

Experiential Learning in Accounting Education: What is Known, What Needs Knowing?

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Abstract

This paper assesses empirical evidence on experiential learning in the accounting education context in light of Kolb's (1984) experiential learning theory (EL) to evaluate its status within the EL pedagogy in teaching and learning. The study uses published scholarly literature in different subject areas of accounting degree programs in higher education institutions globally; the study uses Noblit and Hare's (1988) qualitative synthesis technique to analyze the learning outcomes. The study finds that users of EL approach to teaching in accounting do not follow the suggested sequence of Kolb's (1984) EL theory and the learning outcomes are very little emphasized in the EL literature reviewed in this paper. Further, users of EL used two common contexts to teach accounting students: learning within the confines of a classroom and learning outside a classroom. Learning experiences were gained through textbook related resources and assessment items, and out of real-life class experiences from different workplaces or open learning spaces. Finally, the study finds that EL is evolving as an excellent platform to build students' personal and professional skills, recommended by the accounting profession and other accounting education stakeholders. The study is beneficial to academics and practitioners in accounting and related discipline, willing to relate theories and principles that are required for the performance of professional duties.

Keywords: Experiential learning, learning tools, learning outcomes, skills, accounting curriculum, qualitative synthesis.

1. INTRODUCTION

Experiential Learning (EL) is a form of learning that exposes students to learning from experiences. Two forms of learning experiences are widely observed in the literature on EL: learning from curriculum experiences i.e., problems, exercises and other forms of assessment items (Grandzol & Grandzol, 2018; Marriott, 2004; Webb, Thomas, & Liao-Troth, 2014); see for example Wilson (2018); (Young & Lee Warren, 2011) and learning from experiences from outside world i.e., out of the classroom experiences such as field visits, work placements, working as an intern in a profession such as medicine, law, engineering and accounting (see for example, Chmielewski-Raimondo, McKeown, & Brooks, 2016; Eckhaus, Klein, & Kantor, 2017; Elijido-Ten & Kloot, 2015; Hill & Johnson, 2014; Panero, Ashton, Izquierdo, Hurtado Martin, & Anid, 2018). EL dates back as early as 1974 (Bublitz, Philipich, & Blatz, 2015), but the current form of EL is associated with the works of Kolb (1984) and A. Y. Kolb and Kolb (2005). The generic steps in EL are used to impart or develop students' learning experiences, either through classroom confinements or out-of-class learning environments. When done in a classroom environment, students can learn from a pre-set curriculum and reflect on their learned textbook principles through defined activities such as problems, projects, or assessment items and link learning to practices. When students learn from the outside world, students learn by engaging with the outer world and reflect on learning through the real-life work environment.

EL has been widely recognized in disciplines that require the application of principles to professional practices. Some professions, such as medicine, engineering, law, and accounting, require the use of learned tenets in daily work situations. The common challenge for a lecturer in these disciplines is to demonstrate how the theories and practices are related and can be applied to perform their professional responsibilities (see for example, Frank,

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Lavy, & Elata, 2003; Regev, Gause, & Wegmann, 2009; Yardley, Teunissen, & Dornan, 2012a; Yardley, Teunissen, & Dornan, 2012b). In accounting education, EL concepts and principles are observed in both in-class and outside of a classroom learning environment. Available evidence suggests that students should learn personal and professional skills to meet the demands of multiple stakeholders, and to prepare themselves for the job markets (see for example, Daly, Hoy, Hughes, Islam, & Mak, 2015; Dellaportas & Hassall, 2013; Eljido-Ten & Kloot, 2015; Foxon, 1991; Hill & Johnson, 2014).

Although there are many published studies to date on different dimensions of EL in the accounting education context, very little is known about how far this approach has progressed as a pedagogical approach to teaching and learning in accounting education contexts. Thus, our key research question for this study is: *What outcomes have emerged from the EL teaching and learning approach in the context of accounting education?* Kolb's (1984) experiential learning (EL) theory is used as a platform to explain the findings from the available accounting education literature in the higher education context and to answer this research question. Many researchers in and outside accounting education have used this theory to weigh the evidence bases of students' and teachers' achievements in higher education institutions and revamp their curriculum to improve their teaching and learning practices.

The key contribution of this study is a critical appraisal of Kolb's (1984) EL theory and an understanding of how EL enables students to learn subject contents and develop skills and abilities required in an accounting degree program. The findings from this study is expected to inform users of EL in teaching and learning in higher education institutes about its potential to grow as a pedagogical tool to achieve students abilities to develop personal and professional qualities (skills, learning processes, and engagement in learning through inside and outside classroom experiences) required by accounting professional bodies (initially summarized in Quinn, Garner, Marshall, and Smith (1995). The rest of the paper is organized as follows: the next section reviews the relevant literature on EL in general, the third section discusses the research method, and the fourth section reviews the related studies in the accounting education context, the discussions, and the conclusion section round off the paper.

