

Literature Study Use of Learning Methods to Develop 21st-Century Skills I Accounting Learning

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Keywords: Accounting learning methods, 21st-century skills

Abstract:: Use of learning methods has gained much attention from researchers and practitioners. Many researchers use innovative learning methods that support 21-st century skills including accounting learning. This research describes several learning methods used in accounting to develop 21st century skills. The analysis was conducted based on a literature study of 27 published articles from 2008 to 2018 from several journals. The most frequently studied method was case study methods, and the little investigated is a portfolio method. Accounting learning methods used to develop communication skills are simulation, cooperative, case study, problem solving and portfolio methods. Collaborative skills are developed through cooperative, and experimental methods. Critical thinking is done through case study, simulation, cooperative, interactive, problem solving, active learning, seminar, and portfolio. Creativity is developed through case study, cooperative, and interactive. Problem-solving skills through case study, problem-solving methods, experimental and traditional lecturer. The least-researched innovation skills are developed through innovative methods. Future research needs to explore accounting learning methods for developer innovation.

1 INTRODUCTION

Currently, 21st-century skills have become a concern of many researchers in the field of education. When a society moves into the new century, 21st-century skills are considered important (Voogt & Roblin, 2010). 21st-century skills such as communication, collaboration, critical thinking, problem-solving, creativity and innovation must be developed (Binkley *et al.*, 2014). 21st-century skills dedicated to developing and extending existing knowledge.

The progress of science and technology has caused students to face the rapid changes in the world. At present, the success of students lies in the ability to communicate, collaborate, and solve problems, be critical, creative and innovate in response to new demands on life. Some authors (Carroll, 2007; Trilling & Fidel, 2009) argue that learning that supports the development of 21st-century skills is very important to achieve the necessary changes. Professional workforce development must be a top priority. According to Partnership for 21st-Century Skills (2008) educators can integrate the development of 21st century skills into classroom learning standards. Learning is an effort to facilitate students

to experience the learning process to develop various potentials as a provision for life in the 21st century.

One way to achieve this is through the use of appropriate learning methods. Learning methods are needed that support students to get creative thinking, innovative, problem solving, able to communicate and collaborate well in order to succeed in work and life in the future.

Developing educational programs that support 21st-century skills requires flexible and coordinated effort. All involved in education must be able to learn from experiences implementing new methods and processes.

Several studies have indicated the implications of learning related to 21st-century skills (Ongardwanich *et al.*, 2015; Sahih, 2015; Griffin, McGaw & Care, 2012). Several other researchers have specifically investigated potential learning methods for developing 21st-century skills. Nevertheless, 21st-century skills are still a topic of interest to many researchers. Does this also occur in accounting learning given the importance of 21st-century skills relevance in various life sectors including accounting?.

2 LITERATURE REVIEW

2.1 21st-Century Skills

Communication skills, information sharing, problem-solving skills, adaptation, and innovation skills are essential in today's life. Much success in the various fields lies in that ability to respond to new demands of life. Several studies that study skills needed to succeed in a change world (Voogt & Roblin, 2010; Trilling & Fidel, 2009; Ongardwanich *et al.*, 2015) and some organizations (Partnership for 21st Century Skills, NCREL, Metiri Group) argue that 21st century skills are essential to achieving the necessary change demands. 21st-century skills consist of a set of competencies such as communication, collaboration, social skills, creativity, critical thinking, problem-solving, productivity, learning to learn, self-direction, planning, flexibility, risk-taking, conflict management and a sense of initiative and entrepreneurship (Voogt & Pareja Roblin, 2012). While the Partnership for 21st-Century Skills (2008) categorizes: learning skills (creativity and innovation, critical thinking and problem solving, communication and collaboration), literacy skills (information, media and information technology literacy) and skills life (flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, leadership and responsibility). Meanwhile, NCREL identifies as digital age literacy, inventive thinking, effective communication, and high productivity. The 21st-century skills discussed in this paper such as communication, collaboration, critical thinking, problem-solving, creativity, and innovation.

