

**ACCOUNTING ETHICS EDUCATION: EMPIRICAL EVIDENCE FROM 25
YEARS OF RESEARCH**

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This study aims to map the knowledge of accounting ethics education literature by conducting a systematic literature review of 21 empirical research published on the Scopus database for the period 1993 to 2018. This study also suggests new avenues and insights for future research by analyzing and classifying the articles into three main levels (environmental, university, and individual), which would help to find the main focus of researchers and draw a clear picture of literature gap. It is also by far the first study to provide and discuss the key variables (gender, age, accounting ethics course) used by previous studies.

Keywords: Accounting Ethics, Accounting education, Systematic Literature Review, Multilevel Analysis

Topic: H) Corporate Social Responsibility

Accounting Ethics Education: Empirical evidence from 25 years of research

1. Introduction

In the current era, financial information has become the most important to maintain a specific economic power in the market economy (Bernardi and Bean, 2007). This has highlighted the role of the accounting professionals, as the accountant is the producer of the information and are expected to provide stakeholders with financial information that are reliable. This purpose of accountants needs to be conducted not only with expertise but also with a mix of integrity, honesty, and objectivity (Kannaiah and Kumar, 2009). Unfortunately, repeated financial crises and scandals have eroded the trust of stakeholders and led the profession into question. Although professional bodies realized the importance of ethics and established codes of ethical behavior (Adkins and Radtke, 2004), these codes were criticized for not being sufficient for individuals to act morally and ethically. After these corporate scandals, business ethics and accounting ethics research have gained interests (Tormo-Carbó et al., 2018). One mainstream of the research is the education of accounting ethics, as it is expected to limit the fraud by improving moral reasoning and development of thoughts of future accountants.

Changes of accounting education have been of interest to several accounting bodies such as the Committee on the Future Structure, Content, and Scope of Accounting Education (The Bedford Committee 1986) of the American Accounting Association (AAA), the large international accounting firms, and the American Education Change Commission (AECC) (White, 2004). These bodies have emphasized the need to include ethics in the content of accounting education. A series of discussions, after that, was proposed and reported to enhance the quality of accounting education in both curriculum and delivery of information. Results of previous research have approved the importance of ethics course for the business student (Tormo-Carbó et al., 2018; Adkins and Radtke, 2004), as it enhances the moral development, and ethical awareness of students. Armstrong (1993) suggested that an ethical curriculum combined with previous ethical learning could help in improving and predicting students reasoning abilities. Moreover, the need for an expansion of ethics education into accounting programs through a different mix of courses and different teaching techniques such as real cases and dilemmas, textbooks examples, discussions in the class and articles overviews (Mintz, 2006).

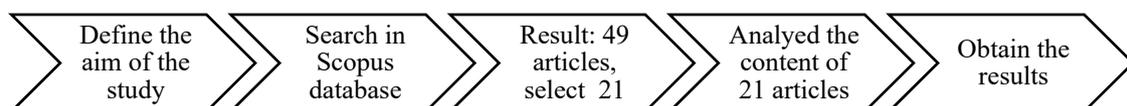
In accounting ethics research there is a limited number of systematic review studies (Bampton and Cowton, 2013). Bernardi (2005) and Bernardi and Bean (2007) conducted a systematic literature reviews of accounting ethics research, and they found that research in ethics is generally increasing. Uysal (2010) used a bibliometric and co-citation analysis of accounting ethics literature; his findings show that the earlier accounting studies (the 1980s) were heavily cited through recent years. Moreover, Bampton and Cowton (2013) conducted a literature review study for more than 500 research in accounting ethics. However, all of these studies focused on accounting ethics field in general and under a monolevel perspective. Thus, to the best of our knowledge, our study is the first systematic review study from a multilevel perspective and also is the first focused only on empirical accounting ethics education research. It also contributes to the literature by classifying the studies into three levels: environmental, university, and individual level.

Therefore, the purpose of this study is to map the knowledge of accounting ethics education literature by analyzing the content of 21 empirical research published on the Scopus database for the period 1993 to 2018. This study also suggests new avenues and insights for future research by analyzing and classifying the articles into three main levels which would help to find the main focus of researchers and draw a clear picture of literature gap; it is also by far the first study to provide and discuss the key variables used by previous studies.