2. LITERATURE REVIEW

Experiential Learning (EL) is a learning strategy that involves four stages: concrete experience, active experimentation, abstract conceptualization, reflective observation (Kolb, 1984). This basic model was refined over the years by scholars from different discipline areas. EL stages are further elaborated over the years to include various types of activities within each stage. In the first state, concrete experience, students actively participate and involve in the whole experience through workshops, seminars, and classes before the actual field trip (Frontczak, 1998). Learning takes place through emotional engagement during the field trip (Abdulwahed and Nagy, 2009). In the second stage, reflective observation, students reflect on their experience to transform them into experiential education (Joplin, 1995; Warren, Sakoffs, and Hunt, 1995). Reflection also maximizes learning through a linkage of concrete experience to abstract lessons (Sakoff, 1995) and the reflection process can offer new understanding leading to new knowledge if the learning is internalized (Jakubowski, 2003). In the third stage, abstract conceptualization, students are required to use theories and ideas to comprehend the experience and understand the situation at hand and form a testable hypothesis (Frontczak, 1998). It requires the students to think and try to form links between theories, past experiences, and the current situation. The final stage, active experimentation, involves the extension of knowledge gained and apply it into practice through recommendations and strategies (Kolb, 1984).

There are many criticisms of the tenet of the original version of the ELT. For example, Rodgers et al. (2017) argue that Kolb's (1984) experiential learning theory overlooks social context, requires further refinements and alternative interpretations. These authors posited that EL is not a complete learning strategy for many disciplines such as accounting that is closely connected to a profession where expert knowledge acquisition and use are heavily dependent on continuous learning of concepts and practices (Rodgers et al., 2017, p. 188). Accordingly, the approach is refined by Rodgers et al. (2017) to accommodate the learning of concepts through a 'Conceptual Learning' approach that followed EL stages with some refinements.

While the learning cycle is a process, it does not tell us about the individuals involved in the learning process and how they learn from experience. Kolb (1984) argues that learning style is habitual, changes over time, and is influenced by personality types before a defined learning style evolves. The evolved learning style, according to him, is associated with the personalized information processing approach in learning and problem-solving. Kolb ((1984) posited a learning style inventory (LSI) to capture the learning styles of individuals. This LSI endeavors to locate individual learning styles in one of the four quadrants of different learning styles: Accommodator,

diverger, assimilator, and converger. A person can belong to any of the four quadrants. However, the best learner is the one close to the intersection point of the quadrant. Kolb (1984) also argues that individual learning style is not fixed, learning preferences and orientations change over time. He also argues that personalities, early education specializations, career choices, current employment, and adaptive competencies influence the learning styles. The LSI critics argue that learning styles are fixed and never change (see Foxon, 1991 for details).

Empirical evidence on Kolb's (1984) EL approach in different disciplines is sparse. The limited number of papers document different processes and outcomes of EL: classroom experiences (Mahmoud & Nagy, 2009), design of a professional learning for managers ((Serena Chiucchi, 2013), a mixture of classroom and field-based learning of subject content (Chmielewski-Raimondo et al., 2016), a blend of classroom and field-based learning (Freeze & Schmidt, 2015), and field-based or work-based learning and learning and learning styles of accounting students and accountants (Foxon, 1991). The evidence bases suggested personal and professional skills development from singular to multiple modes of learning (in class or from the field). The current emphasis is inadequate to draw a conclusion at a discipline level about the full use of Kolb's (1984) EL cycles. In order to broaden our current thinking about the role of EL in general and Kolb's (1984) EL approach in particular, this paper has focused on the evidence of EL approach to teaching and learning in accounting education. Appendix A summarizes the current state of knowledge about EL in the accounting education context.

The summary of the EL literature in the accounting education context in Appendix A provided accounts of learning in different subjects at the accounting program (discipline) level. In these papers, the roles of the teachers, the students and the organizations engaging students to gain experiences provided an account of the evolving use of EL approach to teaching and learning. The evidence also suggests that the EL approach is still a classroom-based teaching approach and predominantly tool based. These tools include games, simulations, exercises, problems from print or virtual sources. In addition, one can only glean minimal information from the role of experiential education that these papers have reported. In section 4, the areas examined in the literature (summarized in Appendix A) are discussed in detail.

3. RESEARCH METHOD

This study is based on a literature search of studies in an accounting education context. A wide variety of databases was screened, including ABI-ProQuest, Scopus, Web of Science, ERIC, Emerald, and Google Scholar. The following terms were used: "experiential learning," "active learning" and "problem-based learning or PBL," "accounting education," "accounting curriculum" (in abstracts or all fields) and "accounting" "management" and "education" (in publication titles). In all, 38 studies were identified from 1988 to 2018. Articles in the English language are selected. Articles that had "experiential learning or active learning" were chosen from published sources in accounting, management, or education journals. Only 38 articles qualified for inclusion in this paper. Full texts of these articles were downloaded and read for checking the suitability of inclusion in this study. After this phase, 33 studies were considered for inclusion in this study.

The full texts of the articles were read after the initial coding of the abstracts. The included articles were all published in scholarly, peer-reviewed journals of international repute. The initial codes extracted the key areas of each article, and subsequent themes reported later in the paper. The summaries of coded papers were then analyzed for common themes and attributes. The evaluation base in this paper follows the qualitative synthesis tradition of Noblit and Hare (1988), where three key areas are reported in a paper: population, interests, and contexts (PICo). The population in each paper are the students in different subjects. The interest of this study is the use of the EL approach in teaching and learning of accounting curriculum in institutions of higher education in a global setting. Finally, the context is in-the class or outside the class learning from experiences. The reviewed papers were, thus, analyzed in terms of students' learning outcomes from different approaches to EL.

