**Book of Abstract
Conference Proceeding**

ICISETIM

International Conference on
Industrial and Systems Engineering,
Technology, Innovation, and Management

*Conference Theme:
Innovative Contributions Towards Sustainability
to Encounter the Impacts of Covid-19 Pandemic*

Virtual Conference
April 22-23, 2022

Host

UNIVERSITAS
KRISTEN
MARANATHA

research synergy

Co-Host

中原大學
Chung Yuan Christian University

DE LA SALLE UNIVERSITY
MANILA

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Book of Abstract Conference Proceeding

The International Conference on Industrial and Systems Engineering, Technology, Innovation, and Management (ICISETIM)

Conference Theme:
Innovative Contributions Towards Sustainability
to Encounter the Impacts of Covid-19 Pandemic

Virtual Conference, Indonesia
April 22-23, 2022
Yayasan Sinergi Riset dan Edukasi

Book of Abstract Conference Proceeding

The International Conference on Industrial and Systems Engineering, Technology, Innovation, and Management (ICISETIM)

FOREWORD

Universitas Kristen Maranatha (Maranatha Christian University) is one of the best private universities in Bandung, West Java, Indonesia. The history of Maranatha Christian University began in 1965. Faculty of Medicine became the pillar for the founding of Maranatha Christian University as well as beginning the pace of higher education in Indonesia. At present, Maranatha Christian University has nine faculties consisting of 28 study programs, covering undergraduate, postgraduate, diploma and professional program. Those faculties are: Faculty of Medicine, Faculty of Dentistry, Faculty of Psychology, Faculty of Engineering, Faculty of Information Technology, Faculty of Business, Faculty of Law, Faculty of Languages and Cultures, Faculty of Arts and Design.

The vision of Maranatha Christian University is to become an independent and self-supporting institution of higher education which explores and instills knowledge in all areas of the arts and sciences, motivated by the love and living examples of Jesus Christ. **The mission** of the University is to educate competent scholars, create a conducive atmosphere, and practice christian values as an effort to develop science, technology, and art in line with carrying out the threefold purpose of higher education: education, research and community services.

Maranatha Christian University has more than 8.000 student body and 40.000 graduates taking part in various sectors in Indonesia and overseas. Having the necessary tools for education coupled with comfortable and conducive atmosphere is one key factor in an effective process of education. Moreover, a holistic approach is taken in carrying out education at Maranatha Christian University, covering both academic and nonacademic elements, including the support of high-quality infrastructure, competent lecturers, and adaptive curriculums. Emphasis is placed on equipping students with personal development, leadership, soft skills and character development as an integrated person upholding **three key values:** integrity, care and excellence.

Integrity · Care · Excellence

Maranatha Christian University is continually developing relationships with national and international partners from academic world as well as industries. These partnerships aim to open up new opportunities and to promote innovations in the outcomes of the education, or in the education process itself.

https://www.maranatha.edu/profile/profil-universitas

https://icisetim.com/

Research Synergy Foundation is a digital social enterprise platform that focuses on developing Research Ecosystem towards outstanding global scholars. We built collaborative networks among researchers, lecturers, scholars, and practitioners globally for the realization of knowledge acceleration. We promote scientific journals among countries as an equitable distribution tool of knowledge. We open research collaboration opportunities among countries, educational institutions, organizations and among researchers as an effort to increase capabilities.

Known as a catalyst and media collaborator among researchers around the world is the achievement that we seek through this organization. By using the media of International Conference which reaches all researcher around the world we are committed to spread our vision to create opportunities for promotion, collaboration and diffusion of knowledge that is evenly distributed around the world

Our Vision:

As global social enterprise that will make wider impact and encourage acceleration quality of knowledge among scholars.

Our Mission:

First, developing a research ecosystem towards outstanding global scholars. Second, Promoting scientific journals among countries as an equitable distribution tool of knowledge. Third, opening research collaboration opportunities among countries, educational institutions, organizations and among researchers as an effort to increase capabilities. Fourth, creating global scientific forum of disciplinary forums to encourage strong diffusion and dissemination for innovation.

https://www.researchsynergy.org/

Our Mission

Chung Yuan Christian University is founded on the spirit of Christian love for the world. With faith, hope, and love, we endeavor to promote higher education for the benefit of the Chinese people, aiming at the pursuit and advancement of genuine knowledge in order to maintain our cultural heritage and, thus, to serve humankind.

Educational Philosophy

We respect the dignity of nature and of humanity, and we seek to promote harmony between the Creator, oneself, all other human beings, and the entire creation through the wise and prudent utilization of professional knowledge of the sciences and the humanities. We recognize individual differences with respect to talents, character, capability, and background. We believe that full development of one's potential signifies success.

We believe that education has broader goals than merely exploring knowledge and improving technology. Education is also a process of building character and searching for the meaning of life and oneself. We are convinced that love is the principal guiding force in education. We, teachers and students alike, pursue mutual growth through instruction by both words and deeds, in a spirit of love and respect for one another.

We respect academic freedom and autonomy, believing that knowledge produces understanding of the truth, and that this understanding makes people genuinely free. We believe that education through honest, diligent pursuit and practical experience is the best means of obtaining true knowledge.

We are proud of the University's tradition of fearing God, loving our country, respecting one another's work in a spirit of teamwork, and appreciating simplicity and sincerity.

https://www.cycu.edu.tw/eng/misson.html

https://www.cycu.edu.tw/eng/Edu_Philosophy.html

De La Salle University is an internationally recognized Catholic university in the Philippines established by the Brothers of the Christian Schools in 1911. Inspired by the charism of St. John Baptist de La Salle, the University community, together and by association, provides quality human and Christian education by teaching minds, touching hearts, and transforming lives.

Our Vision - Mission:

A leading learner-centered and research University bridging faith and scholarship, attuned to a sustainable Earth, and in the service of Church and society, especially the poor and marginalized

Core Values:

Faith
DLSU is committed to nurturing a community of distinguished and morally upright scholars that harmonizes faith and life with contemporary knowledge in order to generate and propagate new knowledge for human development and social transformation.

Service
DLSU is committed to being a resource for Church and nation and to being socially responsible in building a just, peaceful, stable, and progressive Filipino nation.

Communion
DLSU is committed to building a community of leaders, competent professionals, scholars, researchers, and entrepreneurs, who will participate actively in improving the quality of life in Philippine society within the perspective of Christian ideals and values.

https://www.dlsu.edu.ph/inside/vision-mission/

TRANSFORMING THE SOCIETY FOR THE GLORY OF GOD

Petra is where digital leaders are made and forged in Christian values. We invite you to become a part of a global and caring university, studying under accomplished and experienced faculty with fellow scholars who share the same vision—to make a lasting impact on the world.

Our Vision:

To be a world-leading Christian University that transforms the society for the glory of God.

