An Exploratory Study of a Framework for Designing and Developing a Massive Online Course as Smart Future Classroom in VLE.....	57
<i>Enna Ayub, Goh Wei Wei, Johan@Eddy Luaran and Lim Chee Leong</i>	
Reform and Practice of Introduction to Algorithmic Design & Analysis in Local Undergraduate Colleges	63
<i>Liu Xin</i>	
Teaching Reform of Computer Basic Course Combined With Specialty.....	68
<i>Hua Li and Hua Li</i>	
Cryptography Teaching Based on Problem Oriented – Take the Knowledge Point of Designated Verifier Signature asan Example	73
<i>Xiaoming Hu, Wenrong Jiang, Chuang Ma, Taozhi Si and Chengcheng Yu</i>	
A Study for Differences in the Participation of Students from Different Departments in Innovative Design Courses "Taking the Design of Red Dots as an Example"	78
<i>Huang Yu-Che, Peng Yu-Tzu and Huang Tai-Shen</i>	
<p>• <i>Session 2- E-Commerce and E-Business</i></p>	
On Reengineering Logistics Management Professional Teaching Team Based on the Workplace Learning Needs.....	83
<i>Chao-dong LU</i>	
Study on the Impact of Experiential Products' Online Reviews on College Students' Purchasing Intention a Case Study of Taobao.com.....	89
<i>Juan Wang and Kai Xiong</i>	
Customer Satisfaction Attribution Analysis of Hotel Online Reviews Based on Qualitative Research Methods.....	93
<i>Pinghao Ye and Bin Yu</i>	
The Mediated Effect of Relationship Marketing on the Influences of Irritation Advertising in Fintech Times.....	99
<i>Ching-Ting Tien, Hsu, Ko Cheng and Syu, Pei-Ling</i>	
Dynamic Online Bundling Pricing Model and Heuristics Analysis	102
<i>Qingqing Yang, Kewei Yang and Yanqing Ye</i>	
Integration Testing in Small Packaged Software Vendors – A Systemic Snapshot	106
<i>Issam Jebreen, Moutasm Tamimi, Haya Almajali and Faisal Janabi</i>	

- ***Session 3-Information Technology and Application***

The Development Overview of Artificial Mind	111
<i>Yanyao Deng and Hongfeng Jiang</i>	
Emotional Words in Chinese ESL Essay Writing.....	117
<i>Hui Sun, Tiong-Thye Goh and Da-Wei Jing</i>	
Cooperative Control Model of Geographically Distributed Multi-teamAgile Development Based on MO-CSO.....	121
<i>Ji-jiao JIANG, Xiao YANG and Ming YIN</i>	
Visual Analysis of Business Model Innovation Research Based on Citespace	126
<i>Yongan Zhang and Mingming Lu</i>	
Subject Analysis in the Hotspots of MOOC Based on the Cooperative Team	131
<i>Zhang Ling and Shao Yuqi</i>	
An Unbiased User Model for Interest Diffusion in the Heterogeneous Network Recommendation	138
<i>Yin Fengjing, Zhang Xin and Zhang Xiaoyu</i>	

- ***Session 4-Applied Statistics and Business Management***

Use of Technology and SME Managers' Financial Literacy in Developing Economies	145
<i>Juma Buhimila Mabula and Han Dong Ping</i>	
Enterprise Resources Planning Project Manager Competency on Improving Organizational Performance through Process Design and Quality Performance	153
<i>Zeplin Jiwa Husada Tarigan, Sautma Ronni Basana and Widjojo Suprpto</i>	
Analysis on the Overall Level of Regional Innovation Environment in China.....	159
<i>Yongan Zhang and Pei Hu</i>	
Measuring the Innovation Efficiency in China's High-Tech Industries: An Empirical Study Based on Panel Data ...	165
<i>Li Yang</i>	
Opportunities of the Impact of Project Management Practices on Implementing Management Systems: Qualitative Study of Moroccan Companies	170
<i>K. Fath, O. Bouksour and Z. Beidouri</i>	