This paper is structured as follows: First, an introduction and objective of the study are provided. Second, the scope of the study, the methodology, and theoretical background. While the third section provides a discussion and analysis of the result of the content and multilevel analysis. Finally, the last section provides the conclusion of the study, limitations, and recommendations for future research.

2. Methods, Sources, and Data

Figure1: Methodological process



We conduct a systematic review of accounting ethics education literature by search for the Scopus database, from 1991 to 2018. A systematic review is a methodology that identifies previous studies, selects and assess results, analyze data, and reports the results and conclusions reasonably and transparently (Denyer and Tranfield, 2009). It can be characterised as a type of content analysis which observe both quantitative and

qualitative data in the same way (Brewerton and Millward, 2001). The results of a systematic review could determine specific gaps and inconsistent findings which would help to specify the needs of future research (Denyer and Tranfield, 2009). The search criteria included the joint appearance of the words accounting ethics and education, (train or training) ("accounting ethics" AND education OR train*) in one area or jointly of the title, abstract and keywords. We used after the search several 'exclusion criteria' to adapt the results to the purpose of the study. First, we also excluded items such as books, chapters, reviews, and conference papers. According to Jones et al. (2011) and Podsakoff et al. (2005), only journal articles are considered as validated knowledge because of the variability in the peer review process and their more restricted availability. The result of this search showed 49 articles. Second, to achieve the study goals, we focus on this study only on the empirical studies and the studies that fit our multilevel analysis (environmental, university and individual level) these articles were reviewed for their abstract and title to exclude the irrelevant articles. After eliminating 28 articles, the remaining sample included 21 articles from 1993 to 2018.

3. Results.

After carefully reviewing the accounting ethics education literature, we divided our sampled studies into three levels: environmental level, university level, and individual level. In addition, each level is divided into two sections according to its research target which is whether faculty members or students. First, the environmental level is about the studies that have introduced a comparison between different groups according to their cultures, region, country of education, etc. (Sugahara et al., 2010; and Auyeung et al., 2006). Second, the university level is includes the studies that examine the course content of accounting ethics and the teaching techniques (Marzuki et al., 2017; Warinda, 2013; Tunca-Caliyurt , 2007; Auyeung et al., 2006; Christensen et al., 2018; Tormo-Carbó et al., 2018; Shawver and Miller, 2017; Sorensen et al., 2017; O'Leary Stewart, 2013; Massey and Van Hise, 2009; Welton and Guffey, 2009; LaGrone et al., 1996; Armstrong, 1993). Finally, the individual level includes all the studies that have focused on the personal features of faculty members or students that affect their morality or ethics development (Marzuki et al., 2017; Warinda, 2013; Tunca-Caliyurt , 2007; Christensen et al., 2018; Andersen and Klamm, 2018; Tormo-Carbó et al., 2018; Shawver and Miller, 2017; Sorensen et al., 2017; Tormo-Carbó et al., 2016; Cameron and O'Leary, 2015; Sugahara et al., 2010;; Chan and Leung, 2006; Thorne, 2001; Thorne, 1999; LaGrone et al., 1996; Shaub, 1994; Armstrong, 1993). As shown in the next table, some studies

focused on two levels, for example, Marzuki et al., (2017); Warinda, (2013); and Tunca-Caliyurt, (2007) studied university and individual level.

Table (1): Multilevel Analysis and research targets

	Faculty member	Student
Environmental level	Auyeung et al. (2006)	Sugahara et al. (2010)
University / Department level	Marzuki et al., (2017); Warinda, (2013); Tunca- Caliyurt, (2007) Auyeung et al., (2006)	Christensen et al., (2018); Tormo-Carbó et al., (2018); Shawver and Miller, (2017); Sorensen et al., (2017); O'Leary Stewart, (2013); Massey and Van Hise, (2009); Welton and Guffey, (2009); LaGrone et al., (1996); Armstrong, (1993)
Individual / Personal level	Marzuki et al., (2017); Warinda, (2013); Tunca- Caliyurt, (2007)	Christensen et al., (2018); Andersen and Klamm, (2018); Tormo-Carbó et al., (2018); Shawver and Miller, (2017); Sorensen et al., (2017); Tormo- Carbó et al., (2016); Cameron and O'Leary, (2015); Sugahara et al., (2010); Chan and Leung, (2006); Thorne, (2001); Thorne, (1999); LaGrone et al., (1996); Shaub, (1994); Armstrong, (1993).

