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The Effect of Constructive Alignment in Course Design on Accounting Students' Development of Written Communication Competence

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Abstract: The purpose of this study was to examine the effects of Constructive Alignment (CA), that is aligning learning outcomes, learning activities and assessment tasks, on students' development of competence in written communication. A counterbalancing two-phase experimental design was adopted. Third-year undergraduate accounting students in an advanced auditing course were randomly assigned into two groups. In phase 1, Group 1 received the constructive alignment intervention, and Group 2 studied in a traditional learning situation. In phase 2, the order of intervention was reverse, where Group 2 received the intervention, and Group 1 did not receive the intervention. Participants' written competency was measured before and after each phase by using an auditing writing test. Qualitative comments were also collected in group interviews. The study found that in the phase when students received constructive alignment intervention, they write better than the students who did not receive constructive alignment intervention. This finding indicates that constructively aligning learning outcomes, learning activities, and assessment tasks around writing help improve accounting students' written communication competence. For decades, accounting practitioners and employers have been lamenting over the inadequacy of accounting students' written communication competence. Results of this study provide useful and positive evidence to accounting educators on the importance of aligning components in course design to develop students' communication competence as required by the profession. Educators who intend to develop students' competence in written communication can be encouraged to redesign their courses according to the constructive alignment framework.

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INTRODUCTION

Effective writing is essential to success in accounting workplaces (Christensen & Rees, 2002; Fleet & Turner, 2003; May & May, 2009). It is no longer sufficient for accounting graduates to possess only discipline knowledge (Fouché, 2013; Howcroft, 2017; Yap, Ryan, & Yong, 2014) because repeated

evidence has indicated that employers prefer graduates who can communicate effectively in writing and orally (Bui & Porter, 2010; Crawford, Helliar, & Monk, 2011; Lim, Lee, Yap, & Ling, 2016; Mandilas, Kourtidis, & Petasakis, 2014; Tan & Laswad, 2018). Despite the importance of communication for accountants, literature continues to express concern about accounting graduates' communication skills (Christensen & Rees, 2002; Kunz & De Jager, 2019; Moore & Morton, 2017; Riley & Simons, 2016; Stevens, 2005; Stout & Sorensen, 2015). Professional accounting bodies such as the International Accounting Education Standard Board (IAESB) (IAESB, 2019) and the American Institute of Certified Public Accountants (AICPA) (AICPA, 2018) have responded to this problem by outlining good communication competence as one of the learning outcomes that should be developed throughout the accounting education curriculum. However, limited guidance is available to help accounting educators meet the professional accounting bodies' expectation (Ballantine & Larres, 2009).

This study relies on an integrative learning approach known as Constructive Alignment (CA), which aligns three main components of course design: the intended learning outcomes, the learning activities and the assessment tasks (Biggs, 1999; Biggs & Tang, 2011; Joseph & Juwah, 2012; Larkin & Richardson, 2013; Treleaven & Voola, 2008). The aim of the study is to examine if the implementation of CA facilitates students' development of competence in written communication. Prior studies have focused on the views among accounting stakeholders of the importance of written communication (e.g., Camacho, 2015; Crawford et al., 2011; Frecka & Reckers, 2010; Nellermoe, Weirich, & Reinstein, 1999) or reporting a communication skill gap between accounting graduates and practitioners (e.g., Christensen & Rees, 2002; Riley & Simons, 2016; Stevens, 2005). Despite the value of the prior studies, Apostolou, Dorminey, Hassell, and Watson (2013) pointed out that research into the identification of importance of professional competences in accounting has been well documented. Future research 'must shift away from documenting the importance ... toward identifying the best ways to teach these competence' (Apostolou, Hassell, Rebele, & Watson, 2010, p. 146).

Some efforts have been made to improve accounting students' writing skills (Christensen, Barnes, & Rees, 2011; Graham, Hampton, & Willett, 2010; Holmes, Zhang, & Harris, 2018), but their focus was on adding components such as short essay, rubric, or feedback without considering writing in the context of course design (Biggs, 1996; Wessels, 2010; Willcoxson, Wynder, & Laing, 2010). This study contributes to the accounting education literature by providing empirical evidence on the effect of CA, a framework that takes into consideration the interrelationships among different aspects of course design, on students' communication competence.