4. EL IN THE ACCOUNTING CURRICULUM

Different approaches influence students' learning in the accounting curriculum (degree program) to learn of content: some without prior discipline-specific knowledge of content and some after the acquisition of a discipline-specific understanding of the content. The empirical evidence base in accounting education falls somewhere between these two extremes. Extant literature on experiential learning in accounting curriculum revealed four distinct approaches to impart knowledge: learning through exercises (Bublitz et al., 2015; Laing, 2009; B. Snider & Southin, 2016; Wilson, 2018), structured interviews (Cornell, Johnson, & Schwartz, 2013), learning through simulations and games (Eckhaus et al., 2017; Freeze & Schmidt, 2015; Grandzol & Grandzol, 2018; Marriott, 2004; Stanley & Edwards, 2005; Webb et al., 2014), and finally learning through subject content (Hill & Johnson,

2014; Witt, Sandoe, & Dunlap, 2018). The common goal of these approaches is to teach discipline-specific knowledge.

4.1 Learning through exercises

Learning through exercises can involve teaching and learning situations where exercises are used as learning tools to impart content knowledge in different learning contexts within the accounting discipline (different subjects in the curriculum). These exercises were used in theoretical and computational tasks of various topics of the accounting curriculum and hence, provided the 'concrete experience' for the students. Bublitz et al. (2015) provided evidence of uses of exercises in Masters level financial accounting theory course, Laing (2009) used the EL cycle to improve students' understanding of management accounting concepts, B. R. Snider and Eliasson (2013) used Kristen's Cookies Co Harvard case to teach capacity and bottleneck issues to students. Lastly, Wilson (2018) documented how an in-class experiential exercise improved students understanding of production capacity 'issues. The evidence bases above suggest accounting educators preferred to impart knowledge and build students' concrete experience without requiring them to leave the classroom as the students were taught through simplified representations of complex organizational reality.

4.2 Learning through simulations and games

The use of emulated reality through simulation and games is observed in many studies of experiential learning in different subjects within the accounting curriculum (Fuglister, Stegmoyer, & Castrigano, 2010; Grandzol & Grandzol, 2018; Marriott, 2004; Stanley & Edwards, 2005; Webb et al., 2014). Such tools are claimed to enhance students learning of subsequent course content through cost-effective means without having to rely on substantial funding for teaching and learning improvements. The stream of evidence of simulated learning included learning in an AIS subject (Stanley & Edwards, 2005), Enterprise Resources Planning (ERP) (Freeze & Schmidt, 2015), supply chain management (Webb et al., 2014), and operations management (Grandzol & Grandzol, 2018). The simulated learning provided students the opportunities for gaining real experience through the linkages of theories to practice in the subject areas, processes involved, learning situations, and contexts. The learning situations provided the skills of learning content (subject knowledge).

The use of games during class time is also a commonly found learning tool within the experiential learning literature on accounting education context. Learning through games is a representation of the reality where students engaged them in interacting with virtual realities of business environments through different subject-specific content. For example, B. R. Snider and Eliasson (2013) used a 30-minute game for learning time-series forecasting exercise and Eckhaus et al. (2017) provided evidence about an accountancy-oriented board game for students to learn cost accounting concepts. In the context of students' learning, the games facilitated an understanding of real business contexts through a mimicked reality where content-specific knowledge from different subjects is used as platforms to impart knowledge to the students.

4.3 Learning through practicum

The use of industry placements through engagements in projects, assignments, or with professionals is a very commonly observed technique in the existing literature on experiential learning. This mode of teaching and learning requires stepping out of classrooms and gain real experience through work processes or professionals working in real businesses. Akpan (2016) documented two different modes of experiential learning- one involving a field trip (field as a classroom) and the other involving students' engagement in a local professional firm. In Dellaportas and Hassall (2013), students were asked to visit a prison (prison as a classroom) and interact with inmates who were jailed for various professional malpractices. Wygal (2015) and Eljido-Ten and Kloot (2015) discussed students' learning through placements in small to medium-sized enterprises (SMEs). McPhail (2002) demonstrated students' learning of ethical issues and ethical sensitivities through a field visit. The essence of sending students to experience outside the classroom is a learning context where students received opportunities to learning subject content, visualize the linkages between content and context for subsequent learning, and reinforce their learning through reflections after their engagements in different fields or after the completion of field visits. Learning in this space takes place from human interaction, and through linking practice to theories.

4.4 Skills acquisition from experiential learning

EL literature has documented evidence bases on the outcomes of teaching and learning through EL processes. This stream of empirical focuses on the human aspect of the developmental process through EL cycles or approach. Daly et al. (2015) documented how students developed inter-cultural skills through group work in a

masters level subject, involving students from international backgrounds, Helliari, Monk, and Stevenson (2009) documented how students learned the skills and attributes required to become a successful auditor, Serena Chiucchi (2013) described how the EL cycle of managers assigned to adopt intellectual capital (IC) learning and management processes and finally, McCord, Houseworth, and Michaelsen (2015) documented students' acquisition of analytical thinking through the EL cycle of reasoning and reflection of meaning and multiple framing. The evidence bases of the papers reviewed above suggest students' learning experience equipped them with the skills and attributes sought after by potential employers, and the skills impacted personal developmental state through the content-specific knowledge of different subjects.

