IMPLEMENTATION AND RESOLUTION OF MANAGEMENT EDUCATION LEARNING IN THE 21st Century

Nani Sutarni
Fakultas Pndidikan Ekonomi dan Bisnis, Universitas Pendidikan Indonesia, Jalan Setiabudi No. 229,Bandung 40154,Indonesia, ORCID: 0000-0003-4244-5684 Email: nanisutarni@upi.edu
M. Arief Ramdhany
Fakultas Pendidikan Ekonomi dan Bisnis Universitas Pendidikan Indonesia, Jalan Setiabudi No. 229,Bandung 40154,Indonesia, Email. m.arieframdhany@upi.edu
Achmad Hufad
Fakultas Ilmu Pendidikan , Universitas Pendidikan Indonesia, Jl.Setiabudi No. 229,Bandung 40154, Indonesia, ORCID: 0000-0002-9905-3094 Email: achmadhufad@upi.edu
Badawi
Universitas Muhammadiyah Kotabumi, Jl. Hasan Kepala Ratu No. 1052, Sindang Sari, Kotabumi Lampung Utara 34517, Email: badawi@umko.ac.id

Introduction

Management education has developed rapidly for more than a Century. Initially, management education was a relatively limited field. Still, almost all higher education globally, including in Indonesia, provides management education at various levels of knowledge according to market demands.

In the implementation of management education, it is necessary to understand that knowledge has several unique characteristics related to the education system, educational process, curriculum, and learning process, including educating, teaching, learning how to teach, and learning how-to guide to learn. All of that is inseparable from how to manage education.

"Management education" is one of the Faculty of Economics and Business Education disciplines, and in several secondary schools, particularly SMK. The development of economy and management since the 19th Century until now in the 21st Century has significant strength in developing management education. Various problems that occur in management in the world of work have now become a building block or the basis for providing management education (Engwall, 2007). Management education responds to various management problems that arise in the real world and integrates practitioners' experiences with academics (Kipping & Engwall, 2002).

Currently, digital Information Technology and Telecommunications (ICT) is increasing. The 21st Century has brought about various changes in human life, including social aspects, work, government systems, economy, business, health, and education. In the fields of economy, management, finance, and business, the development of the internet, ICT, and e-commerce has impacted services, market structure, competition, and industrial and market restructuring (Kehal & Singh, 2005). The realm of digital technology grows along with the digital economy and digital business (Chaffey, 2015). However, all these resources are incomplete without social skills in managing technology, economy, and digital business. In this case, how important the education of integrated digital mastering skills is in curriculum development in schools or universities (Kupriyanovsky et al., 2017). The development of ICT is both a challenge and an opportunity to resolve the Industrial Revolution 4.0 and Society 5.0, especially during the Covid-19 pandemic, for management education to organize an education system and learning process that is quality, effective and efficient.

21st Century Skills Strengthening

One of the implementations and resolutions of management education in the 21st Century is strengthening that focuses on skills following the demands of this Century, both for educators (teachers or lecturers) and students (students or students) to adapt after they graduate from school or lecture. At least, there are 12 (twelve) skills that students need to master in the information age, which are called "21st-century skills" or 21st-century skills, which are grouped into three main categories, namely learning skills, literacy skills, and life skills (also known as 3L) (Voogt & Roblin, 2010), as presented in Table 1.

Table 121st Century Skills

Learning (4Cs)	Literacy (BMI)	Life (FLIPS)
• Critical thinking • Creativity • Collaboration • Communication	• Information literacy • Media literacy • Technology literacy	• Flexibility • Leadership • Initiative • Productivity • Social skills

Source: modified from Voogt & Roblin (2010).

First, learning skills, called 4Cs, are related to teaching students, especially regarding the mental processes needed to adapt and develop in modern society.

Second, l*iteracy skills,* so-called IMT, focus on how students can distinguish facts, data, and supporting technology so that students can determine reliable sources to distinguish factual information from false information in cyberspace.

Third, life skills, called FLIPS, look at the intangible elements of students' daily lives, focusing on personal and professional qualities.

The three categories cover 12 21st century educational skills that contribute to preparing future learners.

Change Management: The Role of Educators and Students

Various changes in the world of education, both caused by technological developments and the impact of changes in the global Covid-19 pandemic, demand a change in new roles for educators and students in the learning process. These various changes need to be managed so that learning objectives can be achieved effectively and efficiently.

Chowdhury & Chowdhury (2011) reminded that life in the future is very complex and more challenging because technology develops very rapidly and impacts the emergence of the bulk of misleading information or several misleading information. Therefore, the teacher plays an essential role in directing students' skills to "get lost" in the flow of information that is not important but can filter a number of useless information.