The Application of Economic Analysis in the Field of Military and National Defense Legislation	175
<i>JiTian You, LinXi OuYang, XueYing Zhang and ShaoYi Du</i>	
Study on the Influence of Military Enlistment Experience on College Students ' Self-consistency Congruence and Psychological Resilience.....	181
<i>Shao Yuqi and Zhang Ling</i>	
Research on the Driving Mechanism of NRO Oriented to the Innovation Chain	187
<i>Shengfang Lu and Yue Zhuang</i>	
Research on the Problem of the Intuitive Decision Making.....	192
<i>Lu Xinghua and Ma Zhixin</i>	

Preface

This volume contains papers presented at 2018 2nd International Conference on E-Education, E-Business and E-Technology (ICEBT 2018), which was held in Beijing University of Technology, Beijing, China during July 05-07, 2018.

ICEBT 2018 provides a scientific platform for local and international scientists, engineers, and technologists, who work in all aspects of E-Education and E-Business and E-Technology. In addition to the contributed papers, we invited five internationally-known experts from several countries to deliver keynote speeches at ICEBT 2018. They are: Prof. Shaofeng Liu from Plymouth University, UK; Assoc. Prof. Belinda Luke from Queensland University of Technology, Australia; Assoc. Prof. Haiying Ren from Beijing University of Technology, China; Assoc. Prof. Jung-Ho Lai from National Taipei University of Business, Taiwan; Assoc. Prof. Wang Wanqiu from Beijing University of Technology, China.

ICEBT 2018 conference proceedings selected 36 papers for publication, which were submitted to the conference from universities, research institutes, and industries. Each contributed paper has gone through a rigorous, blind peer-review process. They were reviewed by at least two experts who are qualified within this field of E-Education, E-Business and E-Technology. The proceedings tend to present to the readers the newest research results and findings in the related fields.

The chairperson of each session played an important role in guiding the sessions in a timely and efficient manner. To improve the papers and ensure the quality, the reviewers also made great efforts in the given time. With the help of the local organizing Chairs, our conference makes a great success finally. On behalf of the conference committee, we would like to express our sincere appreciation to them for their contribution.

We truly believe that the participants will find the discussion fruitful and will appreciate the opportunity for setting up future collaborations.

Prof. Yong-an Zhang

Beijing University of Technology, China

ICEBT 2018 Conference Local Organizing Chair

Conference Committees

Local Organizing Chairs

Prof. Yong-an Zhang, Beijing University of Technology, China
Prof. Zhai Dongsheng, Beijing University of Technology, China

Conference Chairs

Prof. Shaofeng Liu, Plymouth University, UK
Prof. Xuecheng Yang, Beijing University of Posts and Telecommunications, China

Conference Program Chairs

Prof. Shuangjie Li, Beijing University of Technology, China
Prof. Guorui Jiang, Beijing University of Technology, China
Prof. Yong-an Zhang, Beijing University of Technology, China
Assoc. Prof. Belinda Luke, Queensland University of Technology, Australia
Assoc. Prof. Haiying Ren, Beijing University of Technology, China

Conference Technical Committees

Prof. Christos Bouras, University Of Patras, Greece
Prof. Demetrios Sampson, Curtin University, Australia
Assoc. Prof. Pedro Isaías, The University of Queensland, Australia
Assoc. Prof. Ying (Joy) Zheng, Frostburg State University, USA
Prof. Joan Ballantine, University Of Ulster, UK
Prof. R.Sivakumar, RMK Engineering College, India
Prof. DINESH E, Assumption University of Thailand, Bangkok, Thailand
Prof. Galiya Berdykulova, International University of Information Technologies, Kazakhstan
Asst. Prof. Galina Artyushina, National Research University, Russia
Prof. Jude T Lubega, Uganda Technology and Management University, Uganda
Dr. Anabelie V. Valdez, Mindanao State University, Philippines
Prof. Raymond Q. Datuon, Philippine Cultural College, Philippine
Prof. Mohammed Masood Mohiuddin, Shadan Institute Of Computer Studies, India
Prof. Vilmante Kumpikaite, Kaunas University of Technology, Lithuania
Dr. Choi Wai Ching, Jessie, Hong Kong Institute of Education, Hong Kong
Dr. Giuliana Dettori, Istituto per le Tecnologie Didattiche, Genova, Italy
Asst. Prof. Eliza Stefanova, Sofia University, Bulgaria
Dr. Min Lun (Alan) Wu, Ohio University, USA
Dr. Pak-Lok Poon, RMIT University, Australia
Dr. Zhijiang Chen, Towson University, USA
Dr. Ho Keat Leng, Nanyang Technological University, Singapore
Dr. SYED ABDUL REHMAN KHAN, Chang'an University, China

