

WP4 QUALITY PLAN

QCM report no.5

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REVISION SHEET

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1 Executive Summary

The purpose of this report is to provide an objective assessment from the project's point of view of the progress and achievements of the project during its duration, and, in particular, to identify any improvements and adjustments that should be considered for subsequent periods.

The evaluation period refers from October 2019 to March 2020 and include the partners representatives' feedbacks accordingly to the project processes ongoing, the fifth QCMB meeting and the evaluations for the outcomes within the mentioned period.

2 Introduction

The purpose for internal quality monitoring and control is to validate that the project deliverables are completed with an acceptable level of quality and to assures that project's processes can properly create these deliverables.

For this report, there were taken in account:

- QCMP, version 5/09.07.2019;
- PMCP, version 2/12.04.2019;
- reports submitted by the WP Leaders in the fourth meeting held in Khon Kaen University, Thailand in January 2020;
- Evaluation criteria identification form completed for the tasks ongoing or that are starting in the appropriate future.
- Three QCM reports submitted by QCM team;
- project's results.

3 Process-evaluation

There have been submitted three reports for internal quality control and monitoring of the project progress. The reports involves the time period between september and october 2019, november and december 2019, january-february 2020.

During the meeting held at Khon Kaen University, there were presented WP's reports with the status of their tasks and deliverables. All the WP Leader established actions plan by the end of the meeting that were taken into account by the involved parties.

4 Product-evaluation

During October 2019 to March 2020, there was submitted for quality assessment:

- the external quality audit report, reviewed according to QCMB and PEC suggestions and submitted in the final version on 09.12.2019;
- CDD-T2.1_O2.1 (V4) Outcome 2.1 A modernized curriculum for Master's degree in Industrial Engineering Outcome 2.1 A modernized curriculum for Master's degree in Industrial Engineering, for which the evaluation feedback is "Document accepted, changes required", with "satisfactory" (40% answers), "good" (27% answers) and "very good" (33% answers) level.

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Different surveys involving the teachers and the students implicated, were conducted within task 2.4 "Assessment of pilot test of the key courses and finalize the curriculum and the courses", that will be centralized in a final report in the next period.

The Control System and SCADA was purchased for The Learning Future Factory Laboratory. In November, there was conducted a virtual classroom training workshop, were participated representatives from all the Thai universities.

Between February and March 2020, a set of Android TVs has been setup at every Thai partner as a part of the immersive classroom, that allows the instructor to display learning materials on the three TVs in front of the room and to offer a live class with an equipped VDO camera.

5 Evaluation of the project impact

Public seminars were held at Khon Kaen University, industrial visit at Tesco Lotus Distribution Center Khon Kaen and Thammasat University (Rangsit Campus) in January 2020. Also, MSIE 4.0 team was invited to deliver a seminar entitled 'MSIE 4.0: Striving Engineering Education Towards Student Competence Development' at the Department of Industrial Engineering, Mahidol University.

The project members introduced the project through their keynotes, presentations during different conferences and workshops, such as *Technology and Science Advancement organized at Bach Khoa University* (october 2019); *The 7th Global Conference on Business, Economics, Management, and Tourism* (october 2019); *The International Conference on Information technology in engineering education - ITEE'2019*, (November 2019); *7th International Conference on Emerging Challenges - Management in the Digital Evolution (ICECH2019)* (december 2019).

By the march 2020, the number of the VDO Clips available an the official MSIE4.0 YouTube Channel, incresed with 22 VDOs. Also the project team members are active on the facebook page, with a good impact on the project according to the comments of the viewers.

The impact of the project is also seen in the acceptance of renowned personalities in industry and education fields, to be part in the project's conference with the theme "Striving Engineering Education Towards Student Competence Development", PAEE/AE'2020, International Conference on Active Learning in Engineering Education, 12th International Symposium on Project Approaches in Engineering Education (PAEE) AND 17TH Active Learning in Engineering Education Workshop (ALE), organized by AIT, in collaboration with PAEE- Project Approaches in Engineering Education Association and Active Learning in Engineering Education Network (ALE). The confirmed Keynote Speaker are Hon. Abhisit Vejjajiva, Thailand's 27th Prime Minister; Prof. David W Rosen, The George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology and Digital Manufacturing and Design Centre, Singapore University of Technology and Design; Michael Christie, Emeritus Professor at Stockholm University, Sweden, and Associate Professor at the School of Education, University of the Sunshine Coast, Queensland, Australia; Sampan Silapanad, Vice President and General Manager of Western Digital; Dr.Cynthia Finelli, Professor of Electrical Engineering and Computer Science, Professor of Education, and Director of Engineering Education Research at University of Michigan.

6 Conclusions

The focus in the period evaluated was set in finalizing at the proper quality the outcomes for the WP2 and WP3, assuring the necessary support for the external quality audit process, and the preparations for the

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project conference. By following the actions plans submitted by the WP Leaders, the projects can progress within the overall due times as established in the adjusted work plan - PMCP, version 2/12.04.2019.

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