The development of students in mastering 21st-century skills cannot be separated from educators' role in understanding various skills and the use of digital technology. By understanding 21st-century skills and digital technology in learning, educators can implement these demands to benefit students in the future.

This digital era provides opportunities for 21st-century learners with the ability to learn using 21st-century methods. Advances in ICT and improvements in computer technology provide new methods for learners to learn and store information. Currently, the traditional educational environment is far behind other industries embracing new experimental methods of disseminating information to the public (Schaaf, 2012). One of the reasons that educators are not optimally successful in educating students today is because educators tend to inform the new generation in the old way, namely using methods, media, and tools that are no longer effective for "today's kids" (Prensky, 2001) or children today ... "kids nowadays."

For this reason, management education in an educational institution needs to pay attention to strengthening the skills of the 21st Century in developing the knowledge and competence of educators to carry out a learning process that is in line with the times.

Other implementations and resolutions in management education are still related to the teaching staff, namely how teaching staff can integrate their knowledge. At least three important components of knowledge must be possessed as educators, namely: (a) mastery of subject matter or content (according to their qualifications and competencies according to the demands of the curriculum), (b) pedagogy (how to convey material to students), and (3) technology (information support, learning media, and the application of technology in the learning process in class and outside the classroom) (Mishra, & Koehler, 2006), or what is called Technological Pedagogical and Content Knowledge, which is abbreviated (TPaCK).

In the TPACK scheme, there is a relationship between constituent components, intersecting each other between learning material (C), pedagogy (P), and technology (T), which is affected in the learning context. Figure 1 "The TPaCK Framework," illustrates the relationship between the three components and knowledge (K). The components, namely C, P, and K, then C becomes CK, P becomes PK and T becomes TK, and the relationship between the components can be explained as follows:

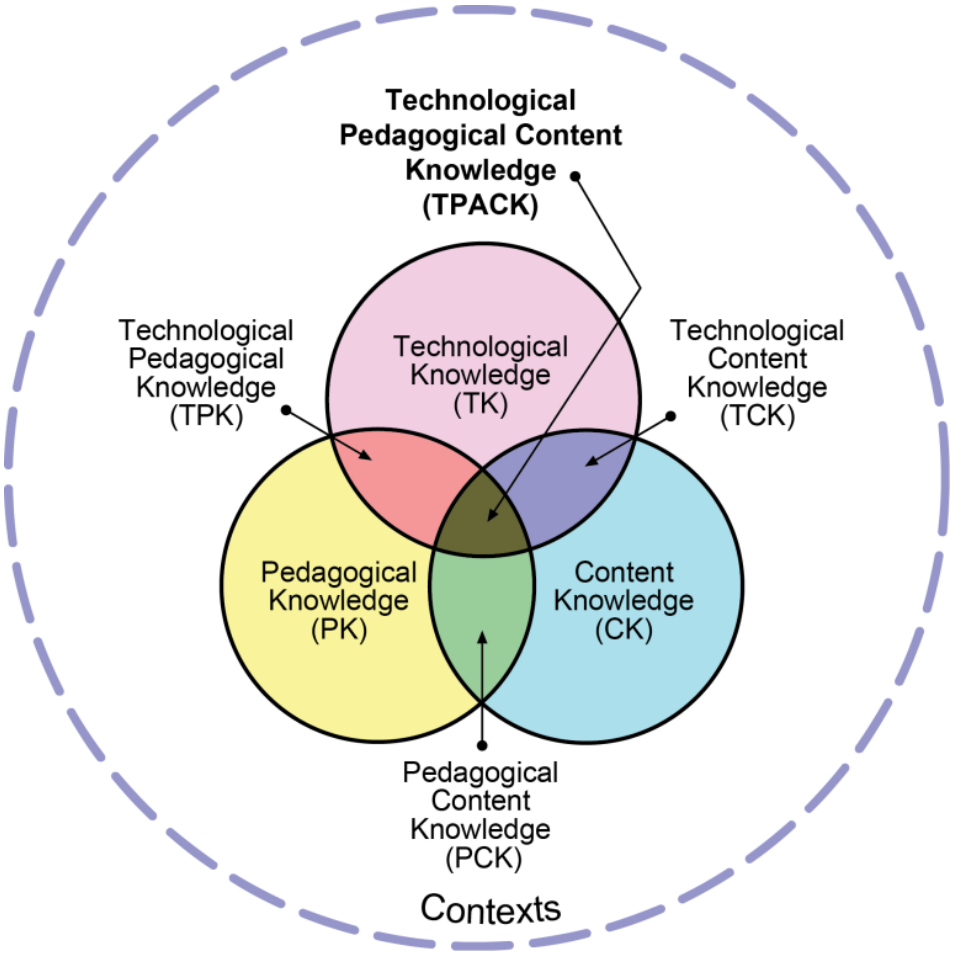


Image 1:TPaCK framework
Source: http://www.tpack.org

Content Knowledge(CK) is the knowledge of educators related to their field of study. Some management disciplines need to be mastered for management education, such as financial management, HR management, operations management, marketing management, banking management, office management, strategic management, quality management, change management, entrepreneurship, management information systems, communication management, etc.