Enterprise Resources Planning Project Manager Competency on Improving Organizational Performance through Process Design and Quality Performance

Zeplin Jiwa Husada Tarigan
Lecturer Management
Faculty Economic
Petra Christian University, Surabaya
+62312983244
zeplin@petra.ac.id

Sautma Ronni Basana
Lecturer Management
Faculty Economic
Petra Christian University, Surabaya
+62312983244
sautma@petra.ac.id

Widjojo Suprpto
Lecturer Management
Faculty Economic
Petra Christian University, Surabaya
+62312983244
Joe.suprpto@gmail.com

ABSTRACT

With the increasing numbers of organizations that implement the project management approach, there is an increasing interest of the key users to become the Enterprise Resource Planning (ERP) project manager. The project managers must possess roles and competencies to boost the organizational performance of a company. The implementation and development of ERP in the company are determined by the capabilities and expertise of the project manager. The project manager's competency is used to implement both ERP and Total Quality Management (TQM). Many companies implement ERP and Total Quality Management (TQM) that require managers to have reliable competencies, therefore, many companies seek and retrieve personnel from other companies who have sufficient competence. This research has three main problems, first of all, the influence of ERP project manager competence to improve the process design and the quality performance. Second, the influence of process design on company quality performance, and finally, the improvement of process design and quality performance are able to improve to the company performance. Based on the results of questionnaires distributed to 46 manufacturing companies, it is obtained that the project manager's competency has a positive and significant impact on the design process with 0.730, and on the quality performance with 0.553. Then, the design process has an impact but not significant to the quality performance of 0.164. Finally, it is found that the quality performance has a positive and significant impact on the performance with 0.466 and the process design had positive and significant effect on the performance with 0.692.

CCS Concepts

•Information systems→Enterprise resource planning

Keywords

Manager competency; organizational performance; process design

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from Permissions@acm.org.

ICEBT 2018, July 5–7, 2018, Beijing, China.

© 2018 Association for Computing Machinery.

ACM ISBN 978-1-4503-6481-2/18/07...\$15.00

DOI: <http://doi.org/10.1145/3241748.3241777>

and quality performance.

1. INTRODUCTION

Organizational management and interpersonal relationships aim to utilize the potential of personnel capabilities optimally, for example, through motivation, direction, division of labor, and other non-technical efforts. The completion of a project depends heavily on the ability of the project manager to select the project to work on, select the strategy for completing the project, select the work method to complete the project, select a measurement system to monitor the project, and select a system to evaluate a project and end the project [2].

The development and usage of project management standards is the standard that describes what is required to achieve an effective performance in project management in the workplace. Those who comply with the standard will succeed at work, or appear to be more effective at work, than those whose performance do not meet the standards. The implementation of Enterprise Resource Planning (ERP) technology in manufacturing companies has been done a lot, and also has many previous studies that discuss about the implementation of ERP and implementation TQM. The implementation of ERP in the company is the integration of departments within the company in which there is data integration from various related department [3]. The implementation of ERP in the company will provide data in real time and data sharing on line between departments by using single data entry. Many companies are using some ERP modules that are implementing able in the company. ERP modules in companies are tailored to the functions of each department in the company which may include quality management (QM) for inspecting raw materials acceptance, production process control, and finished goods.

