# Accounting Student or Asian Learner? The Moderating Impact of English Proficiency on Accounting Learning Outcomes in Australia

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**Abstract**
Australia has a high percentage of international students, mainly from Asia, undertaking higher education. The paper aims to better understand how Asian students achieve their desired learning outcomes, exercising their perceptions of the relative influence of factors affecting their learning. We examine the moderation effects of English language proficiency on the relationship between learning methods and teaching methods with learning outcomes of international postgraduate accounting students. The results show that English language ability critically moderates various learning constructs. Contrary to stereotypes of the Asian learner, lower levels of English ability encourage higher levels of desire to engage with, which results in improved learning outcomes. Although deep learning approaches were preferred by Asian students, lower English ability forced them to spend more time preparing for class and confined them to surface learning methods. The study broadens the meaning of learning outcomes beyond grades awarded to encompass other critical success factors such as skills, knowledge, and personal development for employability.

**Keywords:** Asian learner, Learning outcomes, Postgraduate accounting, Accounting students, English language.

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## 1. INTRODUCTION

The total number of international students studying in Australia was 758,154 in 2019 and 780,104 in April 2024 (www.internationaleducation.gov.au) and, on one projection, will number around 940,000 by 2025 (www.austrade.gov.au). However, this projection may not be materialised as the government is limiting the number of international students by introducing student caps and imposing student visa restrictions from July 2024. Still, Australia has a higher percentage of international students, mainly from Asia, undertaking higher education than any other country (www.internationaleducation.gov.au). Coursework-based postgraduate courses attract most international students, who are primarily business students. Australia's international students' learning outcomes are less clearly identifiable (Arkoudis et al., 2010). The quality of learning outcomes of post-graduate accounting students is a apprehension for various stakeholders, although quality is one of the key performance indicators in Australian higher education (Christie, 2017). Our study is driven by the growing significance of the quality of student learning outcomes and is concerned with the factors that impact learning outcomes among international accounting students. Our study examines the moderation effects of one critical factor - English language proficiency on the relationship between learning methods and teaching methods with learning outcomes. The mediating effect of the English language is explored because the vast number of international students from non-English speaking Asian countries are studying in Australia and their level of English language proficiency has been a worry for researchers (Bobe and Cooper, 2017; Murray and Hicks, 2016; Ryan, Bhattacharyya, Stratilas and Goela, 2012; Watty, 2007). Arkoudis et al. (2010) reported that apart from learning outcomes, English language proficiency is also a crucial element for employment for international students in Australia.

Australia's higher education institutions have suffered the loss of autonomy (Altbach, 2009), the commodification of educational services (Gibbs, 2008), and financial reliance on international students that potentially overshadow their ability to focus on learning experiences and outcomes, often resulting in blame for poor outcomes being based on the international students' nationality and 'cultural' learning style. No doubt national culture influences human behaviour, including approaches to learning (Biggs, 1996). However, the degree to which culture influences learning preferences, experiences, and outcomes in a new environment (Ryan and Hellmundt, 2003) contributes to continued learning impairment, may rather depend on factors other than culture, such as language proficiency, teaching quality, and inclusive curricula (Chan and Ryan, 2013). Much of the literature on international students tends to stereotype student learning by nationality or geographical region, with few studies focusing on learning differences within national groups. Despite concerns with the 'Asian learner', generally, and with the quality of Asian accounting postgraduate students specifically, having been expressed by a variety of stakeholders both in the media and in scholarly journals, a scant effort has been made to examine the experiences of this group. Most studies of accounting students (e.g. Hartnett et al., 2004; Rankin et al., 2003) examine the association of student-oriented factors (e.g. age, gender, previous education, prior accounting knowledge, work experience) with accounting learning experiences of local undergraduate students. Scant research has been undertaken, particularly on international postgraduate accounting student experience. This is, then, a timely study. Australian universities are increasingly challenged to attract and retain postgraduate international students as they operate in a globally competitive environment. Prior research generally focused on institutional factors such as image and prestige, and technology used, as drivers of student satisfaction and learning outcomes, ignoring other factors such as accommodation and safety that contribute significantly towards their satisfaction and outcomes. Previous studies in accounting (such as Arthur and Everaert, 2012; Byrne and Flood, 2004; Keller et al., 2009; Lusher, 2011; Tessema, Ready and Malone,

2012) use only endogenous factors and measure learning outcomes narrowly through the marks awarded. Although the significance of endogenous variables (e.g., age, gender, language proficiency) in explaining learning experiences and outcomes was advocated in the 1990s (e.g., Carpenter et al., 1993), the examination of student-exogenous factors (e.g., types of assessments, learning activities and also teaching methods) is limited in the accounting literature. Where such research does exist, the findings are inconsistent.

Within the context of Asian students enrolled in Australian postgraduate accounting programs, we aim to comprehend the process of achieving learning outcomes by examining the influence of both endogenous and exogenous factors using quantitative and qualitative techniques. We analyse the impact of engagement with learning activities, the impact of teaching methods, and the impact of learning approaches on learning outcomes. We also examine the moderating roles of English language skills in these relationships. To our knowledge, the moderating roles of the English language skills in these relationships have not been examined before.

The obvious implications of our results for accounting educators, curricula designers, and teaching practice are to forget the stereotype and to offer courses that are more engaging and productive for graduates. To improve accounting learning outcomes, non-English speaking Asian students should be supported to enhance their English proficiency. Our result will be useful for universities to develop their future strategies in planning, evaluating, and designing more effective accounting modules.

Our study contributes to the accounting teaching practice by highlighting the significance of English proficiency to linguistically different students. Our paper extends previous work in several ways. We specify and empirically test a model that links accounting students' endogenous and exogenous factors with their learning outcomes and the moderating effect of the English language on their relationship. Our study is important because English language proficiency is positively associated with academic performance (Martirosyan, et al., 2015), a deeper learning approach (Bobe, B.J. and Cooper, B.J.), and an individualistic cultural learning style (Li, L., 2015). All these factors enhance the learner's productive skills, thereby improving learning outcomes. Our study is current and relevant, as a recent study by Umar, M.A. and Olowo, R. (2023) also reports that, still today, English language ability directly impacts learning outcomes and time, and effort spent on preparation for class and engagement. We are the first to examine the moderating roles of the English language on students' related factors and learning outcomes association in the Australian context.