Pedagogical Knowledge(PK) or pedagogical knowledge describes knowledge in depth related to teaching and learning theory and practice, including objectives, processes, assessment learning methods, strategies, etc. As usual, pedagogy consists of learning, class management, instructional objectives, and student assessment models. Pedagogical knowledge requires understanding cognitive, affective, and social aspects and developing learning theories and how they can be applied in the learning process. Educators should understand profoundly and focus on the pedagogy needed, namely how students understand and construct knowledge, attitudes, and skills.

Technological Knowledge(TK) is the basics of technology that can support the learning process. For example, software, animation programs, internet access, models, virtual laboratories, and others. For this reason, educators need understanding, knowledge, and mastery in information processing, communicating with ICT in learning. It can be stated that kindergarten is essential knowledge, technological knowledge, and is skilled in using it to support understanding of the subject matter being studied. Furthermore, mastery of this technology is the demand of students in the 21st Century.

Technology Pedagogy and Content Knowledge(TPaCK) summarizes a series of learning in which the ability to master technology is integrated, which cannot be separated from one another from its constituent components (C), (P), and (K). TPACK requires multiple interactions between members, namely unique and synergistic ICT-based subject matter, pedagogy, and technology.

So, some important aspects that need to be done to manage change in management education in the 21st Century can be presented in the new paradigm of 21st-century learning.

Table 2:New Paradigm of Learning

Long		New
Time-bound	→	Bound to the result (outcome)
Bound by place (classroom)	→	Place-independent (expanded global collaboration network)
Focus on memorizing facts (memorizing and knowing)	→	Focus on higher-order thinking (know, understand, do, can do)
Passive learning	→	Active learning
Teacher-centered (teacher as the center of attention and provider of information)	→	Student-centered (the teacher is only a facilitator and coach)
Textbook-driven (only relies on textbooks)	→	Textbook and research-driven (based on textbooks and research results)
Fragmented curriculum	→	Integrated / Individualized Curriculum
Single media	→	Multi-media
printed material learning and assessment	→	digital learning and assessment
3 R's Literacy (Reading, Writing, and Math)	→	Multi-literacy (concerning 21st-century skills)
School-regulated learning	→	Self-regulated learning

Table 2 shows a new paradigm in learning, which can be referred to by Management Education. All these changes, in turn, must be adaptable by educators and students, gradually or radically. Strengthening 21st-century skills, both for educators and students, is a necessity. Mastery of digital skills and literacy is undoubtedly an important aspect that educators and students need to anticipate. What is more important is how students can learn independently related to self-regulated learning (SRL).

Self-Regulated Learning Learners

The COVID-19 coronavirus pandemic has caused an unprecedented health crisis and socio-economic crisis. This pandemic has the potential to create alarming social, economic, and political impacts around the world. The education sector has also been affected by this outbreak. Almost all learners are affected by temporary school closures at all education (UNDP, 2020).