From this framework, this section develops a multilevel analysis of accounting ethics education literature. We discuss the studies of each level by present the critical variables and highlighting the main findings and results.

3.1. Trends

The period in this field is relatively wide (1993-2018), in general, there is no clear trend for the publications, and there is a fluctuation during the period. However, if we take into consideration each flow of the research during the period, we could tie it to a financial event, for example, the Enron case happened in 2001, a few years later, the flow of research has increased (17 of 21 articles are published after 2001). It is also noticeable that there is a lack of the number of publications in this field which reflects that the field is new, therefore, the need for further research to explore it and fill the literature gap.

As shown in table (1), the trend of the publications is different according to the multilevel perspective. Thus, in the individual and university levels the publications are distributed in a wide timespan (from 1993-2018), while the publications on the environmental level (two articles) are more recent (2006 and 2010). However, regarding the research targets, these studies begun on students and that focus is common in the current literature (there are works from 1993-2018). In fact, it is important to note that the majority of the studies of the sample are conducted on students (17 of 21). On the other hand, the tradition of studies concentrated on faculty members and academics are more recent (they started after 2006).

3.2. Geographic Scope

Table (2): Country distribution

Countries	Number of articles	Legal origin	Developed/Developing
United States	10	Common law	Developed
Australia	5	Common law	Developed
Canada	2	Common law	Developed
Spain	2	Civil law	Developed
Malaysia	1	Civil law	Developing
China	1	Civil law	Developing
Hong Kong	1	Civil law	Developing
Japan	1	Civil law	Developed
Zimbabwe	1	Civil law	Developing
Turkey	1	Civil law	Developing

Table (2) shows the countries published in the field. It is notable that regarding Malaysia, China, Turkey, Hong Kong, and Zimbabwe all other countries are developed and are mainly from common law countries. We can also notice the leading role of United States

in the field, this result is consistent with previous accounting and business ethics research (McLoed et al ., 2016; Bampton and Cowton, 2013), which could be explained by the Enron-Arthur Anderson and World Com scandals which happened in U.S, that put the reputation of the profession into question, leading the American Congress to form the Sarbanes Oxley 2002, that called for serious actions regarding the code of professional conduct, such as taking into consideration teaching the ethics of accounting and calls for the research in the field of accounting education and accounting ethics education in order to mitigate further scandals in the future.

From a multilevel perspective, we observe some differences between levels. Thus, the most productive country in the field (USA) don't have any contribution in the environmental level because the two contributions in this level belongs to Australia and Japan. Regarding the rest of the levels, there are no significant differences between the department and individual level.

3.3. Journal

Twenty-one articles published in eleven journals; this result reflects the high diversity of articles produced in this field. However, almost 52% (11 of 21) of the articles were published in two journals. The scope of the journals is on accounting, accounting ethics, and accounting education. Journal of Accounting Education (JAE) and Journal of Business Ethics (JBE) are the most productive journal with 6 and five publications respectively. This result is consistent with Bampton and Cowton (2013).

Regarding the multilevel analysis, it is worth to mention that, all of the articles in our sample that were published on the top three journals (Journal of Business Ethics, Journal of Accounting Education, and Accounting Education) are focused on an individual level and university level respectively and no studies on the environmental level. It also notable that the sample was on student only. Besides, all of the articles on the environmental level (2 articles) and articles with faculty members sample were published in journals with general accounting and business scope (such as Accounting Research Journal; Asian Review of Accounting; Managerial Auditing Journal). Moreover, our results show that, in our sample, all the publications (5 articles) on the JBE are published from 2013-2018. On the other hand, the publications (6 articles) of the JAE are distributed between 1993-2018.

3.4. Data Source

In the empirical accounting ethics research, most researchers used a questionnaire as a data collection method, while a few researchers used personal interview (Bampton and Cowton, 2013). Consistent with previous studies, in our study, all studies used surveys. However, from an individual and University level, Christensen et al., 2018 used both survey and interview. Similarly, from the environmental level, Auyeung et al., (2006) conducted a survey and interviews to outline how the understanding of accounting ethics education varies among three different cultural backgrounds.