Quality management in the company is a product quality planning designed by top management to improve quality, reduce production cost, decrease the number of product rejects, and improve company's productivity so that the organizational performance will be improved, which ultimately brings some impacts on the competitiveness of the company [4]. TQM is a management system to improve overall quality towards achieving the competitive advantage orientation of customer satisfaction by involving all members of the organization. The application of TQM can be achieved well by considering the following characteristics. (1) Customer satisfaction must be met in all aspects, including price, security, and timeliness. (2) Respect for everyone, each employee is seen as an individual with unique talents and creativity and all employees in the organization are treated well and given the opportunity to develop themselves,

especially participating in the team decision-making. (3) Fact-based management, the organization is fact-oriented which means that every organization's decisions must be based on data. (4) Continuous improvement important for every organization.

ERP technology is able to integrate management functions with single data base such as marketing function, production function, logistics function, finance function, human resource function, production function, quality function, and other functions [5]. Based on several previous researches, the critical success factors of ERP implementation are determined by the top management commitment [6]-[9]; project team competencies [10], [11] and project team competency acting as the research indicator [12]; business process design [13]-[15]; project management [7], [12].

Some previous researches discussed the implementation of TQM; among others are Sahoo and Yadav [16] who focus on the variables of leadership management, strategic planning, employee empowerment and involvement, and quality education and training. A research by Duran *et al.*, [17] observes that the quality management implementation is studied through knowledge management by considering customer satisfaction, employee participation in sharing knowledge about quality, quality process, quality culture, and company quality performance. Another research conducted by Jackson [18] focuses on quality management innovation variables which consists of management support to maintain product quality, employee development in quality understanding, and employee empowerment so that all play an important role in maintaining the quality by understanding the quality tools. Bolatan *et al.*, [19] state that integrated technologies can be used to improve total quality management and quality performance. The integrated technology enables to transfer data by using software and hardware so that the transferred knowledge and data can be done quickly and precisely. Previous studies are still focused on the product quality and service quality, but only a few researches discusses on how technology plays the roles in supporting quality performance which later on improves the organizational performance. With the use of the ERP technology, the integrated data can be access in real time. Company's operational activities related to product quality include material purchasing, material acceptance, material quality control, material use adapted to product quality, quality control of production process, and quality inspection of finished products.

2. HYPOTHESIS DEVELOPMENT

Critical success factors for the ERP implementation in the company are determined by the project manager's competency in designing the operational processes that are tailored to the ERP system. Customization processes are performed by key users together with the project manager so that the ERP system is in accordance with the operational processes. The adoption of ERP in the company has to be adjusted to day to day operation system by the key users setting up in detail the ERP software to fit the implementation of enterprise processes [20]. ERP system must be able to be tailored to the company's business process as a whole and be implemented in collaboration with the project managers and key users; meanwhile the ERP software is assisted by the ERP provider or consultant [21]. The implementation of the ERP project should be able to develop the company's internal business process and to enhance the employee's personal skills after collaborating with external parties (ERP consultants). The aims of ERP implementation for the companies rely on reducing operational costs, improving the efficiency of corporate processes,

increasing responsiveness to enterprise customers, and integration of data between departments.

The achievement of this goal is obtained by standardizing the company process, and trying to establish an optimal system based on the best practices of the company [22]. The competency of the project managers is measured by such indicators as project manager has demonstrable performance, project manager has knowledge and skill, project manager has personality characteristic [23].

Quality can work well if there is a commitment from the top management by providing time and resources over a certain period of time when implementing TQM. The implementation failures often occur in companies due to the lack of supports from the top management. Failure that occurs can be caused by an ambiguous vision of quality from the top management, a misunderstanding of the management role in quality management, and an unclear program from the top management about quality. Management commitment is the main thing for companies to implement the quality system [24]. Based on the above explanation, it can be formulated that the first and second hypothesis are: first hypothesis: the increased managers' competency is able to provide the accelerated integrated design process. Second hypothesis: the increased managers' competency is able to increase the integrated quality management.

Increasing ability of the employees will provide faster TQM implementation process [19]. The quality management supports a stable enterprise system and can keep the company consistently to always develop the process in order to focus on the customers and the continuous improvement [25]. The process at the company should be designed to make it easy to know the business process owner, the process ownership restrictions, the process integration, and the steps of each process by building the business blue print. This condition can also be used as the statistical process control so that the quality system can maintain the good product [26].