Our Mission:

- *Maintaining PCU's INTEGRITY as a Christian university.*

- *Increasing PCU's CREDIBILITY to be a world-class university.*

- *Building the CIVILITY of the people and state in PCU to form, develop, and strengthen Civil Society.*

https://petra.ac.id/about

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ORGANIZING COMMITTEE

PROGRAM COMMITTEE

Conference Chair:

David Try Liputra, S.T., M.T.
Universitas Kristen Maranatha, Indonesia

Co – Conference Chair

Dr. Hendrati Dwi Mulyaningsih
Research Synergy Foundation

Organizing Committee

Dr. Ir. Christina Wirawan, M.T.
Universitas Kristen Maranatha, Indonesia

Yulianti, S.T., M.T.
Universitas Kristen Maranatha, Indonesia

Santi Rahmawati
Research Synergy Foundation (RSF)

Ani Wahyu Rachmawati
Research Synergy Foundation (RSF)

Diah Rahmadani
Research Synergy Foundation (RSF)

Refani Putri S F
Research Synergy Foundation (RSF)

Risky Adha
Research Synergy Foundation (RSF)

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Dr. Benny Budiawan Tjandrasa, S.E., M.M. – Universitas Kristen Maranatha, Indonesia

Catharina Badra Nawangpalupi, Ph.D. – Universitas Katolik Parahyangan, Indonesia

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Sunday Alexander Theophilus Noya, S.T., MProcMgnt. – Universitas Ma Chung, Indonesia

Dr. Dra. Amelia Santoso, M.T. – Universitas Surabaya, Indonesia

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Prof. Rosemary R. Seva – De La Salle University, Philippines

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Gede Agus Widyadana, Ph.D. – Universitas Kristen Petra, Indonesia

Yung-Tsan Jou, Ph.D. – Chung Yuan Christian University, Taiwan

Wei-Jung Shiang, Ph.D. – Chung Yuan Christian University, Taiwan

Po-Tsang Huang, Ph.D. – Chung Yuan Christian University, Taiwan

WELCOMING REMARKS ICISETIM2022 – DAY 1

Good Morning Everyone,
Ladies and gentlemen, distinguished participants, as the Conference Chair, on behalf of the Organizing Committee, we would like to welcome you to the International Conference on Industrial and Systems Engineering, Technology, Innovation, and Management (ICISETIM) 2022 – DAY 1.

In this occasion, we would like to express our sincere gratitude to Prof. Ir. Sri Widiyantoro, M.Sc., Ph.D. as Rector of Universitas Kristen Maranatha, Dr. Yosafat Aji Pranata, S.T., M.T. as Dean of Faculty of Engineering, Universitas Kristen Maranatha, Ms. Christina, S.T., M.T. as the Head of Bachelor Program in Industrial Engineering, Universitas Kristen Maranatha, Dr. Hendrati Dwi Mulyaningsih, S.E., M.M. as the Co-Conference Chair of ICISETIM2022 and also the Founder & Chairperson of Research Synergy Foundation;

all of the Keynote Speakers in this event: your honorable Prof. Chew Ek Peng from National University of Singapore; your honorable Prof. Rosemary R. Seva from De La Salle University, Philippines, your honorable Dr. Ir. Christina Wirawan, M.T. from Universitas Kristen Maranatha, Indonesia;

and all of the Moderators and Session Chairs from various countries:
• 	Dr. Indah Victoria Sandroto, S.T., M.T. - Universitas Kristen Maranatha, Indonesia
• 	Ms. Rainisa Maini Heryanto, S.T., M.T. - Universitas Kristen Maranatha, Indonesia
• 	Dr. Miriam F. Bongo - De La Salle University, Philippines
• 	Dr. Ng Siew Imm - Universiti Putra Malaysia, Malaysia
• 	Prof. Dr. Daniel Marco-Stefan Kleber - Modul University Dubai, UAE
• 	Dr. Rita E. Diloy - Asian Institute of Maritime Studies, Philippines
• 	Ts. Dr. Ooi Shih Yin - Multimedia University, Malaysia
• 	Pei-Chia Wang, Ph.D. - Chung Yuan Christian University, Taiwan
• 	I Gede Agus Widyadana, Ph.D. - Universitas Kristen Petra, Indonesia
• 	Dr. Reshma V. K., Ph.D. - Hindusthan College of Engineering and Technology, India
• 	Prof. Zachariah John A. Belmonte - Technological University of the Philippines, Philippines
• 	Engr. Christopher C. Mira – Polytechnic University of the Philippines
• 	Dr. Lina Anatan, S.E., M.Si. - Universitas Kristen Maranatha, Indonesia
• 	Dr. Anamie R. Selencio - Asian Institute of Maritime Studies, Philippines

We would also like to express our appreciation to all of the Scientific Reviewers for their contributions to this event.

This international conference which will be held virtually on 22 - 23 April 2022 is jointly organized by Universitas Kristen Maranatha and Research Synergy Foundation, supported by the Co-Hosts from:
• 	Chung Yuan Christian University, Taiwan
• 	De La Salle University, Philippines
• 	Universitas Kristen Petra, Indonesia

ICISETIM2022 has the theme "Innovative Contributions Towards Sustainability to Encounter the Impacts of Covid-19 Pandemic". Therefore, this conference aims to provide a global forum to share ideas, knowledge, and experiences in the fields of Industrial and Systems Engineering, Technology, Innovation, and Management, especially to overcome the challenges faced as a result of Covid-19 Pandemic.

To conclude, we sincerely hope that this two-day conference will run successfully, and with your cooperation, you will build a great research ecosystem for a better future for our world. Thank you.

CONFERENCE CHAIR MESSAGE

We are delighted to welcome you to **The International Conference on Industrial and Systems Engineering, Technology, Innovation, and Management (ICISETIM)** by Universitas Kristen Maranatha, Indonesia and Research Synergy Foundation (RSF) that held virtually on April 22-23, 2022.

This conference not only give you global forum to share and exchange idea, research, and work. But also, provide wider network and research ecosystem for further collaboration and projects. We are glad to share these good opportunities in the scientific community, that will be offered only for all participants who participate in the conference.

It has been our privilege to convene this conference. Our sincere thanks, to the conference organizing committee; to the Program Chairs for their wise advice and brilliant suggestion on organizing the technical program and to the Program Committee for their through and timely reviewing of the papers. Recognition should go to the Local Organizing Committee members who have all worked extremely hard for the details of important aspects of the conference programs and social activities.

We welcome you to this conference and hope that this year's conference will challenge and inspire you, and result in new knowledge, collaborations, and friendships.

Best regards,

David Try Liputra, S.T., M.T.