3.5. Statistical Methods

Regarding the statistical methods, most of the studies used regression analysis. Christensen et al., (2018); and Chan and Leung, (2006) used a logistic regression, other studies used ordinary least square analysis (OLS) (Shawver and Miller, 2017; Tormo-Carbó et al., 2016; Thorne, 2001; Thorne, 1999; Shaub, 1994), hierarchical regression (Tormo-Carbó et al., 2018), Analysis of variance (ANOVA and ANCOVA) (Andersen and Klamm, 2018; Shawver and Miller, 2017; Sorensen et al., 2017; Cameron and O'Leary, 2015; Sugahara et al., 2010; Armstrong, 1993), factor analysis (Sugahara et al., 2010), and descriptive analysis (Warinda, 2013). There are not significant differences from a multilevel perspective, because the most common methods such as regression, ANOVA or t-test are used in all levels.

3.6. Major theoretical lenses

Accounting ethics education is an emerging field. Therefore, most of the studies in this area are either exploratory or survey (Bampton and Cowton, 2013); few theories have been discussed in the sampled studies. Among our sample (18 of 21) articles have used theories as a base for discussion while three articles did not use any. The most used theory is the Cognitive Moral Development theory (CMD) which have been used in 14 articles of the sample. However, other theories used only once or twice (such as Haidt's moral foundation theory, Eagly's social role theory, social learning theory, the theory of moral sentiments, self-efficacy theory, social cognitive theory, gender socialization theory, experiential learning theory, classical ethical theories).

From a multilevel perspective, on the individual level, all of the articles (12 articles) that focus on students as a target have used CMD theory. Some articles used other theories such as Haidt's moral foundation theory, Eagly's social role theory, social learning theory, social cognitive theory, gender socialization theory, experiential learning theory). In the department level, several theories were used such as CMD theory, classical ethical

theories, experiential learning theory, the theory of moral sentiments), noting that the studies that have used the CMD theory in department-level depend on the student as a target. Finally, in the environmental level, in our sample only two studies are classified as environmental, one has used CMD theory, and its target was student, the second study did not use any theory.

As mentioned earlier, the most commonly used theory is the CMD developed by Kohlberg (1969). According to CMD theory, people are categorized into three hierarchical levels of moral development when they justify or give a criterion to solve a hypothetical moral dilemma. The three levels were classified as pre-conventional, conventional, and post-conventional. These levels are divided into two categories forming a six sub-stages hierarchy model. The pre-conventional stage is when individual behavior is instructed by punishment or rewards and is divided into (1-avoiding punishment and 2- self-interest). The conventional stage is when one's moral action depends on a group of norms or beliefs and is divided to (3-pleasing others and 4-rule followers). Finally, the post-conventional stage is when the individual acts are taking into consideration the natural fairness without social or legal interact and is divided to (5-rules recognized by consensus and 6-self ethical principles) (Kohlberg,1984). Kohlberg introduced a method to measure the degree of moral thinking; his method depends on using lengthy interviews that must be explained by competent experts. However, Rest (1986) developed a more practical method by using defining issue test (DIT). DIT measures the degree of reasoning rather than the production and gives an indicator of the level of moral reasoning.

For all aspects of accounting, when there is a decision or a judgment to take, it is always surrounded by rules and regulations. Therefore, the Kohlberg's approach to ethics in relation CMD can fit in all aspects of accounting. As a result, most of accounting ethics literature has used Kohlberg's CMD (Uysal, 2010) and replied a positive relationship between cognitive moral development and ethical decision-making (O'Fallon & Butterfield, 2005). However, critiques have been raised about CMD, such as the relationship between moral reasoning and moral action, and whether the stages of the model are discrete or sequential or whether an individual could possess to stage six (Andersen and Klamm, 2018). Other controversies noted that moral reasoning is only one part of the decision-making process, as there are other factors such as ethical intuition and ethical behavior.