2.2 Learning Method to Develop 21st-Century Skills

The information age allows each individual to develop talent and potential through the power of knowledge technology and lifelong learning. This is the main challenge facing students today and the future. Students should be prepared skills needed in the work environment of this century (NCREL & Metiri Group, 2003).

Traditional education focuses on content learning and then assesses the content knowledge with tests, quizzes, and learning modules. The outcomes should be include the skills to develop. Students must have apply knowledge and get the challenges of life outside of school.

The effort to keep up with the rapidly changing world of the need for alignment of the educational

system with the demands. Partnership for 21st-century skills (2008) recommends six elements: emphasizing core subjects, emphasizing learning skills, using tools to develop skills learning, teaching how to learn in the context, teaching the content, and using judgments.

In addition, 21st-century skills require a student-centered approach to provide meaningful learning experiences such active learning approaches. Several studies such as Raux and Smith (2009) show that many students learn more and store information better by using active learning. Active learning as a learning method for involving students actively in the learning process. For this, the learning process should engage students' interest in acquiring skills. The design of learning should be designed based on individual needs. The lesson designer should not focus the content or information but the learning process.

The learning modes used to facilitate 21st-century learning include: student-centered learning, multi-interaction in the educational process, broader learning environment, active students investigating in the learning process, what is contextually learned with children, team-based learning, learned objects relevant to the needs of the child, all the senses of the child are utilized in the learning process, using the multimedia, the teacher relationship with the students is the cooperation for learning together, learners learn according to individual needs, individual learning service, plural awareness, multi-discipline, autonomy and trust, creative and critical, teachers and students alike learn from each other (BSNP, 2010).

3 RESEARCH METHODS

This research is a literature study of 27 published articles from 2008 to 2018 from several journals. Descriptive analysis with a percentage is used to look at the methods used by researchers in developing these important skills. Most of the articles were analyzed comes from the journal Accounting Education, Social Proceedia and Behavior Science, and some come from the journal Student In Business and Economics, Accounting and Management, Revita De Contabilidad Spanish Accounting Review, and The British Accounting Review. Most studies are a survey and some qualitative in nature.

This research aims to identify accounting learning methods that have implications for skills in 21st-century such: communication, collaboration, critical thinking, problem-solving, creativity, and innovation.

4 RESULT AND DISCUSSIONS

The results of the analysis show that the majority of studies examining the use of learning methods to develop 21st century skills in accounting learning are case study methods (24%), followed by simulations (10%), cooperative learning (10%), problem solving (10%), active learning (10%), experimental methods (10%), interactive methods, and portfolios (7%), seminars and innovative (4%) and traditional lecturers (3%).

Articles covering accounting learning methods for 21st centuries skills such as communication (27%), collaboration (10,8%), critical thinking (29,7%), solving problem (21,6%), creativity (8,1%), and innovation (2,7%) as show in Table 1

Table 1: Learning methods to develop

communication skill	
Learning methods	Communication skills
Case study	3
Simulation	1
Cooperative	2
Problem-solving	1
Active learning	2
Portfolio	1
Total	10
Percentage	27,0

The results show that accounting learning methods used to develop communication skills was 27% which included simulation, cooperatives, case study, problem solving and portfolio methods.

Table 2: The use learning methods to develop

collaborative skills	
Learning Methods	Collaborative Skills
Cooperatif	2
Experimental	2
Total	4
Percentage	10,8

Meanwhile, collaborative skills was 10,8% were carried out through cooperatives, and experimental methods.

The next method for the development of critical thinking is 29,7% done through case study, simulation, cooperatives, interactive, problem solving, active learning, seminar, and portfolio

Table 3: The use learning methods to develop critical thinking

Learning Methods	Critical Thinking Skills
Case study	1
Simulation	1
Cooperative	1
Interactive	2
Problem-solving	2
Active learning	2
Seminar	1
Portfolio	1
Total	11
Percentage	29,7

Table 4: The use learning methods to develop problem-solving skills

Learning Methods	Problem-Solving Skills
Case study	4
Simulation	1
Problem-solving	1
Experimental	1
Traditional lecturer	1
Total	8
Percentage	21,6

Problem-solving skills through case study, simulation, problem-solving, experimental and traditional lecturer methods. Creativity is 8,1% which developed through case study, cooperative, and interactive. The least-researched innovation skills in 2,7% accounting learning were developed through innovative methods.