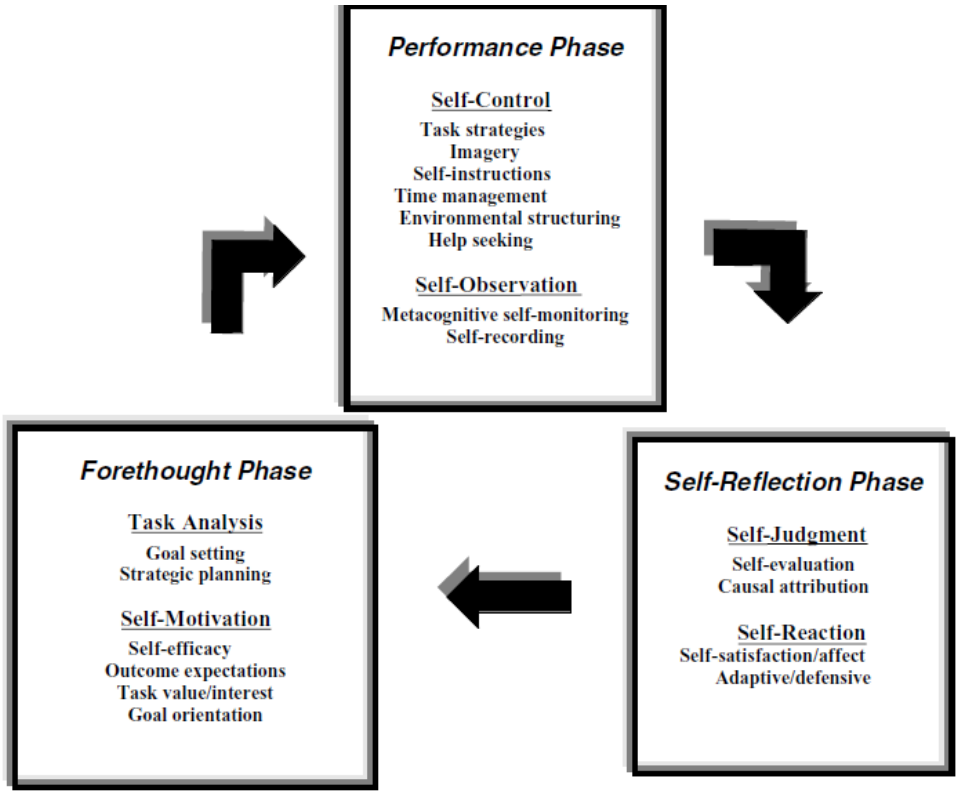
The education sector needs to immediately adapt and anticipate change and implement solutions to support the learning process's new adoption because students stay at home, and teachers work from home. Teachers must work from home, and students must also study from home. Advances in digital information and communication technology can indeed facilitate the process of 'distance learning' from home in this case. Teachers can prepare lessons using appropriate learning media that can be accessed by students via the internet.

Implementation and resolution of learning in higher education generally emphasize that students can learn independently with self-regulated learning through a learning management system. This distance learning process requires students to be more independent in self-regulated learning. To achieve meaningful learning, not only memorizing, students are expected to manage their learning process actively. Besides, students are expected to master lifelong learning skills to organize their learning upon graduation and work in their respective areas of expertise (Van Eekelen, Boshuizen, & Vermunt, 2005).

Self-regulated learning(SLR) refers to a person's ability to understand and control the learning environment. This self-regulation capability includes goal-setting, self-monitoring, self-instruction, and self-reinforcement (Harris & Graham, 1999; Schraw, Crippen, & Hartley, 2006; Shunk, 1996). Self-regulation here should not be confused with the mental abilities or academic performance of students. Instead, self-regulation is a self-directive process and a number of behaviors in which students can change their cognitive skills into a number of skills (Zimmerman, Bonnor, & Kovach, 2002) and habits through a process of self-development (Butler, 2002).), which emerged from guided practice and feedback (Paris & Paris, 2001).

Effective learners can be independent with self-regulating learning, analyze task requirements, set productive goals, and choose, adapt, or create strategies to achieve their learning goals. These learners can also monitor progress while working on assignments, manage annoying emotions and reduced motivation, and adjust strategies that are processed to achieve success. Here, students are more dominant in asking questions, taking notes, and allocating time and resources in a way that helps these students to take responsibility for their learning (Paris & Paris, 2001).

Zimmerman & Campillo (2003) describe a framework that describes the three phases of self-regulated learning, as shown in Figure 2.



Source: BJ Zimmerman & M. Campillo, 2003, in JE Davidson & RJ Sternberg (Eds.), The nature of problem-solving (p. 239). New York: Cambridge University Press

Figure 2.Three Phases of Self-Regulated Learning

Figure 2 depicts the three phases of self-regulated learning as a continuous process. The first is the forethought phase as an initial stage related to how students plan in planning the learning process, including how the level of motivation is. The second stage is the performance phase, which shows students' implementation stage in carrying out the learning process. The third stage as the final stage is the self-reflection phase, which is related to students' evaluation stage in assessing the success of this learning process as feedback for improvements in the early stages.

Learning Management System

Learning Management System(LMS) is a software application for online activities, electronic learning programs (e-learning programs), and training content. A good LMS contains the following:

1. using self-service and self-guided services,
2. collect and deliver learning content quickly,
3. consolidating training initiatives on a " scalable web " platform,
4. supports portability and standards,
5. personalize content and allow knowledge reuse.