Conference Chair of ICISETIM 2022

CONFERENCE PROGRAM

Friday, April 22nd, 2022

CONFERENCE PROGRAM International Conference on Industrial and Systems Engineering, Technology, Innovation, and Management (ICISETIM) VIRTUAL CONFERENCE: 22-23 April 2022	
DAY 1 - Friday, 22 April 2022	

Time (UTC+7)			Dur'	Activity
Main Room				Link Zoom for ICISETIM https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09 Meeting ID: 867 5689 0727 Passcode: icisetim
7:50	-	8:00	0:10	**Participant Login and Join Virtual Conference by ZOOM**
8:00	-	8:15	0:15	**Welcome Address** and Conference Publication Announcement by MC Listening the national anthem "Indonesia Raya"
8:15	-	8:20	0:05	**Doa Recitation**

8:20	-	8:30	0:10	**Welcome Remarks of ICISETIM Day 1** Mr. David Try Liputra, S.T., M.T. Conference Chair of ICISETIM Universitas Kristen Maranatha, Indonesia
8:30	-	8:40	0:10	**Opening Speech** Prof. Ir. Sri Widiyantoro, M.Sc., Ph.D., IPU Rector of Universitas Kristen Maranatha, Indonesia
8:40	-	8:50	0:10	**Speech** Dr. Yosafat Aji Pranata, S.T., M.T. Dean of Faculty of Engineering, Universitas Kristen Maranatha, Indonesia
8:50	-	9:00	0:10	**Speech** Ms. Christina, S.T., M.T. Head of Bachelor Program in Industrial Engineering, Universitas Kristen Maranatha, Indonesia
9:00	-	9:15	0:15	**Global Research Ecosystem Introduction** Dr. Hendrati Dwi Mulyaningsih Co-Conference Chair of ICISETIM Founder & Chairperson of Research Synergy Foundation
9:15	-	9:20	0:05	**Token of Appreciation for Co-Host:** Chung Yuan Christian University, Taiwan. De La Salle University, Philippines. Universitas Kristen Petra, Indonesia.
9:15	-	9:20	0:05	**E-Group Photo**
9:20	-	9:30	0:10	**ICISETIM Moderator Introduction & Opening of Keynote Speaker Panel Session Day 1** Dr. Indah Victoria Sandroto, S.T., M.T.

9:30	-	10:10	0:40	**Keynote Speaker 1: Prof. Chew Ek Peng** National University of Singapore
10:10	-	10:50	0:40	**Keynote Speaker 2: Prof. Rosemary R. Seva** De La Salle University, Philippines
10:50	-	11:20	0:30	**Discussion (Question & Answer) Session**
11:20	-	11:25	0:05	**Token of Appreciation for Keynote Speakers & Moderator**
11:25	-	11:30	0:05	**Announcement and preparation of Online Parallel Presentation Session**
11:30	-	12:55	1:25	**Break** (Video played: University Profile, and Industrial Engineering Program of Universitas Kristen Maranatha; Research Synergy Foundation Profile; ICISETIM Agenda & Sessions)
Breakout Rooms 1 & 2				**DAY 1 - Online Presentation Session**
12:55	-	13:05	0:10	**Session Chair Introduction at each parallel breakout rooms** **Breakout Room 1: Dr. Miriam F. Bongo - De La Salle University, Philippines** **Dr. Ng Siew Imm - Universiti Putra Malaysia, Malaysia** **Breakout Room 2: Prof. Dr. Daniel Marco-Stefan Kleber - Modul University Dubai, UAE** **Dr. Rita E. Diloy - Asian Institute of Maritime Studies, Philippines**
13:05	-	15:05	2:00	**Online Presentation Session at each parallel breakout rooms: max. 8 presenters** **15 minutes/presenter**
15:05	-	15:15	0:10	Awarding Certificate of Presentation, Testimonial, and Post-conference information announcement

15:15	-	15:35	0:20	Short Break and Back to Main Room for ICISETIM Day 1 Closing Ceremony
Main Room				Link Zoom for ICISETIM https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09 Meeting ID: 867 5689 0727 Passcode: icisetim
15:35	-	15:50	0:15	**Awarding Ceremony** **Best Presentation** **Session Chair**
15:50	-	15:55	0:05	**Closing Speech of DAY 1** Ms. Christina, S.T., M.T. Head of Bachelor Program in Industrial Engineering, Universitas Kristen Maranatha, Indonesia

Saturday, April 23rd, 2022

https://icisetim.com/			
DAY 2 - Saturday, 23 April 2022			
Time (UTC+7)		Dur'	Activity
Main Room			Link Zoom for ICISETIM https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09 Meeting ID: 867 5689 0727 Passcode: icisetim
7:50	-	8:00	0:10	**Participant Login and Join Virtual Conference by ZOOM**
8:00	-	8:15	0:15	Welcome Address and Conference Publication Announcement by MC
8:15	-	8:25	0:10	**Welcome Remarks of ICISETIM Day 2** Mr. David Try Liputra, S.T., M.T. Conference Chair of ICISETIM Universitas Kristen Maranatha, Indonesia
8:25	-	8:35	0:10	**ICISETIM Moderator Introduction & Opening of Keynote Speaker Session Day 2** Ms. Rainisa Maini Heryanto, S.T., M.T.
8:35	-	9:15	0:40	**Keynote Speaker 3: Dr. Christina Wirawan** Universitas Kristen Maranatha, Indonesia

9:15	-	9:25	0:10	**Discussion (Question & Answer) Session**
9:25	-	9:30	0:05	**Token of Appreciation for Keynote Speaker & Moderator**
9:30	-	9:35	0:05	**E-Group Photo**
9:35	-	9:40	0:05	**Announcement and preparation of Online Parallel Presentation Session**
Breakout Rooms 1 & 2				**DAY 2 - Online Presentation Session 1**
9:40	-	9:50	0:10	**Session Chair Introduction at each parallel breakout rooms** **Breakout Room 1: Ts. Dr. Ooi Shih Yin - Multimedia University, Malaysia** **Pei-Chia Wang, Ph.D. - Chung Yuan Christian University, Taiwan** **Breakout Room 2: I Gede Agus Widyadana, Ph.D. - Universitas Kristen Petra, Indonesia** **Dr. Reshma V. K. Ph.D. - Hindusthan College of Engineering and Technology, India**
9:50	-	11:50	2:00	**Online Presentation Session at each parallel breakout rooms: max. 8 presenters** **15 minutes/presenter**
11:50	-	12:00	0:10	Awarding Certificate of Presentation, Testimonial, and Post-conference information announcement
12:00	-	13:00	1:00	**Break** (Video played: University Profile, and Industrial Engineering Program of Universitas Kristen Maranatha; Research Synergy Foundation Profile; ICISETIM Agenda & Sessions)
Breakout Rooms 1 & 2				**DAY 2 - Online Presentation Session 2**
13:00	-	13:10	0:10	**Session Chair Introduction at each parallel breakout rooms** **Breakout Room 1: Prof. Zachariah john A. Belmonte - Technological University of the Philippines, Philippines** **Engr. Christopher C. Mira - Polytechnic University of the Philippines**