We also broaden the meaning of learning outcomes beyond grades awarded and encompass other critical factors such as skills, knowledge, and personal development for employability. We employ both quantitative and qualitative measures for greater breadth and depth of understanding. Learning outcomes are captured through an array of factors using Partial Least Squares (PLS) – a rigorous statistical technique to identify associations of endogenous and exogenous factors with learning outcomes and the moderating effect of English language skills on these relationships. Liu and Agbola (2014) argue that "the PLS estimator is powerful and provides consistent estimates of models with small sample data sets". While the use of PLS is generally lacking in accounting literature, the method has substantial merit in answering important research questions. Hence, our study provides more reliable and robust results.

## 2. HYPOTHESES

Since the global flow of students began in earnest in the late 1980s, literature on national differences in learning style and outcomes has greatly increased. Students from Asia have attracted the most attention as they represent the greatest number of students studying in any other country and, in the case of those from Confucian countries, they represent students with the greatest cultural and language differences (e.g., Cooper, 2004; Gerbic, 2005; Ramburuth, 2000; Ramburuth and McCormick, 2001). Much that has been written about the 'Asian learner', especially in accounting education, is couched in terms of deficits and national stereotypes. Despite Biggs' (1996) defence of the Asian learner as not especially different from other nationalities, research continues to typecast these students as passive, dependent, and engaging in rote learning (Chan and Ryan, 2013). Commonly cited deficits in the Asian learner include inappropriate motivation (de Lange et al, 2010; Jackling, 2007); low engagement (Jackling and Natoli, 2010); adoption of surface learning strategies (Burch, 2008; Bobe and Cooper 2017; McGowan and Potter, 2008); and inadequate English language proficiency (Birrell and Healy, 2008; Bobe and Cooper 2017; Bretag, 2007; Li et al., 2010; Ryan, Bhattacharyya, Goela and Stratilas, 2011; Watty, 2007).

Most of the literature focuses on the learning deficits of Asian students but other voices view the problems faced by Asian students beyond cultural issues. Critics of the cultural deficit model argue that Western ideas of what is needed for high learning outcomes in the West are not applicable among Confucian students or are misunderstood. In seminal research, Biggs (1996) found that Chinese students are deep learners for whom language barriers to class engagement do not affect academic performance. Similarly, Li et al. (2010) find learning strategy has little impact on performance. In a comparison of Australian and Asian students' learning strategies, Ramburuth and McCormick (2001) report that Asian students studying in Australia demonstrate significantly higher motivation to learn but surface learning strategies whereas, Australian students demonstrate higher use of deep learning strategies and lower motivation to learn. However, Ramburuth and McCormick (2001) conclude that despite strategy differences, Asian students differ very little from their Australian counterparts in their overall learning outcomes. Based on the above discussion we hypothesise that:

*$H_1$: The Overall learning outcomes of Asian students are not associated with their learning approaches.*

Despite these findings, the general view remains that students from Asian countries are deficient. This is explained by Ryan and Louie (2007) as being the consequence of the binary logic used to describe Asian and Western students. This logic not only results in negative stereotyping of Asian students but also undermines the development of appropriate forms of teaching and learning. The stereotyping is reinforced especially in business schools where lecturers face large and diverse classes, few resources, and an abiding cynicism of institutional motives in recruiting international students (DeVos, 2003; Ryan and Louie, 2007). Ryan and Hellmundt (2003) find a general lack of awareness amongst university lecturers of teaching and learning issues with international students. For example, Asian students preferred student-centred teaching despite coming from a teacher-centred educational and cultural background, though their Australian lecturers assumed they continued to favour a teacher-centred environment (Ryan and Hellmundt, 2003). University lecturers become exasperated by the student's lack of participation and preparation (Pop-Vasileva, Baird and Blair, 2011), which reinforces the perception of Asian students as passive learners who have 'cultural' rather than linguistic barriers to engaging in learning.

Different disciplinary teaching and assessment methods affect learning and learning outcomes. Indeed, Ryan and Louie (2007) argue that disciplinary approaches are considerably more important than national culture in determining learning outcomes. Accounting curricula, including teaching and assessment methods, have been criticised repeatedly for failing to develop communication and higher-order cognitive skills by privileging technical matters and emphasising assessment of knowledge rather than skill (Bunney and Therry, 2011; Hancock et al., 2009; Kavanagh and Drennan, 2008). Some are also reluctant to take on additional unrewarded duties, such as engaging in non-traditional methods of teaching (O'Connell, 2010). The accounting discipline portrays that it is easier to concentrate on technical knowledge and numeracy rather than academic literacy (Benzie, 2010). Lecturers tend to separate disciplinary knowledge from academic literacy regarding their responsibility to teach the former but not the latter. In some cases, this results in setting assignments that avoid language skills or, worse, lowering the standards of assessments to ensure higher pass rates (Bretag, 2007; McGowan and Potter, 2008; Watty, 2007). To abide by the institutional requirements, academics probably revert to simplified assessments where numeracy is the focal point rather than communication. Thus, students pass accounting courses with low levels of language proficiency because the emphasis is on technical knowledge rather than language proficiency (Benzie, 2010). In sum, there are considerable evidence that suggests 'that teaching methods in accounting education encourage passive and surface learning regardless of cultural background, which influences their learning outcomes' (Chan and Ryan, 2013: 173). Thus, we propose the following hypothesis.

*$H_2$: Student-centred teaching methods improve Asian students' learning outcome*

On the other hand, the association of learning approaches and teaching methods with learning outcomes can be influenced by various contingency conditions. English language skills is the most critical factor. Therefore, the moderating role of English on various aspects of learning and their impact on learning outcomes is significant. The number of international students with English as their second language has been growing globally, which makes it more pressing to investigate the field further (Benzie, 2010). It is anticipated that international students will undertake more uniform accounting education globally and attain similar standards in the context of international accounting harmonisation (Sugahara and Boland, 2010). Prior research indicates that a lower level of English language proficiency among international students in Australian universities has a profound effect on their educational outcome (Chatterjee and Brown, 2012; Jackson et al, 2006; Ryan, et al., 2012; Watty, 2007). This is also witnessed at a British university in Egypt by Ghenghesh (2015). Accounting educators are accused of 'dumbing down curricula' and minimising written and spoken assessments believing that such practices will assist international students with poor English language skills (Birrell and Healy, 2008).

The literature on the moderation effects of English language proficiency on the relationship between learning methods and teaching methods with learning outcomes of international accounting students (who have English as a second language) is scant. It is important to formulate strategies and support mechanisms that will enhance English language proficiency among international students and assist them in adopting a deep learning approach (DLA) as research found that Asian students studying in Australian universities are more likely to adopt DLA (Biggs, 1987a; Cooper, 2004; Donald and Jackling, 2007). Prior research has reported a significant positive association of DLA with some measure of learning outcome (Booth et al., 1999; Eley, 1992). Other studies that have examined the impact of English proficiency on learning outcomes have also found a significant positive association of language proficiency with academic performance. Bobe and Cooper (2017) argued that accounting students with a

higher level of English ability are inclined to embrace a deep approach and therefore achieve a higher learning outcome.