While researchers have claimed that aligning learning outcomes with teaching and learning processes and assessment will facilitate the development of students' competencies (Lawson et al., 2014; Lawson et al., 2015; Wessels, 2010; Willcoxson et al., 2010), it remains unclear whether adoption of CA in accounting classrooms would result in positive impacts on students' development of communication competence. Therefore, research on CA in accounting education is of value (Gunarathne, Senaratne, & Senanayake, 2019; Irafahmi, Williams, & Kerr, 2021; van Rooyen, 2020).

As the communication competence problem is not limited to accounting graduates (e.g., Brownell, Price, & Steinman, 2013; Haldane, Hinchcliff, Mansell, & Baik, 2017), the CA approach may also be useful for other disciplines. Joseph and Juwah (2012) and Teater (2011) have implemented CA in the context of nursing and social work, but they did not specifically use CA to solve the problem of lack of communication skills. Educators from various disciplines can redesign their courses accordingly to improve their students' communication ability.

This study contributes to the CA literature because it addresses many important issues that were not addressed by past studies. While researchers have documented the positive impact of implementing CA (e.g., Joseph & Juwah, 2012; Larkin & Richardson, 2013; Treleaven & Voola, 2008), their research design typically did not consider the impact of control variables such as different teaching staff members on the implementation of CA (Larkin & Richardson, 2013). In addition, prior research did not explore the ongoing learning experience and performance of students after their exposure to CA. The counterbalanced experimental design of this study helps to examine whether ongoing support is needed to ensure continuity of skill development.

This paper proceeds with a review of literature on the gaps in communication competence as perceived by accounting stakeholders, followed by the literature describing written communication competence for auditors, and the CA framework. The paper then describes the research method, the findings and discussion of the findings. The paper concludes with some recommendations for accounting educators who desire to develop students' competence in written communication.

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LITERATURE REVIEW

Communication Competence Gap

Graduates' competence in communication has received wide attention in accounting education literature. Not only is it considered important in the workplace (Siriwardane & Durden, 2014; Siriwardane, Low, & Blietz, 2015; Tan & Laswad, 2018), but it is also regarded as an area where there is a substantial competence gap (Lin, Krishnan, & Grace, 2013; Mandilas et al., 2014; Phan, Yapa, & Nguyen, 2020). Employers and practitioners consider communication competence to be vital for career success but educators and students tend to underestimate its importance (Howcroft, 2017; Lin et al., 2013).

Tan and Laswad (2018) conducted a content analysis on accounting job advertisements in Australian and New Zealand. The results showed that communication is listed as one of the most frequently required behavioral skills in job advertisements, indicating an extension of the work of accountants from handling numbers to communicating numbers and information effectively to others (Tan & Laswad, 2018). Findings from a study of the Big Four accounting firms also indicated that communication is an essential competency for accounting graduates (Bui & Porter, 2010). Employers surveyed in Howcroft's study (2017) pointed out that technical accounting knowledge must be accompanied by good communication ability for graduates pursuing a career in accounting. Similarly, practitioners stressed that communication competence is a key determinant for hiring entry-level accountants; therefore, graduates should pay more attention to upskill their competency (Riley & Simons, 2016).

Teaching practice in accounting education, however, seems to emphasize technical skills related to the accounting discipline (Fouché, 2013; Yap et al., 2014) and is not tuned in to the current and future demands of the accounting profession (Diller-Haas, 2004). Hence, it is unsurprising that the literature continues to report the inadequacy of accounting graduates in meeting professional requirements. For example, a survey in Hong Kong shows that accounting graduates were considered weak in written and oral communication (Chen, 2013). While the importance of oral communication cannot be neglected, some research indicates that written communication is more frequently used by entry level accountants in their work (Siriwardane et al., 2015). Other studies have suggested that students master oral communication better than written communication (Bui & Porter, 2010). Students perceived that they did not develop sufficient writing skills during their studies (Oussii & Klibi, 2017). Hence, employers remain concerned about writing skill development in undergraduate education (Clokie & Fourie, 2016; Howcroft, 2017).