				Breakout Room 2: Dr. Lina Anatan, S.E., M.Si. - Universitas Kristen Maranatha, Indonesia **Dr. Anamie R. Selencio - Asian Institute of Maritime Studies, Philippines**
13:10	-	15:10	2:00	**Online Presentation Session at each parallel breakout rooms: max. 8 presenters** **15 minutes/presenter**
15:10	-	15:20	0:10	Awarding Certificate of Presentation, Testimonial, and Post-conference information announcement
15:20	-	15:40	0:20	Short Break and Back to Main Room for ICISETIM Day 2 Closing Ceremony
Main Room				Link Zoom for ICISETIM https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09 Meeting ID: 867 5689 0727 Passcode: icisetim
15:40	-	15:55	0:15	**Awarding Ceremony** **Best Presentation** **Best Paper** **Session Chair**
15:55	-	16:00	0:05	**Closing Speech of DAY 2** Ms. Christina, S.T., M.T. Head of Bachelor Program in Industrial Engineering, Universitas Kristen Maranatha, Indonesia
16:00	-	16:05	0:05	**Doa Recitation**

List of Presenters

Track Technology and Innovation Management

Paper ID	Presenter	Paper Title
ISM22106	Roland Yosua Hasudungan Silitonga	Assessment of Managerial Innovation in a Dairy Company
ISM22111	Alexander Christian	A Proposal on How to Use Software Reliability Growth Model to Build Confidence in Dashboard Testing
ISM22120	Khanis Satya Nugraha	Two-Stage Memory Allocation using AHP & Knapsack at PT Berca Hardayaperkasa
ISM22126	Jani Rahardjo	Implementation of Six Sigma Philosophy and 6S Principles on Bag Making Warehouse at PT. X
ISM22115	Ezekiel Landicho Bernardo	Explanatory Modelling of Factors Influencing Senior Citizen Telehealth Adoption in COVID-19 Pandemic

Track Knowledge Management

Paper ID	Presenter	Paper Title
ISM22108	Jiabao Wu	Knowledge Management for Thai SMEs Exporting Thai Local Products from Thailand to China during COVID-19
ISM22130	Anggita Leviastuti	Empowering Women through Social Media-based Financial-Literacy Education Programme

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Meeting ID: 867 5689 0727
Passcode: icisetim

Breakout Room 2

Session Chair: Prof. Dr. Daniel Marco-Stefan Kleber & Dr. Rita E. Diloy

Track Entrepreneurship

Paper ID	Presenter	Paper Title
ISM22127	Maya Malinda	Entrepreneurship Training of Culinary Business for Micro Small Medium Entrepreneurs in Bojong Soang, Bandung, Indonesia
ISM22139	Sugih Arijanto Mukti	The Correlation of Credible Online Reviews of Skincare Products on Social Media on Brand Equity and Its Impact on Purchase Intention
ISM22135	Donard Games	Impulsivity and Entrepreneurship during and Post-Pandemic Crises

Track Sustainability Studies

Paper ID	Presenter	Paper Title
ISM22119	Shiela Mhay Rosales Dalisay	Worker-Machine Relationship based Strategy for Sustainable Management in a Machine Shop
ISM22132	Axel Varian Kurniawan	Improving Service Quality to Enhance the Sustainability of Higher Education (Case Study: Division of Creativity and Study Consultation, University X)
ISM22146	Johanna Renny Octavia	Empowering the Community to Design a Household Waste Management System Through Design Thinking

Track Supply chain management

Paper ID	Presenter	Paper Title
ISM22116	Richard Chua Li	A Process-Based Dead Stock Management Framework for Retail Chain Store Systems

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ICISETIM: Day 2 Session 1		
Link Zoom for ICISETIM https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09 Meeting ID: 867 5689 0727 Passcode: icisetim		
Breakout Room 1		
Session Chair: Ts. Dr. Ooi Shih Yin & Pei-Chia Wang, Ph.D.		

Track Big Data

Paper ID	Presenter	Paper Title
ISM22104	Feliks Prasepta Sejahtera Surbakti	Exploration of Data Scientist's Current Expertise and Qualification Gap in Indonesia (Case Study: Jakarta Metropolitan Area)
ISM22143	Chin-Hui Lia	Applying Data Mining Technique to Improve the Precision of Predicting Patients' Ultrasound Scan Time
5020	Wu Chia Yu	Applying Mathematical Programming to Solve a Case Flexible Job Shop Scheduling Problem
ISM22142	Chin-Hui Lai	Applying Random Forests and Time Series to Forecast the Hospital's Pharmacy Drug Consumption

Track Technology and Innovation Management

Paper ID	Presenter	Paper Title
ISM22147	Prima Fithri	A Review of Technology Commercialization Research: Current Research Trend and Directions for Future Research
5042	Hazhar Mohammed Ahmed	Brain Tumour Segmentation Based on MRI Image: Article Review

Track Industrial design (product design)

Paper ID	Presenter	Paper Title
ISM22131	Hsueh-Lin Chang	Application of Ranked Position Weight and Region Approach Method in Overcoming Bottlenecks in Garment Industry

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ICISETIM: Day 2 Session 1

Link Zoom for ICISETIM
https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09

Meeting ID: 867 5689 0727
Passcode: icisetim

Breakout Room 2

Session Chair: I Gede Agus Widyadana, Ph.D. & Dr. Reshma V. K. Ph.D.

Track Information Technology

Paper ID	Presenter	Paper Title
ISM22112	Gerand Boy Ocsan Elinzano	Adoption and Use of Online Bank Account Opening through e-KYC using UTAUT and its Extensions
ISM22117	Wei-Jung Shiang	A Study of AGV Collaboration with Internet of Things Concept for Collision Avoidance at Warehouse Intersection
ISM22136	Kuan-chun Huang	A Study of Design and Development of Cyber-physical Applications

Track Supply Chain Management

Paper ID	Presenter	Paper Title
ISM22134	Frittandi	The Application of U-shaped Line Balancing at Furniture Manufacturing
ISM22144	Samuel Sunya Reongjareonsook	A Short Note for Vaccine Cold Chain Network Models
ISM22137	Hendri Cahya Aprilianto	Analysis of the Factors Affecting the Palm Oil Industry's Supply Chain with Consideration of Circular Economy

Saturday, April 23, 2022

ICISETIM: Day 2 Session 2

Link Zoom for ICISETIM
https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09

Meeting ID: 867 5689 0727
Passcode: icisetim

Breakout Room 1

Session Chair: Prof. Zachariah john A. Belmonte & Engr. Christopher C. Mira

Track Ergonomics

Paper ID	Presenter	Paper Title
ISM22107	Indah Kunia Mahasih Lianny	Implementation of Single Minute Exchange of Dies at PT Ganding Toolsindo
ISM22109	Chengyi Lo	RULA and REBA Risk Assessment System: a Case Study on Filipino Salt Workers
ISM22121	Winda Halim S. T., M. T.	Coffee Shop Re-Design for Low-Vision Baristas and Visitors (Case Study at Café X Bandung)
ISM22118	Raden Roro Christina	Students' Perception of Mental Load in Collaboration Workshop in Pandemic Covid-19 Era (Case Study: Interior Design and Industrial Engineering)
ISM22145	Yen-Chun Huang	A Case Study of Ergonomic Prevention Program in a Machine Manufacture Industry