Although international students in Australian universities were more engaged in learning compared to their domestic counterparts, their grades were lower, especially in business schools where international students accounted for 50 percent of all students (POSSE, 2010). In explaining this apparent anomaly in the POSSE findings, Edwards (2011) attributes the lower learning outcomes to lower levels of English language proficiency among most international students. English competency among accounting students has not only the greatest impact on learning outcomes, but is a source of frustration for students, teachers, and employers alike (Jackson et al., 2006). From the outset of their studies, students are faced with the difficulties of dealing with academic vocabulary, with lecturers using colloquial English or speaking in heavy accents, and with rapid rates of speech in lectures as well as in class discussions, where knowledge and skills are constructed through negotiation and dialogue (Bretag, 2007). For business students, language competency is perceived as "the key to successful integration" (Robertson, Line, Jones and Thomas, 2000, p. 101). If competency is weak, integration is minimised, and educational development suffers accordingly. The criticality of language to learning and employment outcomes is well documented generally and in the accounting education literature specifically (e.g., Birrell and Healy, 2008; Bretag, 2007; Jackson et al., 2006; Ryan et al., 2012; Watty, 2007). In a UK study, Chinese students were found to work harder than other international students but suffer lower grades because of relatively poor language skills (Li et al., 2010). The discussion above and other literature, such as Umar and Olowo (2023) and Martirosyan et al. (2015) lead us to conclude that proficiency in the English language impacts the various aspects of learning and, in turn, impacts their learning outcomes. Therefore, we hypothesise that, for Asian accounting students:

> *$H3_a$: Asian students' higher levels of English language proficiency moderate the relationship between learning approaches and learning outcomes.*
> *$H3_b$: Asian students' higher levels of English language proficiency moderate the relationship between teaching methods and learning outcomes.*

Figure 1 summarises the hypothesised relationship of learning approaches, engagement of learning activities, and teaching methods with learning outcomes and the moderating effect of English language proficiencies on these relationships.

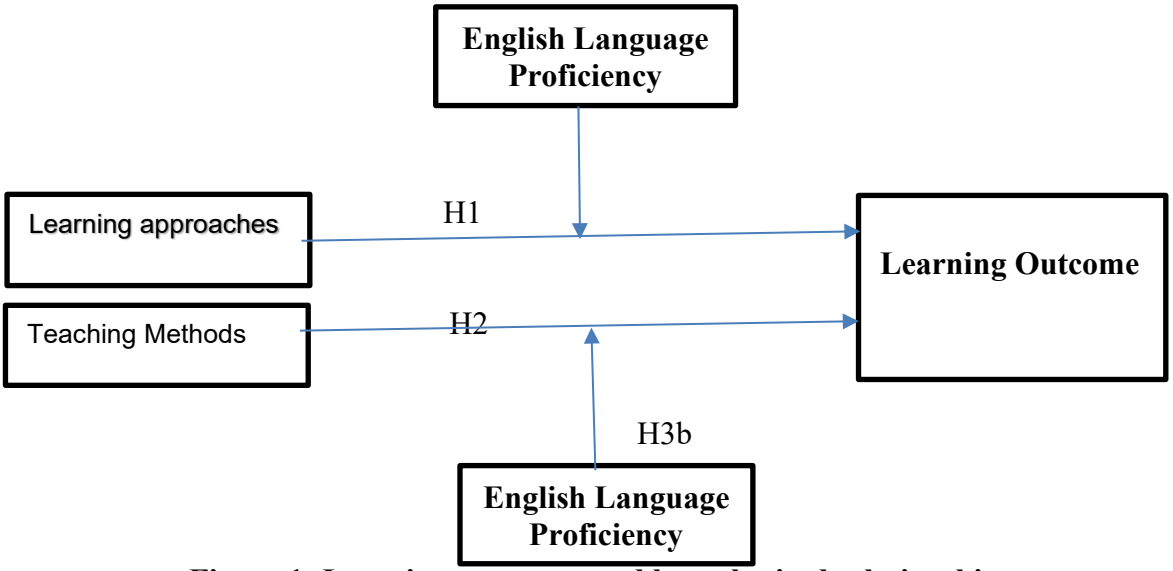


**Figure 1: Learning outcomes and hypothesised relationships**

## 3. METHOD

### *3.1 Survey Instruments*

The survey instrument was adapted from the Australasian Universities Survey of Student Engagement (AUSSE) which is employed annually to monitor student trends within and across most Australian universities. The AUSSE survey, and its postgraduate coursework equivalent, the Postgraduate Only Survey of Student Engagement (POSSE) (ACER, 2011), are used as benchmarks within the Higher Education Sector. Additionally, the AUSSE definition of 'student engagement' as the "involvement with activities and conditions likely to generate high-quality learning" (ACER, 2010, p.3) suited the aims of our research. The survey was designed to minimise social desirability bias. We implemented anonymous random model surveys and wordsmith questions carefully. We have adapted well-established survey questions and scales from the Australasian Universities Survey of Student Engagement (AUSSE). The adopted questions and scales were validated, tested, and widely used in the Australian Higher Education Sector (ACER, 2010). It is a well-tested, anonymous survey that allows comparison across institutions and fields of study, in this case Management and Commerce (Coates, 2010). Some of the questions from the AUSSE survey were rephrased for clarity and additional questions on English language and learning styles were included. The survey was made available to students in both hardcopy and online for three weeks.

### *3.2 Sample and Data*

A sample of Asian students enrolled in a Master of Professional Accounting (MPA) program at a New South Wales state public university was surveyed about their learning experiences. In Australia, the MPA was developed as a conversion program in response to the shortage of accountants. The demand from international students desirous of permanent residency through accounting qualifications provided a ready source of revenue for universities (Yong et al., 2011). Entry requirements assumed that the students had an undergraduate degree in another discipline or needed an accredited Australian degree to work in Australia as an accountant. The focus of this study is the MPA program at New South Wales, Australia University. At the time of this research, the case study program consisted of 12 compulsory courses available over three semesters or 18 months.

The population of students enrolled in and freshly graduated from the program was 102. A sample of 71 was used in the current study. The usable response rate was 70 percent (71 students). All 71 students were Non-English-Speaking Background (NESB) Asian students. Of the 70 NESB Asian students, 90 percent were from Confucian countries (China, Vietnam, and Cambodia) and the remaining came from India and Malaysia.