Written Communication Competence for Auditors

Auditors have to communicate with others in both written and oral formats. Auditing Standard ISA 260 (IFAC, 2015) states that auditors should provide written documents to communicate the significant findings of the audit if in the professional judgment of the auditor, oral communication would not be adequate (Para. A37 – A45). Written audit documentation helps auditors demonstrate that audit procedures were properly conducted, audit evidence was properly collected, and the audit conclusions were derived appropriately.

There are two categories of written documents in auditing: internal documents and external documents (Goby & Lewis, 1999). Internal documents include memos, periodic reports, and working papers. External documents include audit reports, confirmation letters, management advisory letters, letters of representation, and other correspondence to clients (Goby & Lewis, 1999). Unlike external documents which have a standardised format and are mostly written by managers and supervisors (Goby & Lewis, 1999; Nellermoe et al., 1999), internal documents typically have a non-standard format and are prepared by entry-level accountants (Siriwardane et al., 2015).

Many studies acknowledge the importance of written communication for accountants and auditors (Camacho, 2015; Crawford et al., 2011; Frecka & Reckers, 2010; Mandilas et al., 2014; Nellermoe et al., 1999). For example, Camacho (2015) found that auditors spent one-third of their time on writing. Similarly, Nellermoe et al. (1999) found that accounting professionals spent about one-third of their time on writing. Surveys of auditors in the U.S.A. also concluded that writing audit reports is one of the most important aspects of an auditors' job (Frecka & Reckers, 2010). In Europe, a survey of Chartered Accountants concluded that written communication competence is important and the development of such competence should be at the undergraduate level (Crawford et al., 2011). Overall, these studies show that written communication is a prominent part of auditors' work. Unfortunately, the literature continues to report a gap between professionals' written communication expectations and accounting graduates' skills (Kunz & De Jager, 2019; Moore & Morton, 2017; Siriwardane & Durden, 2014; Stout & Sorensen, 2015).

Christensen and Rees (2002) found that employers were dissatisfied with employees' writing skills, and were concerned about the organization and clarity of their written documents. Similar findings were reported in a study by Stevens (2005) who emphasised the need for university graduates to improve their writing skills, especially skills related to the clarity and development of ideas. A survey of public accounting firms revealed that practitioners were concerned about misspelling and poor grammar of entry level accountants (Riley & Simons, 2016).

The message from the literature is obvious: writing is a competency that should be developed in the accounting education curriculum (AICPA, 2018; IAESB, 2019). In the pre-certification core competency framework, AICPA (2018) states that effective communication is a core professional skill of accounting graduates. In the same vein, IAESB (2019) specifies communication competence to be one of the learning outcomes for accounting graduates. Accounting graduates must be able to 'communicate clearly and concisely when presenting, discussing and reporting in formal and informal situations, both in writing and orally' (IAESB, 2019, p. 45). Unfortunately, despite their requirements, neither AICPA nor IAESB provides explicit guidance for effective development of written communication competence.

Developing Students' Written Communication Competence

Two types of strategies that incorporate writing skill development into the accounting curriculum have been outlined in the literature. The first approach simply adds an independent writing course to the curriculum, and the second approach integrates writing components into existing accounting courses (Gingras, 1987). Generally, the second approach is preferable due to time and cost effectiveness (Gingras, 1987; Graham et al., 2010). Some researchers argue that students need to put their discipline knowledge into their writing product. Hence, providing a standalone writing course in the curriculum is not as useful as embedding the mechanics of writing within existing courses (Christensen et al., 2011; Holmes et al., 2018). By incorporating a written communication components within each relevant discipline, students will 'learn to write' and 'write to learn' (Christensen et al., 2011).