The indicators for the design process are the integration of data among departments within the company, the regular coordination in improving the design of the corporate systems, and the existence integrated inventory systems in real time in the company. The ERP used by the company can redesign the company's business process to provide the speed and agility of the company's operational system [27]. The design process using ERP technology can also change the manual control system to the ERP control system [28]. This can be done when the company has integrated the relevant departments through the process design modules that are available and customized so that the achievement of the ERP system is obtained optimally. Optimization can be achieved by setting the business process standards, business rules, information system reporting. The standardization that is performed on quality management module system is a quality material acceptance system with the standard business process, standardized production quality control system, and reporting system on the standardized ERP system. Based on the above explanation, the third hypothesis and fourth hypothesis are formulated as following: third hypothesis: the process design is able to provide a positive and significant impact on the integrated quality management system. Fourth Hypothesis: the process design can increase the company performance.

Research conducted by Demirbag *et al.*, [29] states that TQM can improve the product quality and can be continuously used to improve the company performance. The results of Chzee's [30] study states that the implementation of TQM in Malaysia provides

an improved performance. A research conducted by Cetindere *et al.*, [31] shows that the total quality management, which is consisting of training, continuous improvement, internal and external customer, and training, have a positive and significant influence simultaneously to the company performance. The indicator used for the quality management is including the decreasing defect rate, better material price than competitor, better supplier delivery performance, better supplier response time, better coordination among purchasing department, and increased order forecast accuracy. While the indicators for organizational performance can be derived from the company's performance, which includes the increased product quality, the increased delivery accuracy time, the increasing productivity, and the increasing response to customers. Based on the above explanation, the fifth hypothesis can be constructed as follows: fifth hypothesis, the integrated quality management can bring an improved corporate performance.

3. RESEARCH METHOD

Data collection techniques are using questionnaires that are distributed to manufacturing companies to obtain information about the competence of project managers in completing ERP implementation projects, especially on the quality management module (QM module). This questionnaire is intended to obtain descriptive data to test hypotheses and model studies. To obtain the data, the questionnaire is using closed questions, made in such a way that the respondents are limited in giving answers to some alternatives only or to one answer only. The distribution of questionnaires is using the likert scale: 5 = strongly agree, 4 = agree, 3 = less agree, 2 = disagree, and 1 = strongly disagree. Data collection is completed by distributing questionnaires to the company's project manager or those who are fully responsible during the project work or key users who develops the module quality management.

The questionnaires are distributed to manufacturing companies in East Java that have implemented ERP. As many as 102 questionnaires are distributed and 71 questionnaires are returned. Only 38 respondents are the project manager implemented implementation of ERP or key user quality management module so that the response rate is 37.25%. To test the five predefined hypotheses, PLS (Partial least Square) is used. The path diagram shows the flow of influence between the independent variables and the dependent variables, i.e. first, the competency manager variables affect the project design process; second, the competency manager project variables influence the implementation of the quality management module. Meanwhile, the dependent variables with other dependent variables are the design process influencing the implementation quality management module, the design process influencing the organization's performance, and the implementation of quality management module influencing the organization's performance.

To obtain representative data for this research, the instruments for analysis need to be tested to determine the reliability and validity of the instrument, therefore the validity test and reliability test are conducted to examine the instrument. The instruments for analysis have met the requirements, as the instruments are valid if the Corrected Item-Total Correlation of the instruments is ≥ 0.3 . Based on Table 1, it is obtained that the smallest Corrected Item-Total Correlation value of the manager competency variable is on the indicator of demonstrable performance with 0.594; so it is valid. For the second variable, the design process, the smallest value is on the company real time inventory system integration indicator with 0.582. For the third variable, which is the quality

management, the smallest indicator value is on the level of decreased defect by 0.333. For the last variable, which is the organization performance, the smallest indicator value is on the increased product quality of 0.391. Based on the validity test, all indicators are valid, meaning they are able to measure the variables. The reliability test is obtained from Cronbach's Alpha value, where an instrument is reliable if the coefficient of reliability or alpha of 0.6 [32], [33]. The reliability value for all variables is above the value of 0.6 so all variables are reliable.