Track Operations Research

Paper ID	Presenter	Paper Title
ISM22141	Christina Wirawan	Restaurant Quality Improvement (An Indonesian Restaurant Fact)
ISM22140	Ricardo Cabrera Alindayu	A Binary Integer Linear Programming Approach for Risk Minimization of a Multi-Mode Resource-Constrained Project Scheduling Problem with Discrete Time-Cost-Quality-Risk Trade-off
5026	Yu-Chieh Chuang	Building a Smart Factory Prototype – A Case Study of Company X

Saturday, April 23, 2022

ICISETIM: Day 2 Session 2

Link Zoom for ICISETIM
https://us06web.zoom.us/j/86756890727?pwd=eXBPVllqbXJLQXpSdmdpc2hiZ2t5dz09

Meeting ID: 867 5689 0727
Passcode: icisetim

Breakout Room 2

Session Chair: Dr. Lina Anatan, S.E., M.Si. & Dr. Anamie R. Selencio

Track Enterprise Resource Planning

Paper ID	Presenter	Paper Title
ISM22129	Dr. Fitriani Tupa R. Silalahi	Industrial Agglomeration Analysis and Enterprise Resource Planning for Local Economic Growth (Case Study Medium-Large Industries at North Sumatera)

Track Management Science

Paper ID	Presenter	Paper Title
ISM22105	Tamara Regina Darmawan	Marketing a Webinar: Lesson Learnt from a Real Experiment
ISM22113	Mariana Simanjuntak	The Role of Entrepreneurial Ecosystem Co-Creation in Enhancing Sustainable Business
ISM22133	Davic Carriaga	Application of Linear Model to Determine the Relationship of Team Developmental Performance Metrics in
ISM22128	Budhi Prihartono	Development of Switching Intention Model of Hotel Industry in Bandung
ISM22138	Chung-Cho Chang	Investigating the Strategy of internationalization Architectural Design in Taiwan within the Conceptual Design International Competition
ISM22114	Laurence	Case Study to Improve Mall Patronage Intention in Indonesia

Improving Service Quality To Enhance The Sustainability Of Higher Education (Case Study: Division of Creativity and Study Consultation, University X)

Axel Varian Kurniawan[1], Yulianti Talar[2]

[1] Bachelor Program of Industrial Engineering, Maranatha Christian University, Indonesia;
[2] Bachelor Program of Industrial Engineering, Maranatha Christian University, Indonesia
[1] E-mail address alexkurniawan345@gmail.com [2] yulianti@eng.maranatha.edu

Abstract

HE institutions need to continuously improve their quality to be able to compete and maintain their sustainability. The Division of Creativity and Study Consultation (CSC) is a division at University X, which plays a major role in promoting University X. Various complaints from prospective new students and their parents have been received regarding the inaccurate delivery of the information provided. This study aims to determine the satisfaction index of prospective students/parents with the Division of CSC and propose improvements for the Division of CSC based on the expectation of prospective students/parents and the performance of the Division of CSC. Data was collected using a questionnaire based on the SERVQUAL Model. Questionnaires gathered from 100 respondents who meet the purposive sampling requirements, namely prospective students or their parents who have received services (online or offline services) from the Division of CSC from promotion until admissions, have seen the University X website/social media, and have received services from the Division of CSC via telephone or email. Consumers' expectations and performance of the Division of CSC were processed using the Gap Analysis Model, hypothesis testing for 2-paired-means, Consumer Satisfaction Index, and Importance-Performance-Analysis (IPA). A cause-effect diagram consisting of 8 Ps (People, Process, Policies, Procedures, Price, Promotion, Place, Product) is used to find out the root of the problem. The suggestions from this research are training for the Division of CSC staff, making direct and indirect delivery procedures, and developing market research to support service activities.

Keywords: *Cause Effect Diagram, Customer Satisfaction Index*, *Hypothesis Testing, Importance-Performance Analysis*, SERVQUAL

I. INTRODUCTION

The importance of service quality is very supportive to improve the delivery of information on products or services so that services satisfy consumers. Service quality is a consumer's assessment of the service it receives. In the SERVQUAL model, service quality is defined as the gap between consumers' perceptions of what happens during service transactions and their expectations of how service transactions should be carried out (Culiberg and Rojšek, 2010).
Just like other industries, higher education institutions also need to continuously improve their quality to be able to compete. Along with the dynamics of globalization, the influence of service quality is very substantial on the management and marketing of services (Warraich, Warraich and Asif, 2013). With high competitiveness, higher education institutions can continue to maintain sustainability, so that they can continue to develop and fulfill their responsibilities to educate the nation's children. The SERVQUAL model is a valuable tool for higher education institutions to measure, track, establish and maintain superior service quality (Bhuian, 2016).

In Indonesia, there are 4593 higher education institutions, consisting of 4 groups, namely Religious Higher Education Institutions, Government Higher Education Institutions, Public Higher Education, and Private Higher Education (PDDikti, 2020). A large number of higher education institutions in Indonesia certainly

form competition among the four groups. University X is a private university that has been established for 56 years, which provides education for diploma, undergraduate, graduate and profession levels. The university has 9 faculties and more than 20 study programs and has produced many graduates. To improve the quality of students and graduates, the university is equipped with various programs and facilities in academic and non-academic fields. The increasing competition among higher education institutions has spurred University X to further improve the quality of its services, both for students and employees who are already members of University X, as well as for prospective students and their parents.

The Division of Creativity and Study Consultation (CSC) is a division at University X, which is tasked with planning and supervising customer care programs, maintaining customer satisfaction, and controlling all programs related to the Division of CSC. This division plays a major role in promoting University X, by conveying information related to faculties, programs, and various other promotional activities to prospective students and their parents. Various complaints from prospective new students and their parents have been received by the Division of CSC regarding the inaccurate delivery of the information provided. Some of the complaints submitted were inaccurate information regarding the new student registration process, errors in the registration system, and unclear terms and conditions for the new student registration program. These complaints will certainly cause dissatisfaction of prospective students and their parents, especially during this Covid 19 pandemic. In Indonesia, during this pandemic, various activities outside the home are still very limited, activities at University X are still not running normally. Prospective students and their parents will rely heavily on the information provided by the Division of CSC, to obtain information about University X. The ambiguity and inaccuracy of the information/process that occurs will disserve prospective students and their parents, will also harm University X.

The Division of CSC must pay special attention to the level of service it provides, even invest in systems and tools that can be used for the development of service quality, to maintain sustainable development (Noaman *et al.*, 2017). Research with strong quantitative measurements can provide factual information for higher education institutions so that they can set clear strategies (Latif *et al.*, 2019). In addition to strategy, along with increasing service quality, the possibility of a satisfied customer will increase (Arasli, Mehtap-Smadi and Katircioglu, 2005). Consumer satisfaction is the level of a person's feelings after comparing the performance or results he feels compared to his expectations (Kotler and Keller, 2016), and customer satisfaction in the context of service, cannot be studied without paying attention to service quality (Tripathi, 2018).