Although many researchers agree that the embedding strategy is the most effective, it is difficult to implement. The accounting curriculum has already been overloaded with technical knowledge components, leaving the educators little leeway to teach written communication. This issue inhibits educators' willingness and commitment to add writing skills components into their courses (De Lange, Jackling, & Gut, 2006; Hossain, Kummer, & O'Leary, 2015). Researchers' suggestions include a minimal instruction intervention approach incorporating a rubric, feedback and handouts (Holmes et al., 2018), using short essays (Christensen et al., 2011), and implementing a writing session (Graham et al., 2010). However, some argue that attempts to develop students' competencies need to take place in the context of course design, instead of just adding new components such as writing tasks and feedback (Biggs, 1996; Mladenovic, 2000; Wessels, 2010; Willcoxson et al., 2010; Zhao, 2016). Wessels (2010) and Willcoxson et al. (2010) described that one potential way to develop competence is by aligning three elements in the course design: the intended learning outcomes, the learning activities and the assessment tasks. In general education literature, this alignment principle in the course design is known as constructive alignment (Biggs, 1996, 1999; Biggs & Tang, 2011). Thus, constructive alignment is deemed appropriate to assist in this issue (Biggs & Tang,

2011; Treleaven & Voola, 2008; Wang, Su, Cheung, Wong, & Kwong, 2013).

Constructive Alignment (CA)

CA is a framework in education that has potential to enhance the quality of teaching and learning (Biggs, 2014; Biggs & Tang, 2011; Nightingale, Carew, & Fung, 2007; Wang et al., 2013; Zhao, 2016). According to this framework, the key to helping students develop specific competencies is by enhancing the quality of teaching, which is attained by aligning the three main components of course design: the intended learning outcomes, the learning activities and the assessment tasks (Biggs, 1996, 1999; Zhao, 2016). The interrelated elements of course design will enable students to engage deeply in their study, thus students will have a better opportunity to achieve the desired outcomes (Biggs, 1996, 2014; Biggs & Tang, 2011). To align the elements in course design, the first thing to do is to formulate the intended learning outcomes (in this case is to be able to write an audit documentation) and then to design the learning activities and assessment tasks that support the attainment of the intended learning outcomes, such as by providing writing activities and writing tasks (Irafahmi et al., 2021).

CA has been implemented in various disciplines (Joseph & Juwah, 2012; Morselli, 2018; Teater, 2011; Treleaven & Voola, 2008). Joseph and Juwah (2012) compared the clinical skill acquisition of nursing students who participated and did not participate in a constructively aligned curriculum. They found that those in constructively aligned curriculum were perceived to acquire more clinical skills compared with those in non-aligned curriculum. In a study that examines the application of CA in a marketing course, Treleaven and Voola (2008) found that students felt confident in their development of critical thinking and lifelong learning. Similarly, Teater (2011) found that in a social work course, the use of CA contributed to improved student confidence in applying social work theories into practice.

CA has been reported to have strong a linkage with the improvement of students' learning approach (Lawson, 2011; Wang et al., 2013). Students' learning approach, or how students learn, could be classified into two types: deep and surface (Biggs & Tang, 2011). A deep learning approach occurs when students engage in appropriate and meaningful learning activities to achieve the learning outcomes (Biggs & Tang, 2011). In a study comparing two programmes that have different degrees of CA, Wang et al. (2013) revealed that students in the more CA-oriented program were more likely to apply the deep learning approach instead of surface approach in their studies than were students in the less CA-oriented program. This study' conclusion is consistent with the results in another study that examined students from seven different programmes (Lawson, 2011). Lawson (2011) found that highly aligned courses foster a deep approach to learning.

While positive outcomes from the implementation of CA have been reported in the literature (Joseph & Juwah, 2012; Larkin & Richardson, 2013; Treleaven & Voola, 2008), the impact of variables such as different teaching staff members and different characteristics of participants were not considered in those studies. The current study adds to this literature by controlling for important factors that may contribute to the pattern of results observed in prior literature. Moreover, the indicators for successful implementation of CA were mostly derived from data collected about the perspectives of students under investigation (Larkin & Richardson, 2013; Lawson, 2011; Teater, 2011; Wang et al., 2013; Zhao, 2016). To gain a more accurate understanding of students' development of competence, the use of a direct measure of students' achievement, such as utilising students' actual writing tasks is warranted (Wang et al., 2013). To examine the benefit of CA in the context of developing accounting students' written communication competence, this study examines the following research question: Does CA in course design affect accounting students' development of written communication competence? Based on prior literature, it is expected that students in the constructively aligned course will have better development of written communication competence than students in traditional course.