So, LMS is a set of systems for managing training and education records, the software for distributing programs over the internet with features for online collaboration. In organizational training, LMS is used to automate employee registration and registration. The management system dimension includes "Students self-service" (e.g., self-registration led by training instructors), workflow training (e.g., user notifications, manager approval, management waiting lists), provision of online learning (e.g., computer-based training, reading & understanding), online assessments, continuing professional education management (CPE), collaborative learning (e.g., sharing of applications, discussions), and resource management training (e.g., instructors, facilities, equipment).

Besides, LMS is used by industry regulations (e.g., financial services and biopharma) for compliance training. LMS is also used by educational institutions to enhance and support classroom teaching programs and offer courses to a larger population, i.e., worldwide. Some LMS providers include 'performance management systems' covering employee appraisals, competency management, skills analysis, succession planning, and multi-rater assessments (e.g., 360-degree reviews). Modern techniques now use competency-based learning to find learning gaps and guide training selection materials.

Conclusion

This presentation describes the implementation and resolution of management education in the 21st Century, focusing on strengthening 21st-century skills, change management related to educator's and students' roles, and self-regulated learning that students can do. All of this leads to reality regarding the academic paradigm with practitioners focused on implementing and resolving management education in the 21st Century.

The priority of management education is how educators master 21st-century skills, integrate TPaCK, adapt to various changes that occur, and provide students with an understanding of self-regulated learning. If educators already have adequate knowledge and skills, other aspects of education delivery and learning management can effectively support professional teachers' development in the 21st Century.

In essence, management education must be able to provide education and teaching both academically and professionally to produce graduates and educators who are competent in management education, supported by accountable institutions, which have academic and professional abilities that can develop and apply science technology. , following the demands and developments of the 21st Century.

Reference

1. Butler, D. (2002). Individualizing instruction in self-regulated learning. Theory into Practice, 41, 81-92.
2. Chaffey, D. (2015). Digital Business & E-Commerce Management: Strategy, Implementation and Practice (6th eds.) Pearson UK.
3. Chowdhury, GG, & Chowdhury, S. (2011). Information users and usability in the digital age. Facet Publishing.
4. Engwall, L. (2007). The anatomy of management education. Scandinavian Journal of Management, 23 (1), 4-35.
5. Harris, K. & Graham, S. (1999). Programmatic intervention research: Illustrations from the evolution of self-regulated strategy development. Learning Disability Quarterly, 22, 251-262.
6. Kehal, HS, & Singh, VP (Eds.). (2005). Digital Economy: impacts, influences, and challenges. IGI Global.
7. Kipping, M., & Engwall, L. (Eds.). (2002). Management consulting: The emergence and dynamics of a knowledge industry. Oxford: Oxford University Press.
8. Kupriyanovsky, V., Sukhomlin, V., Dobrynin, A., Raikov, A., Shkurov, F., Drozhzhinov, V., ... & Namiot, D. (2017). Skills in the digital economy and the challenges of the education system. International journal of open information technologies, 5 (1), 19-25.
9. Mishra, P., & Koehler, MJ (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. Teachers college record, 108 (6), 1017-1054.
10. Paris, S. & Paris, A. (2001). Classroom applications of research on self-regulated learning. Educational Psychology, 36, 89-101.
11. Prensky, M (2001). Digital Game-Based Learning. St. Paul, Minnesota: Paragon House.
12. Schaaf, R. (2012). Does digital game-based learning improve student time-on-task behavior and engagement in comparison to alternative instructional strategies ?. The Canadian Journal of Action Research, 13 (1), 50-64.
13. Schraw, G., Crippen, K., & Hartley, K. (2006). Promoting self-regulation in science education: metacognition as part of a broader perspective on learning. Research in Science Education, 36, 111-139.
14. Shunk, D. (1996). Goal and self-evaluative influences during children's cognitive skill learning. American Educational Research Journal, 33, 359-382.
15. UNDP (United Nations Development Program) (June 2020). Brief # 2: Putting the UN Framework for Socio-economic Response to Covid-19 into Action: Insights. UNDP.
16. Van Eekelen, IM, Boshuizen, HPA, & Vermunt, JD (2005). Self-regulation in higher education teacher learning. Higher education, 50 (3), 447-471.
17. Voogt, J., & Roblin, NP (2010). 21st century skills. Discussienota. Zoetermeer: The Netherlands: Kennisnet, 23 (03), 2000.
18. Zimmerman, BJ & Campillo, M. (2003), in JE Davidson & RJ Sternberg (Eds.), The nature of problem solving. New York: Cambridge University Press
19. Zimmerman, B., Bonner, S., & Kovach, R. (2002). Developing self-regulated learners: Beyond achievement to self-efficacy. Washington, DC: American Psychological Association