5. FINDINGS AND DISCUSSIONS

In this section, findings from accounting education literature on theories and practices of EL will be linked to Kolb's (1984) stages of learning to critically evaluate what is known, how it is known, and what needs knowing to transform students' learning experiences to experiential education. This will then be followed by a synthesis of learning contexts and the tools and techniques used in these learning contexts.

5.1 Kolb's (1984) EL stages and accounting education

Kolb's stages are cyclic and assume a sequential, uni-directional forward-moving phase of learning. In the first stage, *concrete experience*, learning through actual attendance in institutional learning sessions (tutorials, workshops, seminars, lectures, and interactive discussions) are assumed to precede field trip. There is a forward-moving learning to experience sequence in this phase. Only 6 out of 33 works reviewed on experiential learning studies have provided insights about this phase. The studies ranged from descriptions of accounts of industry placements or institutional/organizational partnership arrangements for students to learning from experiences from the field (Elijido-Ten & Kloot, 2015; McPhail, 2002; Wygal, 2015) to learning experience from an overseas field trip where field trips are considered as a classroom (Chmielewski-Raimondo et al., 2016; Dellaportas, 2015). The students' engagement with the outer world was the starting point for field trips and converting experiences from fields to experiential education.

In such engagements, students learned from the field (or real organizations) about the subject content of an accounting degree program Chmielewski-Raimondo et al. (2016) (international accounting), Dellaportas (2015), (auditing), (Elijido-Ten & Kloot, 2015) (accounting) and (McPhail, 2002) (business ethics). The evidence suggests students benefited through intuitional/organizational partnering activities (getting the right skilled graduate). There is limited evidence from the available studies that students gained any intrinsic benefit (skills and experiences) for a smooth transition from their institution (place of studies) to organizations (jobs) (Akpan, 2016). In summary, the first stage of Kolb's (1984) EL stage turned out to logically lie towards the end of the continuum of a degree program. Other phrases that follow this phase may require an examination before suggesting the right sequence of experiential learning phases.

In the second stage, *reflective observation*, students are required to be reflective observers, demonstrate abilities to link and internalize experience to experiential education. This phase is dependent on gaining experience from the field or actual organization. This assumes field trips or learning from the outer world, engagement to multiple actors (Akpan, 2016; Chmielewski-Raimondo et al., 2016), and collaboration of institution-organization linkages for students' educational benefits. The finding in Elijido-Ten and Kloot (2015) is an account of how small to medium-sized organizations have provided opportunities for accounting students of an Australian university. While McPhail (2002) provided an account of experience to learning sequences for EL education through graduate placement in ethics learning from organizations. Dellaportas (2015) and McPhail (2002) provided reports of learning from field visits, interacting with experienced ex-employees in jail, and gaining an understanding of the consequences of malpractices in employment situations. These accounts have paved the way for internalizing learning from interaction with prisoners.

In the third stage of Kolb's (1984) EL theory, abstract *conceptualization*, students are expected to have learned theories and ideas, abilities to form testable hypotheses and link theories to practices (in future employment situations). This stage implies students' acquisition of some knowledge and ideas through classroom attendances or other forms of engagement, such as distance learning. Students' understanding of theories and concepts is dependent on curriculum design or pedagogical approaches used at the institutional level.

The available evidence reviewed above suggests the prevalence of pedagogy centered on learning from subject content as ends in themselves rather than a means to an end (application of theories to learn from experiences). For example, David Strang (2012); Piercy (2010) Specht and Sandlin (1991); and Wilson (2018) focused on course

content through simulated content knowledge from different accounting subjects. Students in various disciplines are expected to visualize the context and retain the experience for future employment situations. Several papers focused on extending the EL model to incorporate theories and concepts required to transform students' content learning to experiential education (David Strang, 2012; Rodgers et al., 2017; Rose & Wolfe, 2000). While different studies in the accounting education context, reviewed above, afforded opportunities to link theories to practices (actual or simulated), Foxon (1991) revealed a survey of accountants and accounting students in big eight accounting firms, Piercy (2010) and Wilson (2018) demonstrated students' abilities to link theories to practices.

In the very last stage of Kolb's (1984) EL, *active experimentation*, students are expected to be able to apply their knowledge to practice, that is, link theories to practices. The accounting profession is regulated by different standards and guidelines, like medicine, engineering, and nursing. Learning from different degree programs in accounting education exposes students to such standards, and practices McPhail (2002) provided a descriptive account of how students were able to apply their prior understanding of ethical issues to real-life organizational ethical practices. Eljido-Ten and Kloot (2015) have provided another account of learning to application scenario. In the study, managers' previous learning experience helped undertake similar responsibilities (in intellectual capital reporting) in a real organization.