METHODS

This study is part of a larger study aiming to improve the competence of accounting students in an auditing course. The larger study examines the development of several areas of competence, including auditing, information technology, teamwork, ethics, professional scepticism and judgment, and written

communication. This paper specifically reports the development of written communication competence. This study employs a mixed methods, counterbalancing experimental design. Quantitative data were gathered from auditing writing tests conducted before and after each intervention, and qualitative data were collected from group interviews. The study was conducted in two phases, each lasted for six weeks. Two groups of students received intervention in reverse order.

Third-year undergraduate accounting students in a public university in Indonesia were invited to participate in the study. Ethics approval to conduct research with human participants was granted by the university research ethics committee. Participants were recruited through an online announcement posted in the university enrollment system. Out of 521 students, 179 agreed to participate in the study. The enrollment system in the university randomly assigned the participants to two groups: Group 1 and Group 2. In Phase 1, 89 students in Group 1 received the CA intervention, while 90 students in group 2 were taught in traditional approach (non-CA intervention). In Phase 2, Group 2 received the CA intervention, but Group 1 did not. This is called a counterbalancing procedure because all participants were given opportunities to experience the CA intervention, although at different times during the experiment.

The differences between CA intervention and non-CA intervention lie in the clarity of the intended learning outcomes, and the alignment of learning outcomes, learning activities and assessment tasks. In each phase of the study, when students received the CA intervention, written communication competence was formulated as one of the intended learning outcomes, and the instructor frequently emphasised this expectation to students. The instructor provided guidance and example of good structure of audit documentation in the beginning of the meeting, and within the duration of the intervention, students learned about auditing concepts as well as writing skills through preparing audit memorandum in a number of case studies (see e.g., Bagley & Harp, 2012; Miller & Savage, 2009). Students received verbal and written feedback for the writing tasks.

In the portion of the phase where students received no intervention, students studied in a teaching situation that was historically implemented in the auditing course. The intended learning outcomes indicated the expectation for students to write, but the learning activities did not involve supporting the outcomes through writing activities. The main learning activities were lecturing and student presentations, and the focus was on delivering content knowledge. Since there were no writing activities, feedback on writing was not provided in this learning environment. In the final assessment, students had to write audit documentation. Therefore, the learning activities were not aligned with the intended learning outcomes and the assessment. Other variables that may impact on the intervention, such as the instructor, the textbook, the topics, and the study period were the same for both groups.

To measure their development of writing skills, auditing writing tests were administered before and after each phase. The writing test conducted before and after Phase 1 was adapted from Andiola, Lambert, and Lynch (2018), and the test conducted after Phase 2 was adapted from Peaden and Stephens (2013). Both writing tests were similar in terms of the difficulty level. In each test, students were asked to write an audit memorandum in response to the auditing case provided. Students wrote the audit memorandum in their native language. The tests required students to work in teams, since the larger study targeted the development of teamwork. Each team consists of two students, except for three teams that had three members due to the uneven number of students in each classroom. Thus, the computation of the test data used the total number of teams instead of the total number of individual students (44 in Group 1, 44 in Group 2). Each team produce one written item in each phase. Although students' writing was conducted at the team level, Shawver (2020, p. 258) argued that working as a team is based on social interdependence and motivational theories where through learning together as team, team member 'subsequently would perform better as individuals'.

Students' writing were assessed using the rubric developed by Holmes et al. (2018). The rubric consists of four criteria: organization, development, clarity and content. Organization addresses the structure of writing, development indicates the coherency of writing, expression shows the clarity of writing, and content demonstrates students' understanding of the subject matter. These four criteria are a comprehensive assessment of students' ability to write. Students' writing was assessed on a five-point scale, from 1 (poor) to 5 (excellent) on each indicator in the rubric. The score for each criteria was an average of

the indicator scores, while the total score of the test was obtained from converting the maximum score in the rubric (20) to 100. Students' writing was assessed by two independent graders and the researcher to minimize bias in grading.

RESULTS AND DISCUSSION

Writing Test Results

The results of the writing tests are presented in Table 1. At the beginning of the semester, Group 1 and Group 2 possessed similar writing skills. They started at a low level of written communication competence, the mean score of written communication in Group 1 was 32.5 and Group 2 was 30.9. There is no significant difference between these groups' writing competence (df = 86; one-tailed p = .211).