The Division of CSC has never researched the satisfaction of prospective students/parents of prospective students as consumers of the services of the Division of CSC, so this research will be very beneficial for improving the quality of services of the Division of CSC. This study aims to determine the satisfaction index of prospective students/parents for the Division of CSC and propose improvements to the Division of CSC based on the expectation of prospective students/parents and the performance of the Division of CSC. Assessment from service users from the Division of CSC is very much needed because the university must provide services that are customer-centric-oriented in providing services. (Latif *et al.*, 2019).

With the improvements made, the satisfaction of prospective students and their parents will increase. Prospective students and their satisfied parents will give positive word-of-mouth for University X because satisfied consumers will provide positive word-of-mouth and recommendations to others (Bufquin, DiPietro and Partlow, 2017). So that University X still has high competitiveness to maintain its sustainability, especially from the economic aspect.

II. LITERATURE REVIEW

Service quality is a measure of how well the level of service delivered is in accordance with customer expectations (Parasuraman, Zeithaml and Berry, 1985). Defining service quality means consistently meeting customer expectations. The following are service quality attributes: Reliability, Responsiveness, Assurance, Tangibles, Empathy (Berry, Parasuraman and Zeithaml, 1994).

The SERVQUAL model is widely used in various service industry sectors in measuring quality. This model is widely used in studies related to increasing the company's competitive ability, for example in research on marketing strategies to increase consumer satisfaction for bank retail service users (Culiberg and Rojšek,

2010), consumer behavior research in several telecom industries to increase company competitiveness (Warraich, Warraich and Asif, 2013), comparing student expectations and school performance to maintain campus sustainability (Bhuian, 2016), and many other studies.

These studies show the benefits of the SERVQUAL model in assessing company quality, to improve the company's competitive ability. In research on retail banks, all dimensions in SERVQUAL significantly affect consumer satisfaction with retail bank service users, and the Assurance and Empathy dimensions are the most important factors in shaping consumer satisfaction (Culiberg and Rojšek, 2010). Research on telecom companies in Pakistan uses variables from the SERVQUAL model to compare the results of consumer assessments of five companies, with the results showing that tangibility is the dimension that has the largest score, followed by reliability (Warraich, Warraich and Asif, 2013). The negative gap between students' expectations and perceptions of school on the five SERVQUAL dimensions causes schools to experience problems in admitting new students, where the number of new students enrolling is below the break-even number (Bhuian, 2016).

As service quality increases, the likelihood that consumers will be satisfied will increase (Arasli, Mehtap-Smadi and Katircioglu, 2005). This statement is reinforced by research on 20 medium-sized restaurants in the Southeastern United States which shows that quality affects consumer satisfaction (Bufquin, DiPietro and Partlow, 2017).

Satisfaction is a person's feelings of pleasure or disappointment that arise after comparing the performance of the product thought to the expected performance (Kotler and Keller, 2016). If the product's performance is above expectations, the customer is satisfied. If the product's performance is below expectations, the customer is dissatisfied. Three factors that influence customer perceptions and expectations are Word of Mouth, personal needs, past experiences and external communications (Kotler and Keller, 2016). This statement is reinforced by research on restaurant consumers in Delhi shows that customer satisfaction has a significant influence on loyalty and the desire to do word-of-mouth (Tripathi, 2018).

III. RESEARCH METHODOLOGY

Data was collected using a questionnaire. The questionnaire consists of 3 parts, namely an assessment of the level of consumer interest (using a Likert scale), an assessment of the performance level of the Division of CSC according to consumers (using a Likert scale), and filling in the weights of each SERVQUAL dimension (using a weight of 0-100). The research variables were arranged based on the SERVQUAL model, which consisted of Reliability, Responsiveness, Assurance, Tangible, and Empathy. Questionnaires distributed to respondents who meet the purposive sampling requirements, namely prospective students or their parents who have received services (online or offline services) from the Division of CSC from promotion until admissions, have seen the University X website/social media, and have receive services from the Division of CSC via telephone or email. Of the 123 returned questionnaires, only 100 questionnaires met the criteria and were further processed.

Research questions answered in this research are:
1. Is there a significant gap between the consumer's expectation and performance of the Division of CSC based on the SERVQUAL model from Reliability, Responsiveness, Assurance, Empathy, and Tangibles?
2. How is the Customer Satisfaction Index of prospective students and their parents with the services of the Division of CSC?
3. What are the priority to improve the performance of the Division of CSC?
4. What suggestions will be made to increase the satisfaction of prospective students and their parents with the services of the Division of CSC?

Validity testing was carried out using the Pearson Product Moment Correlation Coefficient and declared valid. Reliability testing was carried out using Cronbach's Alpha and the results are the perception attribute has an alpha value of 0.956 and the expectation attribute has an alpha value of 0.962 which means high reliability because it has a value > 0.7. Data on consumers' expectations and performance of the Division of CSC were processed quantitatively using the Gap Analysis Model, hypothesis testing for 2-paired-means,

Consumer Satisfaction Index, and Importance-Performance-Analysis (IPA). The results of all data processing are analyzed together to obtain priority improvements that must be made by the Division of CSC. In giving the proposal, we used a cause-effect diagram consisting of 8Ps (People, Process, Policies, Procedures, Price, Promotion, Place, And Product), so that the proposal is right on target.

IV. FINDING AND DISCUSSION

This study aims to determine the satisfaction index of prospective students/parents with the Division of CSC and propose improvements to the Division of CSC based on the expectation of prospective students/parents and the performance of the Division of CSC. The following are some of the findings and discussions in this research:

4.1 Research question 1: Is there a significant gap between the consumer's expectation and performance of the Division of CSC based on the SERVQUAL model from Reliability, Responsiveness, Assurance, Empathy, and Tangibles?

Tabel 1
Service Quality Gap Scores.

Dimensions	Perception Mean	Expectation Mean	Gap Score Weight	Importance Gap	Weighted Scores
Reliability	3,38	3,74	-0,36	0,21	-0,08
Responsiveness	3,31	3,72	-0,41	0,23	-0,09
Assurance	3,38	3,75	-0,37	0,21	-0,08
Tangibles	3,41	3,68	-0,27	0,19	-0,05
Empathy	3,41	3,72	-0,32	0,16	-0,05
Overall	3,38	3,72	-0,34		

Overall, the Division of CSC has a negative gap of -0.34 between consumer's expectations and the Division of CSC performance, which means that service provided by the Division of CSC is still not satisfactory for prospective students and their parents. The Responsiveness dimension has the highest gap, namely willingness to help customers and provide fast service has a service quality value, which is -0.09.

Hypothesis testing for the 2-paired-means was performed to test the statistical significance of the gap score. The hypothesis testing result is that all average performance of Division of CSC is significantly smaller than the expectations of prospective students and their parents with a t value of -6.048 to -2.659. The lowest t value is owned by The Staff Serves Consumers Responsively variable. This significant negative gap means that prospective students and their parents are dissatisfied.