### *3.3 Measurements*

*Learning Outcomes*

Learning outcomes refer to the extent to which students perceive their learning contributes to their knowledge, skills, and personal development. Prior accounting studies measured learning outcomes very narrowly, by the final score or grade of the course (Arthur and Everaert, 2012; Tan and Laswad, 2015; Seow, Pan, and Tay, 2014). We argue that this type of measurement is narrow because it relies on assessment only. We employed a wide and reliable measurement for this independent variable. It was measured on a 5-point Likert scale where respondents were asked to rate the extent to which their studies contributed to their knowledge, skills, and personal development in areas as follows: 1. Acquiring a broad general education. 2. Acquiring job-related or work-related knowledge and skills. 3. Writing clearly and effectively. 4. Speaking clearly and effectively. 5. Thinking critically and analytically. 6. Analysing quantitative problems. 7. Using computing and information technology. 8. Working effectively with others. 9. Learning effectively on your own. 10. Understanding yourself. 11.

Understanding people of other racial and ethnic backgrounds. 12. Solving complex, real-world problems. 13. Developing a personal code of values and ethics. 14. Securing relevant work after graduation.

*Teaching methods*
The student-centred teaching method was measured using a 5-point Likert scale and questions about their preferences related to teaching methods such as lectures, class discussion, group work, online activity, and class exercises.

*English language proficiency*
Students' English language proficiency was measured in the areas of reading, writing speaking, and listening by asking the respondents to rate their level of English as quite good, average, and below average.

### *3.4 Analysis*

To begin the analysis, we screened the data for outliers and missing data and checked the normality, skewness and/or kurtosis. No significant abnormality, skewness and/or kurtosis was found within the dataset. Following Hair et al. (1998), a skewness and kurtosis value within 1.96 was considered normally distributed. Next, following Armstrong and Overton (1977), we compared constructs and measures' mean score differences of early versus late response for non-response bias. No significant mean differences were shown by the two-sample t-test, demonstrating that non-response bias did not impact the study. Before testing the hypotheses, we tested reliability, convergent validity, and discriminant validity of the model following Nunnally (1978) and Fornell and Larcker (1981). In the final stage, a correlation and regression were untaken to analyse the relationship.

To avoid common method variance, we embraced various approaches. First, we ensure the least possible ambiguity in the survey items and respondents' anonymity. Second, we adapted well-established survey questions and scales from the Australasian Universities Survey of Student Engagement (AUSSE). The adopted questions and scales were validated, tested, and widely used in the Australian Higher Education Sector (ACER, 2010, Coates, 2010). Third, we used Harman's single-factor test (Podsakoff et al. 2003), adding a common latent factor in the measurement model, and the result indicated the unchanged significance of factor loading. Fourth, following Lindell and Whitney (2001), we used a marker variable to observe if there is any shared variance between these variables and other variables involved in our model. Results indicated no shared variance, confirming that our model is free from common method variance.

To test the hypotheses, we developed and estimated empirical models using PLS, which postulates the relationship between English language proficiency, learning approaches, engagement in learning activities, and teaching methods with learning outcomes. We also use some variables (age, gender, and work experience) for statistical control. The primary model was specified as follows:

$$\text{LER-OUTC} = \beta_0 + \beta_{i1}\,(\text{LER-APR}) + \beta_{i2}\,(\text{TEC-MET}) + \beta_{i3}\,(\text{ENG-LP}) + \beta_{i4}\,(\text{GENDER}) + \beta_{i5}\,(\text{AGE}) + \beta_{i6}\,(\text{WOR-EXP}) + \varepsilon \quad \ldots\ldots(1)$$

Where, LER-OUTC = Learning outcomes; LER-APR = Learning approaches; TEC-MET = Teaching Methods; ENG-LP = English language proficiency; Gender = 1 if male, 0 if female; Age = ages in years; WOR-EXP = Work experience, 1 if any, 0 otherwise.

We include interaction variables to test the moderating effect of English language proficiency on the relationship between learning approaches and teaching methods with learning outcomes. To test H3a, we used the interaction between learning approaches and English language proficiency (LER-APR* ENG-LP) and developed the following model.

$$\text{LER-OUTC} = \beta_0 + \beta_{i1}\,(\text{LER-APR}) + \beta_{i2}\,(\text{LER-APR* ENG-LP}) + \beta_{i3}\,(\text{ENG-LP}) + \beta_{i4}\,(\text{GENDER}) + \beta_{i5}\,(\text{AGE}) + \varepsilon \quad \ldots\ldots(2)$$

Similarly, for testing H3b, we used the interaction between teaching methods and English language proficiency (TEC-MET * ENG-LP) and developed the following model.

$$\text{LER-OUTC} = \beta_0 + \beta_{i1}(\text{TEC-MET}) + \beta_{i2}\,(\text{TEC-MET * ENG-LP}) + \beta_{i3}\,(\text{ENG-LP}) + \beta_{i4}\,(\text{GENDER}) + \beta_{i5}\,(\text{AGE}) + \varepsilon \quad \ldots\ldots(3)$$

## 5. RESULTS

### *5.1 Descriptive results*

In our sample, 92% of the students have a language other than English as their first language, Mandarin being the most common (73%). Over 80% of these students attended English language courses, mainly in Australia, before commencing the MPA. Although 60% speak English most often on campus, 80% use their language when not on campus, and 72% spend their non-study time socialising with friends, presumably speaking the same language. Students rate their English generally as average, although writing, speaking, and listening are rated more negatively than reading ability. This is clearly a handicap for communication because 48 percent of our sample perceived that learning was hampered by their writing skills.

Eighty percent of students preferred the practical exercises to be followed by discussion. The preferences are not surprising due to the nature of accounting education. The least preferred learning approach was memorisation, recorded by only 52%. The most preferred method of teaching was class exercises. Seventy-five percent of students preferred this method of teaching, followed by lectures (72%) and class discussion (65%). Descriptive statistics are reported in Table 1.