Table 1. Results of writing test

Time of Writing Test	Group 1 (Phase 1= CA; Phase 2= Non-CA)				Group 2 (Phase 1= Non-CA; Phase 2= CA)				Between groups	
	M	SD	Means Difference (MD)	T-test (p-value)	M	SD	Means Difference (MD)	T-test (p-value)	Means Difference (MD)	T-test (p-value)
Before Phase 1	32.5	8.8			30.9	9.3			1.6	0.807 (0.211)
After Phase 1	73.2	11.1	40.7	-19.490 (0.000)	46.2	12.9	15.3	-6.438 (0.000)	27	10.485 (0.000)
After Phase 2	45.5	13.2	-27.7	12.320 (0.000)	67.5	15.7	21.3	-8.287 (0.000)	22	-7.121 (0.000)

At the end of Phase 1, both groups of students have improved their writing competence (Group 1: M = 73.2, Group 2: M = 46.2). However, students who received the CA intervention (Group 1) performed better than students who did not receive the CA intervention (Group 2). The difference in their performance is significant (df = 86; p < .001).

At the end of Phase 2, when the CA intervention was discontinued in Group 1, their written communication competence significantly declined. The mean scores decrease by 27.7, from 73.2 to 45.5. In contrast, Group 2 developed better written communication competence and they outperformed Group 1. The mean scores of group 2 increase by 21.3, from 46.2 to 67.5. The significantly better performance of Group 2 shows that CA intervention makes a difference in improving students' writing competence.

Overall, the evidence gathered from the quantitative data in this study confirms that the CA intervention facilitated student development of their writing competence. Students who studied under CA intervention developed better written communication competence than students in the non-CA intervention group. This finding confirms that CA has a positive impact on students' learning outcomes and supports the results of prior CA studies (e.g., Lawson, 2011; Teater, 2011; Treleaven & Voola, 2008; Wang et al., 2013). Nevertheless, the counter-balanced experimental design provides some new useful information for accounting educators. As the performance of Group 1 dropped significantly after Phase 2, it suggests that ongoing or long-term CA intervention is necessary to maintain the improvement.

Group Interviews Findings

A total of twenty students participated in three group interviews. The first group interview (8 participants) was conducted after Phase 1, while the second and third group interviews were conducted after Phase 2 (6 participants each). These individuals were selected purposively, based on the results of the experiment. The first and second group interviews recruited participants from the CA group in each phase, and the third group interview recruited participants from the non-CA group in phase 2 who experienced the

discontinuation of the CA intervention.

Three themes emerged from the group interview analyses: motivation to learn, deep approach to learning, and continuity. Students commented that under the CA intervention, they were motivated to learn. The clarity of the learning outcomes helped them realize auditors' work is not limited to number crunching. They became aware that auditors must demonstrate effective written communication competence.

> Once I knew the learning outcomes of the course, I felt this is something that can be applied in the workplace, I was actually educated to become an auditor, really interesting (GI-2a)

The clarity of the learning outcomes in this study was attained not only by embedding the writing expectation in the intended learning outcomes, but also by communicating this expectation to students during the study period. Emphasizing the writing expectation within auditing course is important to dismiss the potential misconception that writing is not critical to success in auditing profession (Boyle, Mahoney, Carpenter, & Grambo, 2014) and to help students obtain a sense of purpose for their future careers (Graham et al., 2010).

Another factor that motivates students to learn is the authentic learning activities and assessment tasks to support the achievement of learning outcomes. The use of auditing case studies in this experiment enabled students to applytheory in practice (Biggs & Tang, 2011). Students felt as if they were real auditors. For students, preparing various internal documents, such as audit memorandum in a number of case studies was challenging yet interesting, because this requirement resembles audit practice. Not only they have to learn about auditing concepts, they have to learn writing skills as well.

> I am so motivated to learn auditing in this course because we have to deal with real auditing cases. I am very happy to learn not only about auditing theory but also practice. (GI-1c)

When these authentic learning activities and assessment tasks support the achievement of the intended learning outcomes, students said they could focus on their learning. A common problem in the teaching practice particularly in higher education is that there is no synergy among those three components, making it more difficult for students to develop certain competencies (Biggs & Tang, 2011).