In an attempt to develop a model that reflects all dimensions of the ethical decision-making process, Haidt (2001) suggested the social intuition model (SIM). In this model,

Haidt did not ignore moral reasoning but draw more attention to moral intuition. His idea was incorporated from (Humes, 1739-1740, 2001) that the emotions create morality, therefore, reflects a sense of right or wrong. The SIM model presumes that the individual is continuously evaluating the environment and will, therefore, make a quick, intuitive judgment. Haidt SIM has not yet been tested or applied, (Andersen and Klamm, 2018) were the first to examine the applicability of the model in their study and they replied that to improve accounting ethics education, students should practice their moral intuition as a mean of the decision-making process. However, they suggested that more research is needed to test the SIM and to build better means of measuring and capturing social intuition.

3.7. Topics

- *Environmental level.*

Regarding the environmental level, Auyeung et al., (2006) outlined how the understanding of accounting ethics education varies among three different cultural backgrounds: Anglo-influenced Australian, the Chinese and the Moslem-dominated Malaysian. The results suggest that there is a significant variation of Malaysian and Australian educators of their beliefs about the source and acquisition of knowledge. The Malaysian educators support that ethics acquisition begins before university as it is affected by religion, home, society and pre-university education. On the other hand, Chinese and Australian educators did not support that religion may affect ethical ideals. Their results also show that there are no significant differences in other accounting ethics education issues such as its goals, qualifications, and the delivery of education.

Interesting results were reported by Sugahara et al., (2010) who compared between ethical reasoning abilities of Chinese and Japanese students. By using DIT, they reported that the average score of ethical reasoning abilities for Chinese students was higher than Japanese students. They also indicate that ethics learning experiences before university affect ethical reasoning abilities for both groups.

- *University / Department level.*

On the other hand, from the university level, prior research shows that an improvement of the accountant's behavior has become a key concern for the accounting profession (Bernardi and Bean, 2007). Therefore, there has been a critical focus on the type of higher education in accounting that would enhance ethical thinking. Critiques have been proposed by some articles about the content of ethics and how the issue of ethics is raised in the education curricula and questions have been raised by researchers about the type and nature of course content that would be appropriate for an accounting ethics

course. A variety of studies since then have been discussing possible theories, contents, approaches, and objectives that should be laid on when teaching accounting ethics.

The academic literature in the field have showed an expansion of ethics education into accounting programs through a different mix of courses and different teaching techniques such as real cases and dilemmas, textbooks examples, discussions in the class and articles overviews (Mintz, 2006). Other researchers claim that a lot should be done to enhance the quality of accounting ethics education (Tweedie et al., 2013). It was also suggested that there are barriers of the integrating of ethics into accounting education, these barriers include the lack of adequate resources, time constraints and lack of qualified staff or educators (Massey and Van Hise, 2009). Other research claimed that academics perception and attitudes are critical to determining the motivation toward integrating ethics education in accounting programs.

Therefore, previous literature have indicated that integrating ethics in accounting courses would have a desirable impact on students' moral thinking. However, there have been controversies on what is the best way to teach it. According to Watts et al., (2007), traditional teaching methods of business ethics course such as lectures, essays, HomeWorks, ... etc would not enhance the moral thinking of the student, while non-traditional teaching methods such as small groups discussion, role-playing, internet discussion, ... etc would significantly enhance the moral thinking of the student.

Furthermore, Christensen et al. (2018) captured the behavior of two different class of students; each class had a different course intervention. The first course was a traditional type of courses, that is, theory based and depend on the traditional syllabus, the other course called Giving Voice to Value (GVV), depends on exercises, short cases, teaching strategies and bibliographies allowing the instructor to choose among these strategies with flexibility. Results of the study indicated a consistent unethical behavior after the traditional course but not after the GVV course. Thus they concluded that faculty should consider the use of GVV pedagogy for an accounting ethics course. Other studies have discussed the benefit of obtaining from an ethics course or ethics intervention in an accounting course.

