

INTRODUCTION

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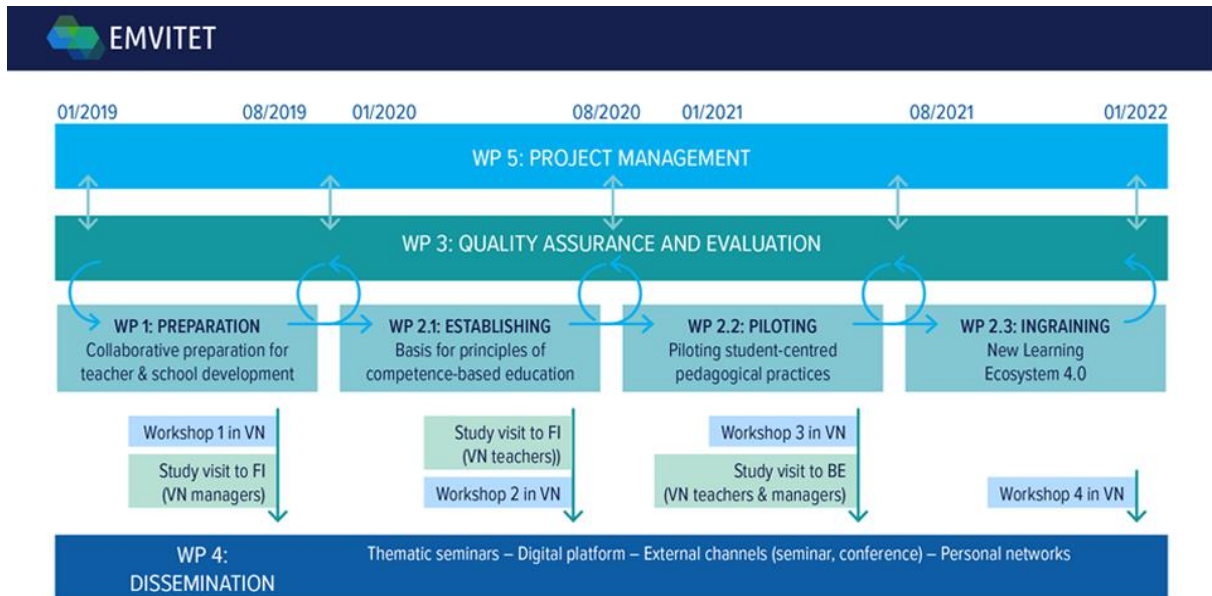
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Education 4.0 is a new concept in Vietnam that has been mentioned about and discussed the most recently in relation to the Industry 4.0 revolution with the prominence of digital technology applications in all fields. Rapid changes in the working environment caused by the revolution is enlarging the gap between graduates' competences and requirements of work life. The necessary knowledge amount to be studied increases so hugely that traditional teaching and learning methods could not handle it well within the limited given learning period of students. Accordingly, graduates are facing the lack of knowledge and working skills due to education that is not corresponding to the rapid changes in technology and globalization. Thus, the competences of teachers and vocational/higher education institutions need to be upskilled and new learning ecosystems need to be established where all aspects of education support Education 4.0 principles. The biggest challenge is to change the mindset of educators to understand the needs of students and the world of work, and to empower them to build learning processes accordingly, following the ideas of student-centered and competence based education, collaborative knowledge construction and innovation. Teachers are key mediators in these processes. Teachers need to learn to collaborate with their colleagues and other networks in order to create new competences and expertise. Furthermore, in Education 4.0, all stakeholders, especially students and work life representatives, need to be engaged. To achieve all these, teachers' professional competence development needs to be supported through training and piloting in which they themselves develop teaching tasks and experience new practices in their working contexts.

Empowering Vietnamese teachers for Transformation towards Education 4.0 (EMVITET), a Capacity Building for Higher Education project funded by ERASMUS+, has been built up to empower teachers to develop their own professional practices to correspond to the needs of both students and work life. The project focuses on creating a new learning ecosystem for Education 4.0 in Vietnam, based on student centered learning, competence based education, collaboration/networking in digital environments, and sharing knowledge through a community of practice. Desired change in Vietnam context requires new ways of operating in professional networks. Paradigm shifting from teacher-led to learner-centered education is crucial. Change in teachers' mindset generates a new procedure of operating based on collaboration with teachers and faculty staff, students and external stakeholders. Moreover, educational structures (curriculum, processes, management) need to support and enable the changes and find ways to overcome possible hindrances. The project is jointly implemented by 06 Vietnamese universities/colleges which are Ho Chi Minh City University of Technology and Education (HCMUTE), University of Technology and Education - The University of Danang (UD-UTE), Lac Hong University (LHU), Hue Industrial College (HueIC), College of Technology II (HVCT) and Ho Chi Minh City Industry and Trade College (HITC) with cooperation and guidance of 03 European universities which are Häme University of Applied Sciences (HAMK, Finland), KU Leuven University (Belgium) and Dublin City University (DCU, Ireland). Here, teachers and educational institutions are learners and they are active agents in constructing their new competencies in Education 4.0. European partners work as facilitators, supporting the development process and utilising their own expertise and experiences from the European context. This trend is approved by the Vietnam Minister of Education and Training, Mr. Phung Xuan Nha that Vietnam's upgraded educational philosophy is following the values of Scandinavian education, and the upcoming reform will empower

teachers and students with more freedom/autonomy, while emphasizing experimental and creative activities at school.



This special issue, an expected outcome of WP2.2 of the project, is a collection of original research papers reflecting the practices done by Vietnamese partners of EMVITET Project themselves in the context of Covid-19 pandemic. It turns out that the pandemic has triggered the switching from traditional teaching and learning into a blended one with online tools and platforms in Vietnam. Although some universities have departed early or later, experiencing the switching themselves makes teachers recognize better the meaning and the needs of change in their teaching habits. Education 4.0 highlights common knowledge construction, innovation, open digital collaborative working, networking with different stakeholders and empowering students to be agents in their own competence development. Students need to learn to cope with constant changes, therefore the transferable skills (i.e. 21st century skills or lifelong learning competences) like collaboration, communication, problem solving, adaptability, resilience and self-management and digital skills are crucial in vocational and higher education. The research papers in this issue focus on experiencing the impacts of EMVITET project from the perspective of Vietnamese partners, the blended and online teaching and learning methods with application of digital technology in different study fields (such as Electrical and Electronics Engineering; Environmental Technology; Information Technology; Foreign Languages; Technical Education and Chemical and Food Technology), both theoretical and practical courses (e.g. graphic design; teaching methodology), assessment methods for online courses, satisfaction and willingness for change of teachers and students, promoting a more comprehensive policy for blended teaching and learning platform, and so on. The findings in general show that although it will take time to get used to the new teaching and learning methodology especially in the pandemic context, both teachers and students are willing to implement and follow the changes which they themselves have found necessary.

Board of EMVITET Project Manager

ⁱ Editor of this special issue