**Table 1: Descriptive Statistics of Variables Employed in the Analyses**

| | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| Gender | 1.0 | 2.0 | 1.639 | .483 |
| Age | 2.0 | 4.0 | 2.486 | .581 |
| Reading | 1.0 | 3.0 | 1.514 | .530 |
| Writing | 1.0 | 3.0 | 1.847 | .664 |
| Speaking | 1.0 | 3.0 | 1.694 | .663 |
| Listening | 1.0 | 4.0 | 1.542 | .626 |
| Work Experience | 1.0 | 3.0 | 2.181 | .810 |
| Teaching methods | 10.0 | 40.0 | 24.389 | 6.233 |
| Learning approaches | 7.0 | 28.0 | 19.806 | 4.452 |
| Learning outcome | 20.0 | 56.0 | 38.486 | 7.755 |

**Table 2: Pearson Correlation Matrix for Explanatory Variables**

| | Gender | Age | Reading | Writing | Speaking | Listening | Work Exp. | Teaching Method | Learning Method | Learning Outcome |
|---|---|---|---|---|---|---|---|---|---|---|
| Gender | 1 | | | | | | | | | |
| Age | .232* | 1 | | | | | | | | |
| Reading | -.035 | .001 | 1 | | | | | | | |
| Writing | .133 | .049 | .506** | 1 | | | | | | |
| Speaking | -.085 | .062 | .532** | .564** | 1 | | | | | |
| Listening | .050 | -.076 | .549** | .337** | .505** | 1 | | | | |
| Work Exp. | .061 | .050 | -.055 | -.131 | -.105 | -.057 | 1 | | | |
| Education | -.091 | .020 | -.022 | -.098 | -.075 | .009 | .077 | | | |
| Learn Activity | .189 | -.022 | -.193 | -.154 | -.123 | -.159 | .127 | | | |
| Course Activity | -.092 | -.014 | -.217 | -.281* | -.027 | -.254* | .194 | | | |
| Teach Method | .071 | -.084 | -.419** | -.336** | -.134 | -.181 | .134 | 1 | | |
| Learn Source | -.035 | -.097 | -.341** | -.383** | -.226 | -.350** | .161 | .608** | | |
| Learn Method | -.066 | -.104 | -.166 | -.339** | -.135 | -.250* | .322** | .479** | 1 | |
| Learn Outcome | .010 | .103 | -.250* | -.417** | -.321** | -.211 | .293* | .423** | .558** | 1 |
| Outside Engagement | -.007 | -.099 | -.222 | -.460** | -.367** | -.104 | .089 | .280* | .372** | .404** |

Note: * indicates10%, ** indicates 5% and *** indicates 1%

### *5.2 Empirical Results*

To check the multicollinearity among variables, we calculate the Pearson correlation matrix of variables (see Table 2). Hanniffa and Cooke (2005) advocate that a correlation coefficient greater than 0.8 indicates the potential presence of multicollinearity. Our results do not suffer from multicollinearity, as Table 2 shows that all the values are below 0.8, indicating the absence of multicollinearity in the data series.

Table 3 reports the results of the regression analysis for Model 1. The empirical models specified in the study are estimated using a Panel Least Squares (PLS) estimator in the EViews 9 econometric package, as Liu and Agbola (2014) argue that "the PLS estimator is powerful and provides consistent estimates of models with small sample data sets". The $R^2$ goodness-of-fit measure is estimated to be 0.48, which is relatively high, and the F statistic was significant at a 1% level (p=0.000).

**Table 3: Results of the regression analysis: Dependent Variable: Learning Outcome, Method: Least Squares**

| | Model 1 | | |
|---|---|---|---|
| Variable | Coefficient | t-Statistic | Prob. |
| C | 6.957 | 0.916 | 0.362 |
| LER-APR | 0.593 | 3.048 | 0.003 |
| TEC-MET | 0.234 | 1.764 | 0.082 |
| GENDER | -1.180 | -0.764 | 0.447 |
| AGE | 2.328 | 1.863 | 0.067 |
| WOR-EXP | 0.972 | 1.059 | 0.293 |
| ENG-LP | -0.644 | -1.665 | 0.100 |
| R-squared | 0.480 | | |
| F-statistic | 8.471 | | |
| Prob(F-statistic) | 0.000 | | |

LER-APR = Learning approaches, TEC-MET = Teaching Methods, WOR-EXP = Work experiences, ENG-LP = English language proficiency.

Our results indicate a significant association of learning approaches and teaching methods with the learning outcomes of postgraduate accounting students (Table 5). Table 5 shows that the coefficient of the variable LER-APR, which indicates learning approaches, is positive (0.589) and statistically significant at a 1% level (p=0.000), indicating that students associate proper learning approaches with an increase in their overall learning outcome, which rejects our hypothesis 1 that Asian student learning outcomes are not associated with their learning approaches. The coefficient of the variables TEC-MET, which indicates the teaching method, is positive (0.298, 0.301) and statistically significant at a 5% level (p=0.037). The result indicates that appropriate accounting teaching methods (student-centred teaching) improve the learning outcome of Asian accounting students, which supports our hypothesis 2. This result could also be explained by the nature of the subject considered in our study, Accounting, which requires some mathematical, and logical understanding with problem-solving skills. Therefore, the subject requires a systematic explanation of procedural knowledge (which relates to

instrumental learning: Delahaye, 2005) and real-world practical examples to grasp the subject matter for connecting the course to the real world.

Results also indicated that age is positive (2.871) and statistically significant at a 5% level (p=0.025), indicating that older students' learning outcomes are better than younger students. These results contradict previous findings about age (except Koh and Koh, 1999; Keller, 2009). Various authors found that younger students outperformed older students in accounting courses (Roos, 2009; van Wyk, 2011; Jansen and de Villiers, 2015). Other demographic variables, including gender, are not significant for learning outcomes. However, prior research found that male students outperformed female students in accounting (Koh and Koh, 1999; Yilmaz, 2009; Jansen and de Villiers, 2015). These differences in the results related to age and gender can be attributed to the fact that generally, the above-referred studies focus on undergraduate accounting courses, compared to the single and compulsory post-graduate accounting courses covered in this study. Furthermore, post-graduate students are more mature and self-motivated than undergraduate students. As students who are serious about learning and achievement in their course, gender may become irrelevant to their academic performance. It may well be the case that more mature learners exhibit greater proficiency in mastering the communicative domain of learning (Delahaye, 2005; Mezirow, 1981). Despite harmonisation in international accounting education curricula, there may still be countries that use different technical terminology and make accounting more challenging for Asian students to relate to and study elsewhere.