4.2 Research question 2: How is the Customer Satisfaction Index of prospective students and their parents with the services of the Division of CSC?

The Customer Satisfaction Index was conducted to determine the satisfaction index of prospective students and their parents for all SERVQUAL variables, using the Mean Score, Weighted Factor, and Weight Score. The CSI formula is as follows:

$$\text{Customer Satisfaction Index} = \frac{\sum_{k=1}^{p} WS_k}{HS} \times 100\% \tag{1}$$

CSI   = Customer Satisfaction Index
WS_k = Weight Score
HS   = High Scale / maximum scale used

The result of the CSI calculation = 84.85%, which means that prospective students and their parents are very satisfied with the services of the Division of CSC.

4.3 Research question 3: What are the priority to improve the performance of the Division of CSC?

Improvement priority is determined using the Importance-Performance Analysis (IPA) method and t-score form hypothesis testing for 2-pair-means. In IPA, each quadrant shows a different priority for improvement, depending on the value of consumer's importance and Division of CSC's performance.
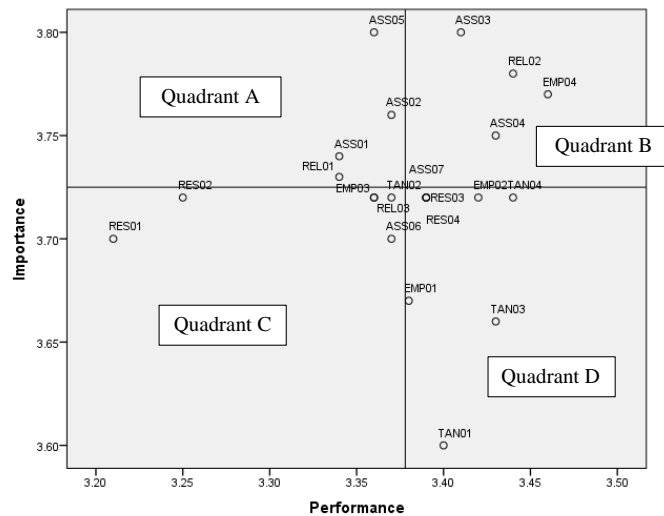
Picture 1
Importance-Performance Analysis

Based on the Importance-Performance Analysis quadrant, the 22 service quality variables are divided into 4 quadrants, namely high priority for improvement (Quadrant A), low priority for improvement (Quadrant C), variables for development (Quadrant A), and variables that are considered excessive by prospective students and their parents (Quadrant D). The result is 4 attributes that have a high priority for improvement, 6 attributes that have a low priority, 4 attributes that need to be developed, and 8 attributes that are considered excessive by consumers. All attributes are improved because they have performances value below consumer expectations.

Priority is determined by sorting the t-score value of the hypothesis testing for each quadrant. The lower the t-score, the higher the priority for improvement.

Tabel 3
SERVQUAL Attribute Improvement Priority

Priority	Dimention	Code	Attributes
High Priority	Assurance	AS05	Creativity staff and Consulting Studies convey program information clearly to consumers.
	Assurance	AS01	Staff creativity and study consulting have sufficient knowledge and information in work.
	Reliability	REL01	The suitability of the new student registration program promised by execution.
	Assurance	AS02	Staff creativity and study consulting are polite and friendly when serving consumers.
Low Priority	Responsiveness	RES01	Creativity staff and consulting studies serve consumers responsively.
	Responsiveness	RES02	Staff creativity and study consulting can respond to consumer complaints responsively.
	Empathy	EMP03	Staff creativity and study consulting are able to understand consumer needs.
	Reliability	REL03	Staff creativity and study consultation deliver a new student registration procedure consistently to consumers.
	Tangible	TAN02	Social Media Creativity and Study Consultation (Instagram: @xxx) Provide clear information.
	Assurance	AS06	Social Media Creativity and Study Consultation (Instagram: @xxx) provides information that is easy to understand.
Need Development	Reliability	REL02	Staff creativity and study consultation deliver information on new student registration programs correctly to consumers.
	Assurance	AS03	The new student registration program provided in accordance with the information received by the consumer.
	Assurance	AS04	The ability of staff creativity and study consultation provide trust to consumers.
	Empathy	EMP04	Staff creativity and study consulting seeks to understand different consumer needs and try to help.
Considered Excessive	Responsiveness	RES03	Social Media Creativity and Study Consultation (Instagram: @xxx) Provide information that is always updated.
	Responsiveness	RES04	The willingness of creativity staff and study consulting to provide information requested by consumers.
	Assurance	AS07	The new student registration procedure provided by staff creativity and study consultation is easy to understand.
	Empathy	EMP02	Ease of information submission to understand, both verbal / direct delivery and social media and web site.
	Tangible	TAN04	Web Site Creativity and Study Consultation (xxx) makes it easy for consumers to get information.
	Empathy	EMP01	Clock service creativity and study consulting can flexibly follow consumer needs, according to mutually agreed time.
	Tangible	TAN03	Web site creativity and study consulting (xxx) are easily accessible to consumers.
	Tangible	TAN01	Social Media Creativity and Study Consultation (Instagram: xxx) Looks interesting.

From the results of the Customer Satisfaction Index (CSI) and hypothesis testing for 2-paired-means, different conclusions are obtained, where based on CSI consumers are very satisfied with the services of the Division of CSC, but the results of hypothesis testing show that all variables do not satisfy consumers. This difference may occur due to differences in the processing for both methods, wherein CSI each attribute is given a weight, meaning that CSI pays attention to the level of importance of each variable but does not pay attention to the value of the standard deviation of the data. Meanwhile, in hypothesis testing, attribute weighting is not carried out but pays attention to the standard deviation of the data so that hypothesis testing is more sensitive. Researchers want to pay attention to the weight of each attribute, as well as the significance of the difference between the value of the consumer's expectation and performance of the Division of CSC so that both data processing is important for this study.

4.4 Research question 4: What suggestions will be made to increase the satisfaction of prospective students and their parents with the services of the Division of CSC?