Kolb's (1984) EL theory begins with a solid experience phase followed by reflective observation, abstract conceptualization, and active participation. In the first stage, *concrete experience*, students mostly prepare for a field trip (going outside a classroom). However, the literature on accounting education reviewed in this study provides little evidence that students are required to visit a field, experience actual practices, and then move to the second phase, reflective observation, to transform their field experience into experiential learning. Kolb's (1984) EL theory emphasizes more on the field trip (outside a classroom), but the accounting literature reviewed in this paper shows lengthy preparation of course content. Only 4 out of 33 papers reviewed provided a descriptive account of field studies in accounting education. However, the third phase, *abstract conceptualization*, a phase where students are required to understand concepts and theories before applying those to job situations (or job-ready skills such as information processing capabilities, communication, judgment, and problem-solving). The majority of the papers reviewed in this study focused on the abstract conceptualization, in full or in part (30 out of 33 papers), either through instructor-led approaches (teaching style changes to embed simulated experiences through games, exercises, or role-playing). The very last stage, *active participation*, is most closely linked and valuable to accounting students if the majority of these students are to qualify for professional accounting qualifications. Accounting qualifications in almost all countries require students to apprenticeships or traineeships in accounting related works (auditing, taxation, business advisory services). Therefore, this last phase is most critical for accounting education students. Still, only a handful of studies (4 out of 33) reviewed in this paper have reported students' exposure to field trips or work placements. In summary, Kolb's (1984) stages of learning may not be appropriate to equip students with experiential learning, as students are to spend a significant amount of their time in teacher-led learning sessions. A revised sequence for accounting education, therefore, is in order.

A possible way to look at this revised sequence is abstract conceptualization, concrete experience, reflective observations, and actual experimentation. This suggestion is based on the number of reviewed papers reporting the teaching and learning experiences of students and academics in accounting programs. There may be some overlaps in the first two phases, abstract conceptualization, and real experience. Still, a merger of these two phases into a single step (reducing the total stages to three only) or the removal of some of the overlapping areas may resolve this problem.

5.2 EL and learning processes and outcomes in accounting education

In the EL approach to teaching and learning, learning the outcomes may be a learning process (learning of concepts and principles) or a product (solutions to an exercise or completion of a tax return). The studies in EL in the context of accounting education context, reviewed in the previous section above, reveals that the studies have followed some of the sequences of EL literature to date (A. Y. Kolb & Kolb, 2005; D. A. Kolb, 1984; Rodgers et al., 2017). In this learning process, instructors may have used a variety of teaching tools to impart content knowledge to students. Students, in turn, learned valuable skills that are required for personal and professional development. Quinn et al. (1995) summarized the Accounting Education Change Commission's graduate capabilities in the US and suggested how students could acquire those capabilities. Other authors have focused on graduate skills for potential jobs and personal developments (Daly et al., 2015; Helliard et al., 2009; McCord et al., 2015; Serena Chiocchi, 2013). Students' acquisition of skills is dependent on what teachers' used (tools and techniques) to impart content knowledge, and they prepared students while the students were studying for an accounting degree. A summary of key learning processes and outcomes from different EL studies in accounting

is presented in Table 1 below, followed by the discussions of those in light of Nobitt and Hare's (1988) learning context, Co, in particular of the PICo framework.

Table 1. Learning outcomes from EL processes.

Learning tools used	Subject area	Learning outcomes
Classroom-based learning		
Textbook exercises	Financial accounting (Bublitz et al., 2015)	Concrete experience
Concepts and issues	Management Accounting (Laing, 2009)	Understanding of Management accounting concepts (Bottleneck and capacity issues in production operations)
Simulations	Accounting Information Systems (AIS)(Stanley & Edwards, 2005) (Stanley & Edwards, 2005) Supply Chain Management (McPhail, 2002) Enterprise Resources Planning (Freeze & Schmidt, 2015)	Concrete experiences and processes in operations
Games	Statistics (B. R. Snider & Eliasson, 2013) Cost accounting(Laing, 2009)	Problem-solving Conceptual understanding
Assessment items	Financial accounting (Daly et al., 2015; Wygal, 2015) Environmental management (Serena Chiucchi, 2013)	Inter-cultural skills Conceptual understanding of Intellectual Capital (IC)
Outside classroom learning		
Practicum (field trip and internships)	Auditing	Conceptual understanding of fraud

Source: Author's own compilation from published sources

The EL literature in accounting revealed two distinct paths of experience in learning concepts, principles, and practices. The first category of the literature showed learning from subject contents within teaching and learning sessions as shown in Table 1 above, as *classroom-based learning*. The evidence complies with the first concept EL. Learning in this approach follows a continuum between vertical learning (teacher-guided learning) to self-directed learning. The principal objective of this stream of research has been to equip students with different types of exercises in theoretical subjects (Eckhaus et al., 2017; Grandzol & Grandzol, 2018; Marriott, 2004; McCord et al., 2015; Wilson, 2018) or to enhance an understanding of key concepts and issues of a subject as shown in Table 1 above.

Apart from exercises or conceptual learning above, the use of simulations and games has been observed in accounting education as other forms of learning tools and techniques that reinforced students' learning of the subject content in accounting subjects. The use of simulations and games are alternatives to learning from the outer world, reduces the cost of providing tuition to students, and relieve institutions from funding pressures (Piercy, 2010). The use of simulation is a replication of reality through computers, without involving actual subjects (students' counterparts) or a learning context (real job environment, a real-life organization, or a production facility). When students engage themselves in such simulated activities, they at least can see the connection between theories and practices.