Moreover, lower levels of English language competency in speaking and writing may sometimes affect Asian students' learning outcomes, particularly assignments and group work, which rely on developing competence in communicative learning. As a result, this communicative drawback may have an adverse impact on student learning outcomes. The moderating effects of the English language proficiency on the relationship between learning approaches with learning outcomes, and teaching methods with learning outcomes were further examined, and the findings are presented in Table 4. The results of Model 2, presented in column one of Table 4, indicate that the coefficient of LER-APR is positive (β=1.756, t-statistic 3.220) and statistically significant at 1% level, and ENG-LP is positive (β=1.566, t-statistic 1.014) but statistically non-significant. In contrast, the coefficient of **LER-APR*ENG-LP** is negative ($\beta$= -0.125, *t*-statistic -1.692) and statistically significant at 10%. This result indicates that, although **LER-APR** has a significant impact on learning outcomes, the introduction of the **LER-APR*ENG-LP** interaction variable in Model 2 makes the learning approaches and learning outcome relationship weaker (the coefficient changes its direction from positive to negative, and the significance strength reduces to a 10% level from 1% Level). These results strongly suggest that English language proficiency moderates the learning approaches and learning outcome relationship and supports our H3a. The results of model 3, in turn, suggest that the English language proficiency is a very important variable in explaining student learning outcomes, along with learning approaches. This result also suggests that the learning approaches and learning outcome relationship are better explained by English language proficiency.

The results of Model 3, presented in column two of Table 4, indicate that the coefficients of TEC-MET is positive (β=1.548, t-statistic 3.114) and statistically significant at 1% level, and ENG-LP is positive (β=2.765, t-statistic 1.625) but statistically non-significant. On the other hand, the coefficient of **TEC-MET*ENG-LP** is negative ($\beta$= -0.156, *t*-statistic - 2.328) and statistically significant at 5%. This result indicates that, although **TEC-MET** has a significant positive impact on learning outcomes, the introduction of the **TECMET* ENG-PR** interaction

variable in Model 4 makes the teaching methods and learning outcome relationship weaker (the coefficient changes its direction from positive to negative, and significance strength reduces to 5% level from 1% Level). Taken together, these results suggest that English language proficiency moderates the teaching methods and learning outcome relationship. Above discussed, our results suggest that the **ENG-LP** is a stronger variable than **LER-APR,** and **TEC- MET** in explaining Asian postgraduate accounting student learning outcomes.

**Table 4: Moderating effects of English language proficiency (method: Least Squares)**

| | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|
| Variable | Coefficient | t-Statistic | Prob. | Coefficient | t-Statistic | Prob. |
| C | 3.863 | 0.312 | 0.755 | 2.345 | 0.168 | 0.867 |
| AGE | 2.257 | 1.737 | 0.086 | 1.947 | 1.393 | 0.168 |
| GENDER | -0.046 | -0.029 | 0.976 | -0.110 | -0.065 | 0.948 |
| ENG-LP | 1.566 | 1.0146 | 0.314 | 2.765 | 1.625 | 0.108 |
| LER-APR | **1.756** | 3.220 | **0.002** | | | |
| LER-APR*ENG-APR | **-0.125** | -1.692 | **0.095** | | | |
| TEC-MET | | | | **1.548738** | 3.114237 | **0.002** |
| TEC-MET*ENG-LP | | | | **-0.156385** | -2.328359 | **0.023** |
| R-squared | 0.417 | | | 0.332 | | |
| F-statistic | 9.442 | | | 6.275 | | |
| Prob(F-statistic) | 0.000 | | | 0.000 | | |

## 6. DISCUSSION AND CONCLUSION

Our study explores the relationships of learning approaches and teaching methods with the learning outcomes desired by Asian postgraduate accounting students, as well as the moderating effect of English language proficiency on these relationships. Our results provide insights into the complex inter-relationships of internal and external factors and their perceived impacts on student learning outcomes. We show that the learning approach is an influential factor affecting learning outcomes ($p>0.00$). However, English language proficiency moderates these significant relationships between learning approaches and teaching methods with the learning outcomes. Our study makes evident that most Asian international students appreciate a more student-centred learning experience, and we conclude that learning style is not cultural but contextual (Wong, 2004). Asian international students prefer and can adapt to a style of teaching and learning other than the so-called 'spoon-feeding' or teacher-centred learning environment they experienced in their country of origin. The students in our study provide evidence that Asian students are not passive learners who prefer rote learning. As Biggs (1996) argued over two decades ago, the Asian learner stereotype is a misconception. However, the stereotype becomes self-reinforcing when programs are designed to cater to it by emphasising lower-order learning outcomes and traditional teaching strategies (e.g., Maloney et al., 2013). Our sample of students appears motivated by an intrinsic interest in accounting, to work hard at their studies, including being engaged with higher learning skills.

Asians are often stereotyped as passive learners relying only on rote learning. These negative stereotypes can be extremely harmful and seriously affect academic achievement and

motivation for these students (Steel and Aronson, 1995). Our findings defy the stereotype but confirm the negative impact of restricted class activities because of language difficulty on learning outcomes. Asian students reportedly prefer Australian higher education because they feel that what they learn is more meaningful (Wong 2004). However, our findings raise questions about the meaningfulness of the type of learning in which students are encouraged to engage. Whether the type of learning, as constructed through class activities, is the consequence of misguided assumptions about their cultural background (Ryan and Hellmundt, 2003) or simply the nature of accounting education is not clear.

Concerning teaching methods, the most preferred teaching methods are practice exercises (80 percent) and discussion with others (63 percent), both of which may be evidence that students prefer instrumental learning over reflective learning or inquiry (Burch, 2008). On the other hand, rather than reflect badly on the nature of the student, a preference for application might well be the result of a class activity whereby choice is restricted to lower-level learning outcomes such as comprehension and analysis. The nature of the course, its content, assessment, and teaching method appear to be the drivers of the appearance of instrumental learning. For similar reasons, communication and teamwork skills were topics of interest in the three focus groups. Group work, although not regularly assessed, was seen as a valuable means of improving communication, engagement, and motivating learning. These positive attitudes are contrary to Wong's (2004, p. 162) findings, which suggested that "generally, Asian students do not have much experience in teamwork. They found it difficult to work in a team, especially with members who are not cooperative and unreliable. There is a preference to work individually so that they can have full control of the final product." Explaining the difference in findings may lie in the two different research samples. Wong surveyed First Year to Fourth Year Asian undergraduate students who were undergoing a range of programs and courses and who may have had the benefit of learning in programs that have a greater emphasis on higher forms of learning and communication. Once again, the more positive view of group work among our sample of respondents might well be the result of a lack of emphasis on communication skills within the accounting program.

English language ability is not only a major barrier to obtaining professional employment, it also directly impacts learning outcomes in the shorter term, especially about time and effort spent on preparation for class and assignments. We found that the students acknowledged language as their principal weakness and were realistic in rating the adequacy of their English language abilities. Students were keen to improve oral and written communication skills, skills they knew were important for employment, learning experience, and learning outcome. Although students preferred interactive teaching approaches, they were reluctant to participate and contribute to the class. Our studies confirm these apparent paradoxes, and others, highlighted for Asian learners by Campbell and Li **(**2008), and deficits in English language ability are most likely the explanation for these seemingly opposite positions.