Moreover, Armstrong (1993) have first introduced the idea of whether a discrete course or integrated one is needed to teach accounting ethics, he concluded that both are necessary, he also concluded that a "sandwich approach" could be used which is a general course of ethics in university followed by ethics case studies and homework problems combined within several accounting courses. Another view introduced by Shawver and Miller (2017), they examined whether an intervention of ethics in an

advanced accounting class would change the moral thinking of students positively; they used five ethics dilemmas with a pre- and post-test. The findings suggest that an ethics intervention would increase ethical awareness and sensitivity which would increase judgment and intention. However, their study did not measure either the actual behavior or whether the change of moral thinking is persistence. O'Leary Stewart (2013) assessed both student's learning styles and teaching method of accounting ethics. He evaluated student's preferred learning styles and attitude toward ethics and then subjected them to three different methods of teaching in an auditing course. The findings show a mix of result with a different combination of teaching method and learning styles. He concluded that teachers should consider the learning styles of the students before deciding to use a teaching method for an accounting ethics class. Tormo-Carbó et al., (2018) support this argument and suggest that to adopt a teaching method suitable to students' characteristics. They also suggest a new method that would enhance the effectiveness of ethical awareness of student which is learning from each other "mix gender group."

LaGrone et al., (1996) and Welton and Guffey (2009), have both addressed the issue of whether an ethics course intervention influences the moral thinking of students, and whether this effect is persistent. The two studies have used the DIT to measure the change of moral thinking after a course intervention. They both replied a positive effect, however, (LaGrone et al., 1996) replied that these changes were transitory, and concluded that accountants might attain their best ethical awareness if ethics awareness became a part of their continuing education or training programs. On the other hand, (Welton and Guffey, 2009) indicated that the gains of moral reasoning of the students are persistent, and they suggested that an appropriate ethics intervention tool could be used as a tool for professional ethics socialization.

Two studies have addressed the issue of what is the best content for an accounting ethics course. Sorensen et al., (2017) examined whether the virtue ethics proposed by Adam Smith in his theory of moral sentiments could be useful to increase student's moral development, they concluded that the concepts included in the theory could be useful in an accounting ethics course. However, they suggested that future research is needed to determine what concepts should be included in such a course. Moreover, Massey and Van Hise, (2009) provided insights for educators in the light of the increasing calls to provide more ethics instructions. They suggest an ethics course content based on their drawings upon existing education literature, philosophy, ethics, and accounting ethics. They also suggest a syllabus and assessment measures to ensure the success of the course they proposed.

It is also important to highline the work of Warinda (2013) who carried out a survey to exam the preparedness of the accounting faculty of a university in Zimbabwe to teach and embrace the education of accounting ethics; the respondent showed that the faculty perceive ethics as extremely vital in accounting education. It also considers the developing and enhancement of capabilities that are needed to deal with dilemmas as the most important. The faculty was very interested in teaching accounting ethics, and opinion of teaching ethics with the discrete course was raised. Another study by Tunca-Caliyurt (2007) examined how much importance the accounting ethics education was perceiving in business schools of Turkey and compared the results with developed countries. The findings show a low rate of ethics education in Turkey. However, an interesting finding suggests that if the faculty members have received an ethics education, he/she are shown to be more able to teach accounting ethics; The study recommends Turkish universities and government to organize conferences and events related to the accounting ethics education. It was also found that almost 55 % of faculty members teach accounting ethics in their classes. Moreover, most of the academics do not prefer to each accounting ethics in a separate course.

More recently, Marzuki et al. (2017) found that head of the department and peer support influence the attitude of the academic towards teaching accounting ethics effectively. They suggested that universities may adopt a work environment that encourages peer support, teamwork, and department support which would improve the teaching of accounting ethics.

- *Individual Level*

As shown from table (2), most of the sampled articles focus on moral development of accounting students and its relationship with the demographic and individual variables such as, gender, age (Christensen et al., 2018; Tormo-Carbó et al., 2018; Shawver and Miller, 2017; Tormo-Carbó et al., 2016; Chan and Leung, 2006; Thorne, 2001; Thorne, 1999; LaGrone et al., 1996; Shaub, 1994; Armstrong, 1993), previous ethics course (Tormo-Carbó et al., 2018; Tormo-Carbó et al., 2016; Sugahara et al., 2010; LaGrone et al., 1996; Shaub, 1994; Armstrong, 1993), and work experience (Andersen and Klamm, 2018; Thorne, 2001; Thorne, 1999; Shaub, 1994). Controversies have been found among their results. In the following section, we will discuss the most used individual variables among our sampled research.