The second category of the papers emphasized learning from the outer world, labeled in Table 1 above as *outside classroom learning*, having to leave a classroom-learning environment, and interacting with people in the community (professionals or private individuals). In this stream of literature, the students are observed to have learned from interactions with outsiders or engaging in activities (listening or actively participating in tasks) and through reflecting on principles learned from textbooks (examples- prison visit, site visits, study trips, etc.). During their engagement phase, they were able to learn from the activities such as projects or work processes and reflect on their prior knowledge from the academic curriculum. Interactions with people during such engagement activities required them to demonstrate an understanding of the issues that surfaced from the engagements and relate their prior learning to the problems examined or observed during conversations and interactions with peers. Learning from these activities took the form of practice to theory cycle of reflections and refinements, and the learning outcomes are inner developments of students as humans.

Finally, the stream of papers in the EL context has focused on skills developments from different subjects or through interactions with their peers. The development of personal and professional skills is much sought after by professional bodies such as (Maudsley & Strivens, 2000; Wygal, 2015). The development of such skills required students to engage in different learning contexts and subject content, as shown in Table 1 above. In the process of developing these skills, students were required to interact with peers from a different culture (Daly et al., 2015) or learn the judgment skills of an auditor (Helliari et al., 2009) or a manager working for a multinational company (Serena Chiucchi, 2013).

6. CONCLUSIONS AND LIMITATIONS

The study is about the current state of knowledge about Experiential Learning (EL) in the context of accounting education and the directions it needs to take to achieve its fullest potential to develop students as future employees and lifelong learners. To summarize the current state of knowledge, this paper has framed only one research question: What learning outcomes are achieved from an EL in the context of accounting education? In addressing this question, published peer-review papers are examined and evaluated in light of the developments in EL literature and its refinements.

The study concludes that the evidence bases of EL in accounting context is reasonably well articulated. However, the EL cycles are not strictly observed in the majority of these published papers by the users of this approach in teaching and learning. Most of the studies examined in this paper reported the use of in-class activities as the context for building students' learning experiences by synthetic emulation of realities through case studies, exercises, concept-building, and assessment activities. These are, indeed, the least costly alternative to gaining experiences from the outer world and suitable for accounting education. To make students' learning experiences more productive, learning experiences from the outside world are much sought-after alternative but costly to an institution and the students. Only a handful of studies have reported students' learning experiences from outer worlds by engaging in field trips or working for different host organizations.

The study has implications for academics and practitioners. Academics can use the fuller cycle of EL theories (Kolb, 1984; 2005) and use their resources to develop students as future professionals. When fuller cycles are used, students may be given feedback about the purposes of engaging in the fuller learning cycles so that they can appreciate the purposes and tap the fuller potential of the trialed EL approach. The practitioner community can also collaborate with academic institutions in setting their agendas for the desired skills and attributes of students as their future employees. In setting their agendas, they can also take part in providing input to developing curriculum materials that can be completed through the EL cycle. Some bilateral discussions between academics and future employers about the inner meaning of EL cycles may be useful in developing curriculum materials and academia-industry partnerships to meet the needs of the students, scholars, and employers.

The study has several limitations. Only published peer-reviewed papers are analyzed and evaluated in this study. The generalizations in this paper are personal accounts of perceptions from the evaluation made by the sole author of this paper. The paper is based on desk research of studies. This study can be pursued in several directions. Future researchers can use a larger sample of studies from other sources (conferences, theses and book chapters) to explore the issues identified in this paper. For one to make a study more meaning to the broader audience, a systematic review and meta-analysis can be conducted. Finally, primary studies can be undertaken using surveys of students, employers, and academics to reflect on the outcomes of the EL approach to teaching and learning in accounting education and higher education context.

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Appendix A: Summary of EL studies in accounting education context