Although most Asian students pass an English proficiency test required for entry into the program, they still lack the vital academic literacy for active learning. Academic literacy involves linguistic, rhetorical, discursive, socio-cultural, cognitive, political, and content knowledge (Woodrow 2005), factors not necessarily guaranteed by minimal scores in English proficiency tests. Academic literacy is likened to games played according to rules, conventions, and strategies (Casanave 2002), but Asian postgraduate students lack adequate training. Successful learning and assessment become more difficult and complex as these rules and

conventions are not explicit. The Asian students' level of satisfaction with their learning experiences and their learning outcomes is lowered by the negative aspects of these paradoxes. The obvious implications of our results for accounting educators and curriculum designers are to forget the stereotype and to offer courses and programs that are more engaging and productive for graduates with higher-order cognitive and communication skills. Our result will be useful for universities to develop their future strategies in planning, evaluating, and designing accounting modules effectively. This does not exclude the need to consider English language and academic literacy abilities and to provide necessary measures to support students in these areas. Thus, we argue that Asian students are not a homogeneous group and their successful participation in postgraduate accounting programs requires a greater focus on developing sound educational objectives without a narrow focus on tailoring programs to cultural stereotypes. From an instrumental perspective, as the recipients of large revenues from predominantly Asian students (Chan and Ryan, 2013), universities and their accounting schools would do well to heed this advice, if only to protect their future revenues, especially as Asian universities advance in quality and international recognition.

Our study also contributes to accounting teaching practice by highlighting the effect of English language proficiency on linguistically different students. The main implication of our results for teaching practice is that Asian students should be supported to enhance their English language proficiency to improve accounting learning outcomes. Universities could implement and administer their own English test on top of international English tests such as IELTS. Other strategies, such as embedding English skills development within accounting education as suggested by Chatterjee and Brown (2012) and the whole-institutional approach as reported by Murry and Hicks (2016), could be very beneficial as most of the students do not take advantage of English enhancement programs developed for them by most of the universities (Watty, 2007).

The differences from earlier studies of postgraduate accounting students might, in part, be caused by a skew in the sample. It is possible that half of the student population who responded to the survey were the more diligent students. Further research can also be undertaken, considering international students' values, to enable universities to target their support services better.

## References

ACER (2010). Doing More for Learning: Enhancing engagement and outcomes, Australasian Survey of Student Engagement, Australasian Student Engagement Report. ACER, Victoria, Australia.

ACER (2011). Monitoring risk and return: Critical insights into the graduate course work engagement and outcomes, AUSSE Research Briefing, 9, April.

Altbach, P.G. (2009). One-third of the globe: The future of higher education in China and India. Prospects, 39, 11-31.
https://doi.org/10.1007/s11125-009-9106-1

Arkoudis, S., Hawthorne, L., Baik, C., Hawthorne, G., O'Loughlin, K., Leach, D., and Bexley, E. (2010). The impact of English language proficiency and workplace readiness on the employment outcomes of tertiary international students. A study commissioned by the Department of Education, Employment and Workplace Relations.

Arthur, N. and Everaert, P. (2012). Gender and Performance in Accounting Examinations: Exploring the Impact of Examination Format, Accounting Education: an international journal, 21(5), 471-487. https://doi.org/10.1080/09639284.2011.650447

Australian Education International (2018). International student data - https://internationaleducation.gov.au/research/DataVisualisations/Pages/Student-number.aspx

Biggs J.B. (1996). Western Misconceptions of the Confucian-Heritage Learning Culture, in Watkins, Birrell, B., and Healy, E. (2008). Migrant Accountants-High Numbers, Poor Outcomes. People and Place, 16 (4), 9-22.

Bobe, B. J. and Cooper, B.J. (2017): The effect of language proficiency on approaches to learning and satisfaction of undergraduate accounting students, Accounting Education, https://doi.org/10.1080/09639284.2017.1396481

Bobe, B.J. and Cooper, B.J., (2019). The effect of language proficiency on approaches to learning and satisfaction of undergraduate accounting students. Accounting Education, 28(2), pp.149-171.

Böhm, A., Davis, D., Meares, D. and Peace, D. (2002). Global student mobility 2025: forecasts of the global demand for international higher education. IDP Education. Australia.

Bretag, T. (2007) The Emperor's New Clothes: Yes, There is a Link Between English Language Competence and Academic Standards, People and Place, 15 (1), 13-2.

Burch, T. (2008) Teaching and Learning Accounting with Overseas Students, People and Place, 16 (1), 12-20.

Bunney, D., and Therry, L. (2011). Employability skills in the Master of Professional Accounting: One school's journey. In Developing Student Skills for the next Decade: Proceedings of the 20th Teaching and Learning Forum, 1-2 February 2011: Edith Cowan University. http://otl.curtin.edu.au/tlf/tlf2011/refereed/bunney.html

Byrne, M. and B. Flood. (2004). Exploring the conceptions of learning of accounting students. Accounting Education, 13, 25-37. https://doi.org/10.1080/0963928042000310779

Campbell, J. A., and Li, M. (2008). Asian students' voices: an empirical study of Asian students' learning experiences at a New Zealand university. Journal of Studies in International Education, 12(4), 375-396. https://doi.org/10.1177/1028315307299422

Carpenter, V. L., Friar, S. and Lipe, M. G. (1993) Evidence on the performance of accounting students: race, gender and expectations, Issues in Accounting Education, 8(1), 1-17.

Chan, H-T. and Ryan, S. (2013) Challenging Stereotypes: International Accounting Students in Australia, Journal of Modern Accounting and Auditing, 9(2), 69-182.

Chatterjee, B., and Brown, A. (2012). Embedding English language in an accounting subject: A case of interactive interdisciplinary collaboration and learning. E-Journal of Business Education and Scholarship Teaching, 6 (1), 44-50.

Christie, H., Tett, L., Cree, V., and McCune, V. (2016). It All Just Clicked. Studies in Higher Education, 41, 3,478-90. https://doi.org/10.1080/03075079.2014.942271

Cooper, B. J. (2004). The enigma of the Chinese learner. Accounting Education, 13(3), 289-310. https://doi.org/10.1080/0963928042000273780

Coates, H. (2010). Development of the Australasian Survey of Student Engagement Australian Survey of Student Engagement, Higher Education, 60(10), 1-17. https://doi.org/10.1007/s10734-009-9281-2

Casanave, C. P. (2002). Writing Games: Multicultural Case Studies of Academic Literacy Practices in Higher Education, Lawrence Erlbaum Associates, Publishers, Mahwah, NJ.