Feedback on writing was another determinant of students' motivation to learn. Students reported that the feedback during the learning activities and assessments influenced their enthusiasm to learn. Because of the feedback given by their teacher, they felt they have received individual attention. They became aware of their writing mistakes and were motivated to put significant effort into subsequent writing tasks. Prior studies also indicated that feedback complements an alignment system and has a positive impact on students' motivation to learning (McCann, 2017; Treleaven & Voola, 2008).

Deep approach to learning is the second theme that explains why students in the CA intervention improved their writing competence. Approaches to learning can be classified into two types: surface and deep (Biggs & Tang, 2011; Davidson, 2002; Duff, 2004; Koh, 2014). A surface approach to learning is characterised by rote learning; while a deep approach to learning reflects students' motivation and occurs when students engage in appropriate and meaningful learning activities to achieve the learning outcomes (Biggs & Tang, 2011). Students commented that under the CA intervention, memorizing is not enough. They had to explore the answers by themselves. Writing an audit documentation required them to not only understand the technical aspects of writing but also the content. The difficult part, according to them, was the content that they had to write, which was related to auditing. To convey the auditing content successfully in their writing, students had to extract information from various learning resources, such as textbooks, audit standards, and codes of ethics.

> When we did the auditing cases, we reviewed the theory first. Is the theory fit to the audit case we are working with? So, it's like, we studied again and again, … I felt like…I just understand many things. I am so happy that I have the opportunity to reveal knowledge by myself. (GI-1f)

Through deep approach to learning, students felt they were confident in their ability to document their audit

findings in written form, and they felt their writing improved significantly. This way of learning is in line with the ultimate goal of the CA framework, which is to set a good environment for students to be constructive learners who can reveal knowledge by themselves (Biggs 1996, 1999; Biggs and Tang 2011).

The third theme revealed from the qualitative data is the importance of continuity. When the alignment system was not sustained, students commented that they changed their learning approach and reduced their effort to learn, and, consequently, students felt they did not make substantial progress in their competence development. This is especially the case for students in Group 1 who switched from receiving CA intervention in Phase 1 to receiving non-CA intervention in Phase 2.

> (When the CA intervention was discontinued) …we were back to remembering theory, I did not study as hard as before because just like any other courses, we read a book only for the purpose of presentation (GI-3d)

Students agreed that they needed a consistent system to continue learning effectively. This finding confirmed that students would adjust their learning approach in response to the learning environment (Wang et al., 2013). Maintaining the sustainability of the alignment system is important in providing a conducive environment for students to learn. It seems that the duration of six-week CA intervention in the study was insufficient to develop learner autonomy in this area. This last theme has provided an explanation of the drop of Group 1 performance in Phase 2.

CONCLUSION

This study conducts an empirical research based on the premise that CA helps improve writing imbedded in a particular course, audit in this instance. This study addresses the gap in the literature by including control variables in the examination of the effects of CA in course design on students' written performance. Results of the counter-balanced experiment show that CA intervention had a positive impact on the development of students' written communication competence. The CA intervention facilitated students' development of their written communication competence, by situating students in an aligned and authentic learning context that promote learning.

Educators from accounting and other disciplines who intend to develop students' competence in written communication can be encouraged to redesign their courses according to the CA framework. However, educators need to beware that the positive impact of constructive alignment is not sustainable unless the system is put in place for a reasonable period of time.

This study has provided evidence of the effectiveness of CA intervention and thus provided valuable information for accounting educators to incorporate written communication into auditing courses. As with any empirical research, there are limitations with this study. Students' work was written by a team (consisted of two students in each team, except for three teams given the odd number of students in the classrooms) instead of an individual student. This is because the complexity level of the auditing test required students to work as a team and to improve students' teamwork skills. It is suggested that researchers should consider measuring students' individual writing in future studies after they are measured at the team level. Furthermore, the length of intervention in each phase of the study was six weeks. Future studies may consider extending the duration of the intervention to determine the 'staying power' of CA and to help researchers better understand the impact of educational intervention on students' learning outcomes.

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