Table 1. Loading factor and instruments analysis

Variable	Indicators Description	Loading Factor	Corrected Item-Total Correlation	Alpha (α)
Competency Manager	Demonstrable performance	0.859	0.594	0.806
	Knowledge and skill	0.779	0.760	
	Personality characteristic	0.916	0.631	
Design Process	Data integration among departments	0.874	0.656	0.716
	Routine coordination to improve system	0.928	0.779	
	Real time integrated inventory system	0.754	0.582	
Quality Management	Decreased defect	0.570	0.333	0.817
	Better material price than competitors	0.459	0.373	
	Better supplier delivery performance	0.768	0.573	
	Better supplier response time	0.732	0.501	
	Better coordination among departments	0.602	0.524	
	More accurate in order forecasting	0.671	0.403	
Organization Performance	Better product quality	0.653	0.391	0.641
	More accurate delivery time	0.672	0.571	
	Increased productivity	0.809	0.449	
	Better response to customers	0.626	0.637	

4. DATA ANALYSIS

The test conducted on 38 respondents, or those who are implementing the ERP module, is using PLS (Partial Least Square). The results of the five hypotheses are in Table 2.

Table 2. The result of the hypotheses tests

Hypotheses	original sample estimate	mean of sub samples	Standard deviation	T-Statistic
Competency QM ->	0.553	0.582	0.152	3.639
Design -> QM	0.164	0.164	0.194	0.848
Competency Design ->	0.730	0.758	0.044	16.768
QM -> OP	0.446	0.389	0.160	3.320
Design -> OP	0.692	0.664	0.092	7.547

From the data processing using SEM PLS in Table 2, the competency of project manager variable to the implementation of the quality management module gets the t-statistic value of 3.639 > 1.96; so the first hypothesis is acceptable. This means that there is a positive and significant influence from the manager's competency on the implementation of the quality management module of 0.553. The competency of the project managers in implementing ERP is demonstrating by their performance, especially in their focused attention to the projects and the ability to take risks. The competency is also demonstrating through a good characteristic personality, which is able to give improvement to accelerate the implementation of quality management module. The manager's competency can also increase the supplier's response.

From the data processing using SEM PLS in Table 2, the design process toward implementation quality management module is obtained the t-statistic of 0.848 < 1.96; therefore, the third hypothesis is rejected. It means that there is no influence from the design process to the implementation of quality management module. This suggests that the integration of data among departments within the company and the regular coordination used by the company in the implementation of ERP modules have not been able to accelerate the implementation quality module of ERP in the company. This is due to the inability of the quality management module system to accommodate the company's operational system in detail. The inability of this system cannot surrender an impact on the quality management performance that is seen from the timely delivery and faster response time of the company's suppliers. This condition brings a negative consequence in purchasing planning as it is not on schedule so the purchasing plan has to reschedule the orders or to customize the module. The data processing using SEM PLS in Table 2 reveals that the manager project competency variable to the design process has a t-statistic value of 16.768 > 1.96; so, the second hypothesis is accepted. It means there is a positive and significant influence from the manager project competency to the design process of 0.730. The manager project competency implementing ERP together with the demonstrable performances are consisting of the management focus on project and the ability to take risks. The project manager competency with a good characteristic personality is able to provide the acceleration to the company's

operational design process in accordance with the company's ERP system.

According to the data processing using SEM PLS in Table 2, the design process variable to operation performance has the t-statistic value of 7.547 > 1.96; then the fourth hypothesis is accepted. This means that there is a positive and significant influence from the design process to the operation performance of 0.692. The company's design process is integrating data between departments and continuously coordinating departments in the company so it is able to provide an increased productivity performance and product delivery time to the company's customers.

The data processing using SEM PLS in Table 2, the implementation of the quality management module variable to the operation performance gets t-statistic value of 3.320 > 1.96; then the fifth hypothesis is accepted. This means that the implementation quality module in the company has not been able to fully describe the detail quality management system in the ERP system. However, the overall ERP implementation is able to provide an increased delivery performance of suppliers, with faster and better response time assisted by the ERP system. This can be seen from the increased company productivity and the time of completion of the customer products.