The Bedford Report (AAA, 1986) sparked a long period and intensive interest in the reform of the accounting curriculum. The report notes that the current accounting curriculum does not give students the skills necessary to compete in the 21st-century. Green (2008) suggests communication, problem-solving, teamwork, and information technology, are valued in economies and markets labor. The implications for education, so that youth must be equipped with the kind of skills needed in the labor market. For that reason, education should focus on developing the skills to cooperate, think critically, creatively, innovatively, communicate effectively and solve problems efficiently.

One of the concerns of accounting education is to reform the use of learning methods. The AECC expressed concerns about the method of learning in accounting education that has been used so far (AECC, 1990). For that purpose, Biggs (2012). changes are made from traditional learning methods to active learning methods. Accounting educators have difficulty in developing conceptual foundations and practical application of learning given the limited

number of hours available, the number of rules, procedures, breadth and depth of knowledge on accounting learning (Howieson *et al.*, 2014).

The reform of accounting education research is skills development include curriculum development to enhance the competency-based education, the learning method that supports the change (case studies, simulations, role-playing), experiential learning, service learning, internships, detailed analysis and exploration of specific skills (communication, interpersonal skills, critical thinking, ethics, etc.), emotional intelligence (Cook *et al.*, 2011; Boyatzis, 2009) and exploration skill development (Palmer *et al.*, 2004; Herring and Bryan, 2001; Herring and Bryan, 2001).

Learning method means ways or techniques to facilitate students to learn. The 21st-century learning method is a way that teachers use to facilitate students' learning experiences in accordance with student conditions, competence characteristics that must be mastered, student learning environment, and the ability of teachers in facilitating student learning. There are several accounting learning methods: reading text, practice questions, demonstrations, interactive, frequently asked questions, case studies and problem-solving, discussions, research, presentations, role-playing, simulations, experiments, and visits and internships to the company (Bonner 1999). Use of appropriate teaching methods can facilitate students to obtain the expected competencies.

One of the best techniques for developing these skills in accounting courses is the use of case studies (AAA, 1986). Case studies can be used to develop skills, when there are technical accounting skills and theoretical knowledge (Indrè, 2014). Case studies bridges a gap between theory and practice. This makes case study methods so popular used in colleges, and an important role in developing students' knowledge and skills (Andersen & Schiano, 2014).

Accounting learning methods such as case study methods, seminars, role playing, and simulations can be used in the learning process to develop student capacity in an analysis, synthesis, problem-solving and communication (IFAC, 1996; AECC, 1990; AAA, 1986). In the 21st-century, education should focus on developing the ability to think and solve problems efficiently. Educators should help students to design learning to develop problem-solving skills combined with other skills in the business environment (Jones, 2010; Wells, Gerbic, Kranenburg, & Bygrave, 2009). Traditional centered learning not enough to develop skills in anticipating a

rapidly changing life. Work and social life will always produce new tasks and can not be solved by applying prior knowledge. A new method is needed to support the achievement of the skills in the 21st-century.

5 CONCLUSION

Several studies related to accounting learning methods used to develop communication skills are simulation, cooperative, case study, problem solving and portfolio methods. Collaborative skills are developed through cooperative, and experimental methods. The next method for the development of critical thinking is done through case study, simulation, cooperative, interactive, problem solving, active learning, seminar, and portfolio. Creativity is developed through case study, cooperative, and interactive. Problem-solving skills through case study, problem-solving methods, experimental and traditional lecturer. The least-researched innovation skills in accounting learning are developed through innovative methods. Therefore, future research needs to explore accounting learning methods for developer innovation. This paper is limited to a descriptive description of the methods used by researchers in developing 21st century skills, further analysis can be done by describing in detail the various aspects developed in each method used.

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