Authors	Aims of the paper - revised	Method used	Findings and implications- Revised version
Akpan, I. J. (2016).	While CP has become a popular way to help students acquire the essential practical skills and experience to enhance career readiness and ensure a smooth transition from college to employment, there is a lack of empirical studies that establish any link between CP and the career readiness of students. This study seeks to fill this gap.	Qualitative (case study)	Students developed essential career-related competencies and behavioural for career readiness, affirmed CP can enhance students' readiness for professional careers in MIS.
Bublitz, B., et al. (2015).	Describes how an <i>experiential</i> learning exercise used in a master's level financial accounting theory course.	Classroom experiment	In-class use of this research-based <i>experiential</i> exercise resulted in greater student acceptance of behavioural accounting theories and concepts.
Chmielewski-Raimondo, D. A., et al. (2016).	It documents the use of the field as a classroom in two distinct settings; in an undergraduate and a post-graduate class in accounting.	Field study (descriptive)	Four stages of Kolb's (1984) are useful in explaining students' reflections, assessments, and host feedback in field based (out of class) learning context.
Cornell, R. M., et al. (2013).	It documents how a structured-interview instrument effectively facilitated <i>experiential</i> learning for accounting students without extensive content-specific knowledge.	Qualitative (interview)	Structured interview assignments helped students to internalize concepts from their classroom learning, formulate recommendations for control, and other improvements in the organization, successfully enhanced student confidence and reduced anxiety.
Daly, A., et al. (2015).	It reports on the processes and outcomes of an <i>experiential</i> learning intervention designed to improve intercultural skills in accounting students by building cross-cultural alliances in culturally mixed groups in an Australian university.	Quantitative	Students participating in the intervention units reported higher levels of cultural learning than those in corresponding control units.
David Strang, K. (2012).	An experiment compared asynchronous versus synchronous instruction in an online quantitative course, based on <i>experiential learning</i> based instructions.	Quantitative	Students in the synchronous Skype tutorials, based in part on EL approach, achieved a statistically higher number of substantive responses during weekly sessions, and they obtained a statistically higher final grade on the exam.
Dellaportas, S. and T. Hassall (2013).	Describes how the concepts of situated and <i>experiential</i> learning was used to assess the effects of a learning opportunity involving visits to prison by students enrolled in the final year of an accounting degree program in an Australian university.	Quantitative	Students appeared to learn several lessons, including the nature of conflicts faced by professional accountants, factors contributing to fraudulent conduct, and strategies on how they might deal with such conflicts in their professional careers.
Eckhaus, E., et al. (2017).	Discussed EL theory dimensions and issues relating to its application in an accountancy-oriented board game designed to help participants learn about the cost management needs of real organizations.	Qualitative (case study)	Game participants had significantly higher grades than students that did not participate in the game and that entertainment and comprehensibility of the game predict the understanding of course material, the level of challenge participants can predict managerial employment capability derive from the game.
Elijido-Ten, E. and L. Kloot (2015).	Discusses the role played by large and small-to-medium enterprise (SME) employers in providing <i>experiential</i> learning opportunities to accounting students in an Australian higher education context.	Qualitative (case study)	The analysis reveals that both SMEs and large firms provide excellent training opportunities that enhance the student's <i>experiential</i> learning, mainly when proper WIL structures for pre-placement processes, training, supervision, and performance reviews are in place. WIL is seen as a positive experience by employers and students alike.

Foxon, M. (1991).	Research using the LSI to identify the preferred learning styles of accountants and accounting students is discussed and compared with the author's own research in one of the "Big Eight" firms.	Literature review	Personal experience and experiences in big-eight firm suggest EL in accounting education is useful but difficult to implement
Freeze, R. D. and P. J. Schmidt (2015).	Describes an experiment in ERP based on an immersive <i>experiential</i> learning environment using the leading commercial ERP system to create a realistic and dynamic business situation.	Quantitative (survey)	Results show perceived complexity to be a parsimonious predictor of resistance to ERP use. Findings further support the importance of assessing tacit knowledge (gained from conceptual <i>experiential</i> learning) and demonstrates avenues to create a highly effective multidisciplinary learning program.
Fuglister, J., et al. (2010).	Presents and discusses how to prepare and use cases in the areas of bank accounting and international accounting.	Case study	The rapidly changing environment in international business provides an excellent opportunity for instructors to design timely, adaptable, <i>experiential</i> learning and open-ended cases.
Grandzol, C. J. and J. R. Grandzol (2018).	Assessment data indicate the simulation is a highly-effective <i>experiential</i> learning activity.	Classroom experiment	Student survey results suggested playing the game in an EL based statistics class (on forecasting) was sufficient, and increased their interest in learning the forecasting techniques.
Helliar, C. V., et al. (2009).	Examines the skills that practitioners, academics, and students think are essential for trainee auditors to possess a successful auditing career.	Quantitative	Universities cannot, and arguably should not, replicate the 'on-the-job' training that auditors receive, but they can usefully try to mimic the skills that are learnt on the job through the use of alternative teaching methods, especially through the use of case studies.
Hill, D. J. and S. Johnson (2014)	Describes a graduate professional services marketing class that focuses on <i>experiential</i> learning in the context of the accounting profession.	Field study (descriptive)	Simulated organizational realities through structured class-room based activities are useful in an EL approach.
Laing, G. K. (2009).	It reports on the use of an <i>experiential</i> learning activity, which designed to provide an improvement in student comprehension of management accounting concepts.	Quantitative	Students participating in EL based learning performed better than the control group in two assessment pieces.
M. Huber, M. and S. L. Mafi (2013).	A teaching note presents an innovation in accounting education called the Philanthropy Project.	Qualitative (case study)	After the project, students reported experiencing the benefits of collaboration, communication, conceptual learning, community engagement, and character development, and participating students learned about NFP financial statements and related economic measures.
Marriott, N. (2004).	Outlines the use of computer simulation in an attempt to combat some of the challenges faced by accounting educators by providing an opportunity for real experience in an educational setting.	Classroom experiment	Students get opportunities to develop algorithmic thinking, to use spread-sheet-modelling skills in a realistic setting for a holistic understanding of a business problem, and learn ways to reduce instrumentality through the intrinsic enjoyment of problem-based learning.
McCord, M., et al. (2015).	Uses Kolb's cycle of learning to describe how and why the real experience provided by IBE enables students to develop the ability to engage in analytical thinking through practical reasoning, reflective exploration of meaning, and multiple framing.	Field study (descriptive)	Students' experiences in IBE are real; they can reflect on their identities and values as they make decisions in both their business and service activities, and experience the consequences of their choices.
McPhail, K. (2002).	To capture and discuss the students' reflections on the visit to a prison to engage with subject materials taught in accounting and business ethics subjects.	Qualitative (descriptive case study)	Students' reflections on the visit to a prison suggest that this kind of <i>experiential</i> learning may be an effective way of encouraging students to engage with business ethics issues and of developing their ethical sensitivity