5. RESEARCH IMPLICATIONS

The company's competency manager project in implementing ERP modules can provide an improved design process, more effectively through the coordination of departments in the company and the integration of data between departments. The competency of manager project is also able to provide an improved performance of the company's suppliers in terms of providing product delivery response and accuracy of material delivery required by the company. The design process undertaken by the relevant departments within the company, especially in the quality management department, has not been able to accommodate the real time of the company's operational quality system [33], so it does not have an impact on ERP implementation quality module. However, the impact from the process design is able to provide an improvement in the company's operational performance which is seen in the improved company productivity and the completion time of the company's product. The implementation quality module ERP as measured by quality performance indicators is able to improve the performance of the organization. This research needs further refinement by choosing the quality department manager as the right respondent, not the ERP project manager. The next stage of the research needs to be an understanding of ERP providers to introduce the importance of implementing quality management modules for companies, as only few companies are interested in the implementation of quality modules. This condition is very different from the corporate system which have implemented TQM fully and already had the ISO certification in producing products.

6. REFERENCES

- [1] Love, P.E.D., Irani, Z., and Edwards, D.J. 2003. Learning to reduce rework in projects: analysis of firms organizational learning and quality practices. *Project Manager J.* 34, 3 (Sep. 2003), 13–25.
- [2] Meredith, J.R. and Mantel, S.J. 2004. *Project Management a Managerial Approach 4/e*. Published by John Wiley & Sons, Presentation prepared by RTBM WebGroup.
- [3] Jagoda, K. and Samaranayake, P. 2017. An integrated framework for ERP system implementation. *Int. J. of*