Coates, H. (2010). Development of the Australasian Survey of Student Engagement Australian Survey of Student Engagement, Higher Education, 60 (10), 1-17. https://doi.org/10.1007/s10734-009-9281-2

De Lange, P., Jackling, B., Philips, J., and Sewell, J. (2010). Perceptions of accounting: Do Australian born students see accounting differently from those born overseas? Paper presented at the Accounting and Finance Association of Australia and New Zealand (AFAANZ) Conference, Christchurch, New Zealand, July 4-6.

DeVos, A. (2003). Academic standards, internationalization, and the discursive construction of the "the international student". Higher Education Research and Development, 22(2), 404-417. https://doi.org/10.1080/07294360304107

Gerbic, P. (2005). Chinese learners and computer mediated communication: Balancing culture, technology, and pedagogy. Ascilite 2005: Balance, Fidelity, Mobility: maintaining the momentum, Conference proceedings, Brisbane.

Gibbs, P. (2008). Marketing-isation of higher education. PhD thesis, Middlesex University.

Greene, W. H., 2008a. Econometric Analysis (sixth edition), Upper Saddle River, New Jersey, Pearson Education, Inc. Growth and opportunity in Australian International Education - Austrade (2018). https://www.austrade.gov.au/.../DAE%20EduWorld%20Austrade%20Report.pdf.aspx

Hair, J., Ringle, C., and Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. The Journal of Marketing Theory and Practice, 19(2), 139-152. https://doi.org/10.2753/MTP1069-6679190202

Hancock, P., Howieson, B., Kavanagh, M., Kent, J., Tempone, I., and Segal, N. (2010).) Accounting for the Future, in E. Evans, R. Burritt and J. Guthrie (Eds) Accounting Education at the Crossroad in 2010. Centre for Accounting, Governance, and Sustainability and The Institute of Chartered Accountants in Australia, 54-62.

Harnett, N., Romcke, J., and Yap, C. (2004). Student performance in tertiary-level accounting: an international student focus, Accounting and Finance, 44(2), 163-185. https://doi.org/10.1111/j.1467-629X.2004.00104.x

Jackling, B. (2007), The lure of permanent residency and the aspirations and expectations of international students studying accounting in Australia, People and Place, 15(3), 31-41.

Jackling, B., and Natoli, R. (2010). Engaging business students: An Australian university perspective. Paper presented at the Accounting and Finance Association of Australia and New Zealand (AFAANZ) Conference, Christchurch, New Zealand, July 4-6.

Jackson, M., Watty, K., Yu, L., and Lowe, L. (2006). Assessing Students Unfamiliar with Assessment Practices in Australian Universities. Carrick Institute of Learning and Teaching in Higher Education.

Jansen, J. and de Villiers, C. (2015). Determinants of student performance in an accounting degree Programme. South African Journal of Accounting Research. https://doi.org/10.1080/10291954.2015.1019223

Koh, M. Y., and Koh, H. C. (1999). The determinants of performance in an accountancy degree program. Accounting Education: An International Journal, 8(1), 13-29. https://doi.org/10.1080/096392899331017

Li, L., (2015). Cultural learning styles-"Is there such a thing?". Culture and foreign language education: Insights from research and implications for the practice, pp.265-295. https://doi.org/10.1515/9781501503023-013

Li, G., Chen, W. and Duanmu, J. (2010). Determinants of International Students' Academic Performance - A Comparison between Chinese and Other International Students. Journal of Studies in International Education, 14(4), 389-405. https://doi.org/10.1177/1028315309331490

Lusher, D. (2011). Masculinity, educational achievement and social status: a social network analysis. Gender and Education, 23(6), 655-675. https://doi.org/10.1080/09540253.2010.527825

Martirosyan, N.M., Hwang, E. and Wanjohi, R., 2015. Impact of English proficiency on the academic performance of international students. Journal of International Students, 5(1), pp.60-71
https://doi.org/10.32674/jis.v5i1.443

McGowan, S., and Potter, L. (2008). The implications of the Chinese learner for the internationalisation of the curriculum: An Australian perspective. Critical Perspectives on Accounting, 19, 181-198.
https://doi.org/10.1016/j.cpa.2005.12.006

Ramburuth, P. (2000). Cross Cultural Learning Behaviour in Higher Education: Perceptions versus practice. 7th International Literacy and Education Research Conference on Learning, July: 5-9. 9, RMIT University, Melbourne, Australia.

Ramburuth, P. and J. McCormick (2001). Learning diversity in higher education: A comparative study of Asian international and Australian students. Higher Education, 42(3), 333-350.
https://doi.org/10.1023/A:1017982716482

Rankin, M., Silvester, M., Vallely, M. and Wyatt, A. (2003). An analysis of the implications of diversity for students' first level accounting performance, Accounting and Finance, 43(3), 365-393.
https://doi.org/10.1111/j.1467-629x.2003.00096.x

Ryan, J. and S. Hellmundt (2003). Excellence through diversity: Internationalisation of curriculum and pedagogy. 17th IDP Australian International Education Conference, Melbourne, Australia, October.

Ryan, J., and Louie, K. (2007). False Dichotomy? 'Western' and 'Confucian' concepts of scholarship and learning. Educational Philosophy and Theory, 39(4), 404-417. https://doi.org/10.1111/j.1469-5812.2007.00347.x

Seow, P.S, Pan, G. and Tay, J. (2014). Revisiting the determinants of student's performance in an undergraduate accountancy degree programme in Singapore. Global perspective on Accounting Education, 11, 1-23.

Tan, L.M. and Laswad, F. (2015), Academic Performance in Introductory Accounting: Do Learning Styles Matter? Accounting Education: an international journal, Vol. 24, No. 5, 383-402.
https://doi.org/10.1080/09639284.2015.1075315

Tessema, M., Ready, K. and Malone, C. (2012). Effect of Gender on College Students' Satisfaction and Achievement: The Case of a Midsized Midwestern Public University. International Journal of Business and Social Science, 3(10): 1-11.

Umar, M.A. and Olowo, R., (2023). Issues in teaching and learning accounting among students who use English as a second language. Accounting Education, pp.1-24.

Watty, K. (2007). Quality in Accounting Education and Low English Standards Among Overseas Students: Is there a Link? People and Place, 15 (1), 22-29.

Wong, J. K. K. (2004). Are the Learning Styles of Asian International Students Culturally or Contextually Based? International Education Journal, 4(4), 154-166.

Yong, J., Ryan, S, Yap, C and Goela, N. (2011) A case study in the failure of graduate attributes in accounting education. Paper presented at the 2011 Higher Education Research and Development Society Conference, Gold Coast, Australia, July 4-8.