Panero, M. A., et al. (2018).	Inquires whether the “Pathways” educational model has been effective in improving the environmental and economic performance of the SMEs by helping them to reduce their water and energy consumption, along with other measures.	Qualitative	The students were expected to gain expertise and capabilities during their practice to guide companies on a sustainable development path. The partner organizations were expected to improve their environmental and economic performance by implementing the recommendations.
Piercy, N. (2010)	It reports on a low-cost simulation exercise (the production game) that can be run quickly and efficiently with little staff overhead, minimal equipment, and free of licensing costs.	Classroom experiment	It is a low-cost simulation exercise (the production game) that can be run quickly and efficiently with little staff overhead, minimal equipment, and free of licensing costs in an EL learning context.
i	Describes an account of an EL based teaching methodology that the authors believe facilitates student acquisition of a number of the prescribed accounting graduate capabilities outlined in the Accounting Education Change Commission's Position Statement No. 1.	Qualitative (descriptive case study)	ABLE/VITA's classroom, client, and team experiences provide students with the opportunity to gain knowledge, skills, and abilities which satisfy the thrust of the AECC's charges and can be a valuable exemplar for other institutions with similar interests.
Rodgers, W., et al. (2017).	Reviews the theory and research to develop a framework involving the Throughput Model that relates to both conceptual and <i>experiential</i> learning.	Literature review	EL alone is insufficient for the accounting education context, proposed a conceptual learning approach to supplement EL to develop a throughput model.
Rose, J. M. and C. J. Wolfe (2000).	Extends the existing literature by using a framework for the study of learning from decision aid use and by using cognitive load theory to explain the failure of specific decision aid design alternatives to promote learning.	Desk review	When explanations in a computerized decision aid are integrated into its problem-solving steps, cognitive load is reduced, and users acquire more knowledge from aid use. Decision aids for firms may be options when new computerized systems are built.
Serena Chiucchi, M. (2013)	Contributes to an understanding of how measuring intellectual capital (IC) can favour IC mobilization, examining the role of actors who design and implement the system in influencing managers' IC learning processes and their take up of IC management practices.	Case study	Actors (including controllers) must complete an <i>experiential</i> learning cycle to mobilize IC and change their minds sent from "IC counting" to "IC accounting".
Snider, B. and N. Southin (2016).	The exercise is a variation and extension of the famous Kristen's Cookie Co. Harvard case, which addresses capacity and bottlenecks issues in a production setting.	Case study	Through Kirsten's Cookies Co Harvard Case, students learned capacity issues and were able to see the linkages between operations and administration functions (marketing, accounting, and finance)
Snider, B. R. and J. B. Eliasson (2013)	Acts as a teaching note that describes a 30-minute game where student groups compete in-class in an introductory time-series forecasting exercise.	Qualitative	Student survey results suggested playing the game in an EL based statistics class (on forecasting) was sufficient and increased their interest in learning the forecasting techniques.
Specht, L. B. and P. K. Sandlin (1991).	To be a comparison of grades between students taught in an EL based class and a traditional lecture-based class.	Case study	There were no significant differences in short-term learning between EL and traditional teaching modes, but EL students retained concepts longer than traditionally taught students.
Stanley, T. and P. Edwards (2005).	Describes the design and development of a CD ROM intended to assist students' learning by bringing a sense of reality to the concepts studied in accounting information systems cycles.	Mixed method	A CD ROM based learning offered students a real life-understanding of applicable concepts and that students were receptive to learning in online environments that are appropriately designed and constructed.
Webb, G. S., et al. (2014)	Describes how an in-class <i>experiential</i> learning activity helps students to develop a holistic understanding of the processes and challenges of supply chain management	Classroom experiment	The classroom simulation actively engages students and has been used successfully in multiple courses at the undergraduate and graduate levels at various universities. Major corporations have used it, too, during a manager training session. The simulation was a

Wilson, S. (2018).	Discusses an <i>experiential</i> learning exercise designed to improve students' understanding of production system capacity issues (bottleneck operations).	Case study (descriptive)	useful learning activity, involving an understanding of supply chain processes. Students can quickly identify the system's bottleneck, often have difficulties distinguishing the practical implications of the processing time of the system versus the process cycle time, leading to judgment problems in a production environment.
Witt, C. M., et al. (2018).	Describes how Kolb's <i>experiential</i> learning cycle was used to design a direct-experience project to support students' learning of the 5S lean philosophy.	Qualitative (descriptive case study)	EL based teaching of content knowledge and demonstration of the linkage between theory and practices were effective in improving student's knowledge and procedures about the 5S leaning philosophy.
Wygol, D. E. (2015).	To act as a literature review that provides evidence derived from author experiences in developing past academic/practice partnering activities with the accounting profession and other stakeholders.	Literature review	Value of a focus on pathways to relationship building from interactions with different stakeholders was well recognised.
Young, M. and D. Lee Warren (2011).	Presents a learning strategy, Challenge Problem approach that encourages the development of critical thinking skills in an Introductory Accounting course.	Mixed method	Rubrics identify the strengths and weaknesses of the students' critical thinking abilities and improve the design of future critical thinking exercises in principles courses.