Gender. Peoples actions are usually determined by there societies and social roles. Therefore, there are expected to vary with their attitudes and beliefs. Accordingly, sex differences are expected to lead to differences in actions between males and females.

Previous social theories mentioned that male and female are expected to act according to predictable stereotypes (Eagly's, 1987). It is generally found that men are expected to behave unethically than women because women are usually more concerned about the community and they act sensitively toward other well beings (Beu et al., 2003; Pan and Sparks, 2012). Gender issue has been introduced concerning whether female students have a higher moral development than male students.

Among the limited literature of accounting ethics education, gender is the most discussed variable. Shaub (1994) reported that females who had an ethics course are found to have higher moral reasoning. Therefore he suggested that the profession could be developed by recruiting a bright female. Thorne (1999) showed a similar result; she found that Canadian female students are found to possess a higher moral development. Also, Tormo-Carbó et al., (2016) have reported a significant positive relationship with female students. However, Thorne (2001) found that female students have no relationship with cognitive moral capability. Moreover, other studies found a non-significant relationship between gender and moral reasoning and ethical behavior (Christensen et al., 2018; Tormo-Carbó et al., 2018; Shawver and Miller, 2017; Chan and Leung, 2006; LaGrone et al., 1996; Armstrong, 1993). In terms of faculty members, according to Warinda (2013), females fully support teaching accounting ethics course, and they were more prepared to teach accounting ethics course than male.

Age. Age is another variable that has been of interest for accounting ethics education researchers. According to Kohlberg (1969), moral development will increase as the person get older, Tormo-Carbó et al supports this view (2016), they found that older students contribute to a higher moral reasoning tendency. In contrast, other studies found a non-significant relationship between student age and moral reasoning and ethical behaviour (Christensen et al., 2018; Tormo-Carbó et al., 2018; Shawver and Miller, 2017; Chan and Leung, 2006; Thorne, 2001; Thorne, 1999; LaGrone et al., 1996; Shaub, 1994; Armstrong, 1993). Regarding the measurement of variable, most researchers measured age as a continuous variable (Tormo-Carbó et al., 2018; Chan and Leung, 2006; Thorne, 2001; Thorne, 1999; LaGrone et al., 1996; Shaub, 1994; Armstrong, 1993). While, Christensen et al., (2018) used a scale of (under 26, or more than 26), besides, Andersen and Klamm, (2018) used a scale of (18-22, or more than 22).

Tormo-Carbó et al., (2018) have introduced the combined effect of gender and age on moral thinking of students. They found that both males and older females would possess

a higher level of moral thinking after attending an ethics course (CSR course), while the same tend not to affect younger females.

Previous ethics course. Previous literature has approved the importance of ethics course for the business student (Tormo-Carbó et al., 2018; Adkins and Radtke, 2004), and it increases the moral development, ethical reasoning, ethical awareness of students. It was also suggested that an ethics course intervention combined with previous ethical learning could help in improving and predicting student moral reasoning (Armstrong, 1993). In our sampled articles, all the studies that have taken the impact of an ethics course have found a positive relationship with moral reasoning and ethical awareness. Shaub (1994) reported a development in the level of moral thinking for auditing students and auditors who have taken a college ethics course. LaGrone et al., (1996) concluded that accountants might attain their best ethical awareness if ethics awareness became a part of their continuing education or training programs.

Moreover, Sugahara et al., (2010) found that the ethical learning experiences from high school have developed the moral reasoning of Japanese and Chinese students. Consequently, Tormo-Carbó et al., (2016); indicate that taking an accounting ethics course will enhance the level of moral reasoning of students. Besides, Tormo-Carbó et al., (2018) replied that students who have taken an ethics/ CSR course are aware of the importance of an ethics course and its effect on workplace decisions. Regarding the measurement of ethics course variable among the literature, all the studies in our sample measured it as a dummy variable.

4. Conclusions.

Recent financial scandals have highlighted the importance of business and accounting ethics education. Therefore, the purpose of this study is to map the knowledge of accounting ethics education literature by analyzing the content of 21 empirical studies published on Scopus database for the period 1993 to 2018. It is worth to mention that accounting ethics is an emerging field; through our search, we have noticed that there are limited studies on the field, particularly of accounting ethics education. Through our sampled articles most of the studies were conducted in developed and common law countries particularly in USA. Besides, the majority of our sampled articles are published in high quality and impact journals such Journal of Business Ethics which reflect the importance of the field. Future research may expand the research on this field, especially in developing countries.