The root of the problem is analyzed using a cause-effect diagram, which consists of 8Ps, namely people, process, policies, procedures, price, promotion, place, and product so that the proposal is right on target. Here is an example of a cause-effect diagram for the first improvement priority:

Improvement priority 1: variable AS05, Division of CSC staff conveys program information to prospective students and parents of prospective students
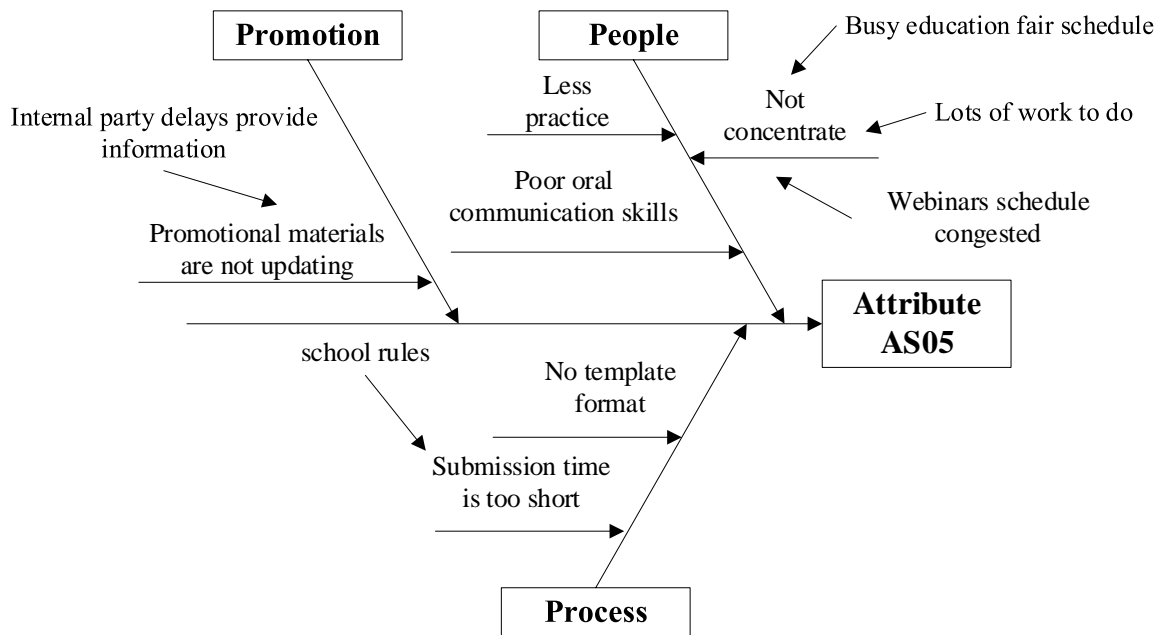
Picture 2
Cause-effect diagram for AS05

Cause-effect diagrams were also made for other research variables. The suggestions from this research are training for the staff of CSC, making direct and indirect delivery procedures, and developing market research to support service activities.

With the improvements made, the satisfaction of prospective students and their parents will increase, and they will provide positive word-of-mouth so that University X still has high competitiveness to maintain its sustainability.

V. CONCLUSION AND FURTHER RESEARCH

The Division of Creativity and Study Consultation (CSC) is a division at University X, which is tasked with planning and supervising customer care programs, maintaining customer satisfaction, and controlling all programs related to the Division of CSC. Various complaints from prospective new students and their parents have been received by the Division of CSC regarding they services. This study aims to determine the satisfaction index of prospective students/parents with the Division of CSC and propose improvements to the Division of CSC based on the expectation of prospective students/parents and the performance of the Division of CSC.

Data was collected using a questionnaire based on the SERVQUAL model, which consisted of Reliability, Responsiveness, Assurance, Tangible, and Empathy. Questionnaires distributed to prospective students or their parents who have received services (online or offline services) from the Division of CSC from promotion until admissions as new students, have seen the University X website/social media, and have receive services from the Division of CSC via telephone or email.

Based on data processing, the Division of CSC has a negative gap of -0.34 between consumer's expectations and the Division of CSC performance, which means that service provided by the Division of CSC is still not satisfactory for prospective students and their parents. The Responsiveness dimension has the highest gap, namely willingness to help customers and provide fast service has a service quality value, which is -0.09. Results of the Customer Satisfaction Index (CSI) and hypothesis testing for 2-paired-means have different conclusions, where based on CSI = 84.85% means consumers are very satisfied with the services of the Division of CSC, but the results of hypothesis testing show that all variables do not satisfy consumers. The root of the problem is analyzed using a cause-effect diagram, so that the proposal is right on target.

The suggestions from this research are training for the staff of CSC, making direct and indirect delivery procedures, and developing market research to support service activities.

For further research, service quality measurements can be carried out for all divisions that are directly related to students and their parents, where this service quality measurement must be carried out continuously to provide maximum results. (Latif *et al.*, 2019).

APPENDIX

Table 4
Items of the Questonnaire

Dimensions	Code	Expectation	Perception
Reliability	REL01	1. The suitability between the new student registration program promised by implementation.	1. The suitability between the new student registration program promised by implementation.
	REL02	2. Staff convey information on new student registration programs correctly to consumers.	2. Study Creativity and Consultation staff convey information on new student registration programs correctly to consumers.
	REL03	3. The staff conveyed a new student registration procedure consistently to consumers.	3. Creativity staff and Consultation Studies deliver a new student registration procedure consistently to consumers.
Responsiveness	RES01	4. The staff serves consumers responsively.	4. Kreafical staff and consulting studies serve consumers responsively.
	RES02	5. Staff can respond to consumer complaints responsively.	5. Study staff and study consulting can respond to consumer complaints responsively.
	RES03	6. Social media provides information that is always updated.	6. Social Media (Instagram: @xxx) provides information that is always updated.
	RES04	7. The willingness of staff to provide information requested by consumers.	7. The willingness of staff creativity and study consulting to give trust to consumers.
Assurance	AS01	8. Staff has adequate knowledge and information in work.	8. Creativity staff and study consulting have sufficient knowledge and information in work.
	AS02	9. The staff is polite and friendly when serving consumers.	9. Creativity staff and study consulting are polite and friendly when serving consumers.
	AS03	10. New Student Registration Program provided according to the information received by consumers.	10. New Student Registration Program provided according to the information received by consumers.
	AS04	11. Staff's ability gives trust to consumers.	11. The ability of staff creativity and study consultation provide trust to consumers.
	AS05	12. The staff conveys program information clearly to consumers.	12. Creativity staff and Consulting Studies convey program information clearly to consumers.
	AS06	13. Social media provides information that is easy to understand.	13. Social Media (Instagram: @xxx) provides information that is easy to understand.
	AS07	14. The new student registration procedure provided by staff is easy to understand.	14. New Student Registration Procedures provided by staff creativity and study consultation are easy to understand.
Tangibles	TAN01	15. Social media looks interesting.	15. Social Media (Instagram: @xxx) looks interesting.
	TAN02	16. Social media provides clear information.	16. Social Media (Instagram: @xxx) provides clear information.
	TAN03	17. Web Sites are easily accessible by consumers.	17. Web Site (xxx) is easily accessible by consumers.
	TAN04	18. Web Site makes it easy for consumers to get information.	18. Web Site (xxx) makes it easy for consumers to get information.
Empathy	EMP01	19. Service hours can be flexible following consumer needs, according to the agreed time together.	19. Clock Service Creativity and Study Consultation follows consumer needs, according to the agreed time together.
	EMP02	20. Ease of information submission to understand, both verbal / direct delivery or social media and web site.	20. Ease of delivering information to understand, both verbal / direct delivery or social media (xxx) and web site (xxx).
	EMP03	21. Staff are able to understand consumer needs.	21. Creativity staff and study consulting are able to understand consumer needs.
	EMP04	22. The staff seeks to understand different consumer needs and try to help.	22. Creativity staff and study consulting seek to understand different consumer needs and try to help.

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