- Accounting & Information Management* 25, 1 (Mar. 2017), 91-109.
- [4] Li, D., Zhao, Y., Zhang, L., Chen, X., and Cao, C. 2018. Impact of quality management on green innovation. *J. of Cleaner Production* 170 (Jan. 2018), 462-470.
 - [5] Baheshti, H.M. 2006. What manager should know about ERP/ERP II. *Management Research New* 29, 4 (Apr. 2006), 184-193.
 - [6] Huang, Z. 2010. A compilation research of ERP implementation critical success factors. *Issues in Information Systems* XI, 1, 507-512.
 - [7] Nah, F.H., Islam Z., and Tan. M. 2007. Empirical assessment of factors influencing success of enterprise resource planning implementations. *J. of Database Management* 18, 4 (Oct. 2007), 26-50.
 - [8] Bradley. J. 2008. Management based critical success factors in the implementation of enterprise resource planning systems. *Int. J. of Accounting Information Systems* 9 (Sep. 2008), 175-200.
 - [9] Soja, P. 2006. Success factor in ERP implementation: lesson from practice. *J. of Enterprise Information Management*, 19, 6 (Nov. 2006), 646-661.
 - [10] Loh, T.C. and Koh, S.C. 2004. Critical elements for a successful enterprise resource planning implementation in small and medium-sized enterprises. *Int. J. of Production Research* 42, 17 (Sep. 2004), 3433-3455.
 - [11] Nah, F.H., Zuckweiler, K.M., and Lau, J.L. 2003. ERP implementation: chief information officers perceptions of critical success factors. *Int. J. of Human Computer Interaction* 16, 1 (Jan. 2003), 5-22.
 - [12] Garg, P. and Garg, A. 2014. Factors influencing ERP implementation in retail sector: an empirical study from India. *J. of Enterprise Information Management* 27, 4 (Jul. 2014), 424-448.
 - [13] Ndede-Amadi, A.A. 2004. What strategic alignment, process redesign, enterprise resource planning, and e-commerce have in common: enterprise-wide computing? *Business Process Management J.* 10, 2, 184-199.
 - [14] Garg, P. 2010. Critical success factors for enterprise resource planning implementation in Indian retail industry: an exploratory study. *Int. J. of Computer Science and Inf. Security*, 8, 2 (Jun. 2010), 358-363.
 - [15] Hong, K.K. and Kim, Y.G. 2002. The critical success factors for ERP implementation: an organizational fit perspective. *Information and Management* 40, 1 (Oct. 2002), 25-40.
 - [16] Sahoo, S. and Yadav, S. 2018. Total quality management in Indian manufacturing SMEs, *Procedia-Manufacturing* 21, 541-548.
 - [17] Duran, C., Çetindere, A., and Şahan, Ö. 2014. An analysis on the relationship between total quality management practices and knowledge management: The case of Eskişehir. *Procedia-Social and Behavioral Sciences* 109, 65 – 77.
 - [18] Jackson, S.A., Gopalakrishna-Remani, V., Mishra, R., and Napier, R. 2016. Examining the impact of design for environment and the mediating effect of quality management innovation on firm performance. *Int. J. Production Economics* 173 (Mar. 2016), 142-152.
 - [19] Bolatan, G.I.S., Gozlu, S., Alpan, L., and Zaim, S. 2016. The impact of technology transfer performance on total quality management and quality performance, *Procedia-Social and Behavioral Sciences* 235, 746 – 755.
 - [20] Bingi, P., Sharma, M., and Godla, J. 1999. Critical issues affecting an ERP implementation. *Inf. Systems Management* 16, 3, 7-14.
 - [21] Elragal, A. and Haddara, M. 2013. The impact of ERP partnership formation regulations on the failure of ERP implementations. *Procedia Technology* 9, 527 – 535.
 - [22] Ram, J., Corkindale, D., and Wu, M.-L. 2013. Implementation critical success factors (CSFs) for ERP: do they contribute to implementation success and post-implementation Performance? *Int. J. of Production Economics* 144, 1 (Jul. 2013), 157-174
 - [23] Crawford, L. 2005. Senior management perceptions of project management competence. *Int. J. of Project Management* 23 (Jan. 2005), 7-16.
 - [24] Luo, X., Wieseke, J., and Homburg, C. 2012. Incentivizing CEOs to build customer and employee firm relations for higher customer satisfaction and firm value. *J. Acad. Mark. Sci.* 40, 6 (Nov. 2012), 745-758.
 - [25] Siva, V., Gremyr, I., Bergquist, B., Garvare, R., Zobel, T., and Isaksson, R. 2016. The support of quality management to sustainable development: a literature review. *J. of Cleaner Production* 138 (Dec. 2016), 148-157.
 - [26] Kaynak, H. and Hartley, J.L. 2008. A replication and extension of quality management into the supply chain. *J. of Operations Management* 26 (Jul. 2008), 468-489.
 - [27] Seethamraju, R. and Sundar, D.K. 2013. Influence of ERP systems on business process agility, *IIMB Management Review* 25 (Sep. 2013), 137-149.
 - [28] Grabski, S.V., Leech, S.A., and Schmidt, P.J. 2011. A review of ERP research: a future agenda for accounting information systems. *J. of Information Systems*, 25, 1 (Mar. 2011), 37-78.
 - [29] Demirbag, M., Tatoglu, E., Tekinkus, M., and Zaim, S. 2006. An analysis of the relationship between total quality management implementation and organizational performance Turkish SMEs. *J. of Manufacturing Technology Management* 17, 6 (Aug. 2006), 829-847.
 - [30] Chzee, C.C. 2014. QM practices, service quality with outsourcing sustains managerial performance. *J. of Research in Business and Management* 2, 9, 62-75.
 - [31] Cetindere, A., Duran, C., and Yetisen, M.S. 2015. The effects of total quality management on the business performance: an application in the Province of Kütahya. *Procedia Economics and Finance* 23, 1376 – 1382.
 - [32] Ghozali, I. 2012. *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: BP Universitas Diponegoro, 2012.
 - [33] Suprpto, W., Tarigan, Z.J.H., and Basana, S. R. 2017. The influence of ERP system to the company performance seen through innovation process, information quality, and information sharing as the intervening variables. In *Proceeding of the International Conference on Education and Multimedia Technology* (Singapore, July 09-11, 2017).