Regarding the statistical methods and the source of data, most of the studies used survey and regression analysis. We provide a multilevel analysis by dividing the

accounting ethics education literature into three levels: environmental, university, and individual level. Each level is categorized into two groups: students, and faculty members. Our results revealed that most of the studies are focused on the individual level followed by university level and finally environmental level.

The environmental level contains the studies that have introduced a comparison between different groups according to their cultures, region, religion, and country of education, ... etc. In our sample only two studies were classified as environmental, one of the studies focused on comparing the morality of ethics development between two groups of the student, the other study compared the perception of accounting ethics between three groups of academics. Both of the studies emphasized the importance of teaching accounting ethics and highlighted the importance of ethics education before university. The results of both studies also indicate that cultural differences affect the education of accounting ethics. More result would be convenient; therefore future research may expand the focus on cultural differences such as combining between a variety of groups with different backgrounds, for example, developed and developing, middle east and western countries, countries of a different religion, common and civil law countries.

University level includes the studies that discussed academic views, course content of accounting ethics, and the teaching techniques. A significant number of studies in our sample discussed this level. They conclude that most academics are aware of the importance of teaching accounting ethics; they also indicate that the head of department and peer support are vital factors that affect the effectiveness of teaching accounting ethics. Academics who teach accounting ethics could go under the training of ethics education; they also could combine between preferable learning styles and teaching techniques which would enhance the effectiveness of ethics teaching excitingly. However, studies that have addressed the issue of accounting ethics education from an academic's point of view are limited. Therefore, future research may take into consideration focusing on these groups and expand the comparison of their views such as comparing between private and public universities, universities from different cultures.

Moreover, it was found that new methods of learning such as case studies, role-playing, mix gender group, literature review, videos, and web learning could be of interest for student to understand accounting ethics. Evidence indicates that most universities do not teach accounting ethics as a separate course, ethics are tackled through some accounting courses, mainly in auditing courses. For a better understanding of accounting ethics, universities may take into consideration teaching it not only with a separate course but also to include it with various accounting courses during the programme.

The most level that has been addressed through the literature in our sample is the individual level; it includes studies that have focused on the personal features of faculty members or students that affect their morality or ethics development. The main focus in these studies was on the personal characteristics of student particularly: gender and age. Most of the studies found no significant relationship between gender and moral development and ethical awareness. However, three studies found a significant positive relationship between female student and the moral development and ethical awareness. On the other hand, regarding one study all of the studies found no significant relationship between the age of student and moral development and ethical awareness. Future research may consider other variables than gender and age; such results may be of interest for firms and professionals while it would be less practical for teachers as they cannot change the way of teaching and split the students according to their gender and age.

Another variable that has extensively examined through the literature is the impact of an ethics course on the moral development and ethical awareness of the student. All studies in our sample indicate the importance of teaching accounting ethics course, and they found that taking an accounting ethics course would enhance the level of moral development and ethical awareness of students. These results are logical, suggestions for future research are, to expand the search on this field to answer questions such as, what kind of course intervention is needed?, what is the possible combination of teaching methods, learning styles, ethics theories, accounting content, and academics' experiences might affect the moral development and ethical awareness better?, and what is the kind of moral development and ethical awareness (if any)?.

Accounting ethics education is an emerging field. Therefore most of the studies in this area are either exploratory or survey; the theories that have been discussed in the sampled studies were little. Most of the studies discussed the cognitive moral development theory; this is because for all aspects of accounting when there is a decision or a judgment to take, it is always surrounded by rules and regulations. Therefore, Kohlberg's approach to ethics about CMD can fit. Also, other theories used by researchers for example (Haidt's Moral Foundation Theory) might be convenient but no suitable model generally tested for it. Therefore, future research may develop and test a suitable model.

Finally, this study might have some limitations in the search, selection and the analysis of data. A significant limitation is the possibility of non-inclusion of one or more of critical vital articles, in a substantial database, which was not due to a lack of methodology.

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