Student-related factors of academic performance: A case of non-accounting students in accounting module

Rodrigo M. Velasco

Abstract

This paper evaluated the student-related factors associated with the academic performance of the non-accounting Omani students in their first undergraduate accounting module. Qualitative research method was employed through a self-made survey tool. The tabular data were integrated with percentages to supplement the analysis. The students' academic performance can be attributed to learning approach and study habits not prior learning. Students prefer surface learning approaches which do not fit the demands of the accounting module while the positive study habits mainly focus on passing the assessments rather than building knowledge and skills. There is a strong need for a student-centered classroom which are focused on knowledge acquisition than assessments. A pre-requisite module to basic accounting can be considered as a bridging program. The teachers are also expected to employ methodologies such as formative assessments to enhance the students' learning and entice effective habits. This study has various statistical and scope limitations. For this, other student-related factors such as demographic profile, performance in other modules and commitment to learning should also be considered in the future studies. Moreover, the actual module performance of the students can be statistically correlated to their prior knowledge, study habits and learning approach.

Keywords:

factors for academic performance, accounting, student-related factors, case study of Omani students

About the author:

Lecturer, Faculty of Business and Management Studies, Gulf College, Sultanate of Oman

1. Introduction

In most of the business programs, accounting is regarded as highly challenging than any other business modules due to its global phenomenon of high failure rate (Alanzi, 2015; Borges, Santos, Abbas, Marques & Tonin, 2014; Fakoya, 2014). The most common identified student-related factors associated with academic performance include students' individual characteristics (Bean, Bush, McKenry & Wilson, 2003), personal responsibility of the learners (Gracia & Jenkins, 2002), commitment and procrastination (Borges, Santos, Abbas, Marques & Tonin, 2014), attendance (Duve, 2016; Alanzi, 2015; Jameel & Hamdan, 2015), prior knowledge (Nayebzadeh, Aldin, & Heirany, 2011; Al-Mutairi, 2011; De Villiers & Farrington, 2017), motivation and determination (Xiang & Hinchliffe, 2019) and learning techniques (Ozpeynirci, Yucenur, Duman & Apak, 2013). Moreover, studies conducted in English as Second Language (ESL) countries, academic performance is mostly associated with knowledge of English (Sebrina, Serly & Taqwa, 2018; De Villiers & Farrington, 2017) and surprisingly, nationality (Al-Mutairi, 2011). This holds true of the Arab countries where English was lately adapted as a medium of instruction in most of the higher education institutions. Studies focused on accounting performance identified English (Andrade, 2006; Al-Sohbani & Muthanna, 2013; Bowen, 2011) and educational culture (Ghazal, 2019; Shafei, 2018) as main causes of academic failure. In fact, Khadijah AlHaddad, Mohamed and Musa AlHabshi (2004) and Almajed and Hamdam (2015) noted the relationship in the academic performance and English language proficiency of the limited-English-proficient accounting students. The same observation of Rivero-Menendez, Urquia-Grande, Lopez-Sanchez and Camacho-Minano (2018) that proficiency in the English language improved students' comprehension of the accounting concepts and terminologies. However, there is an uprising of the higher education in the Arab region (Martin & Hassan, 2019).

While several studies focused on the academic performance in accounting, only few of which pertains to the non-accounting students. In the few studies conducted, there is even higher rate of poor performance. This is probably an effect of the underlying 'accounting stigma' among non-accounting majors. Most of them perceive the module with more maths and less communication (Meixner, Bline, Lowe & Nouri, 2009). Non-accounting students mostly have poor performance (Muda, Hussin, Johari, Sapari & Jamil, 2012) primarily because

of their math anxiety (Joyce, Hassall, Arquero-Montano & Donosoanes, 2006). Owusu, Bekoe, Okyere and Welbeck (2019) states that non-accounting students are largely motivated by extrinsic not self-interest.

The same scenario exists in most of the colleges and universities in Oman where compulsory accounting course in various business programs are offered. While there are less studies of non-accounting students' academic performance in accounting, there is even less study conducted in the Oman setting. A study conducted by Khan & Al Mamari (2019) on the perception of the non-accounting Omani students towards basic accounting found that they lack knowledge of application, formulae usage and decision making. On testing the causes of poor academic performance of Omani students, Alami (2016) took the case of students in a higher college of technology. Student-related factors, teacher-related factors, family-related factors and some other personal factors were the macro-groups of factors affecting poor performance. There was no study conducted on the academic performance of non-accounting students in accounting modules. Thus, the current study fills this gap.

The point of inquiry emerged from the results of the Focus Group Discussion (FGD) of the 14 accounting and finance teachers conducted every end of the semester that the academic performance of the students in the introductory accounting is mainly caused by lack of prior knowledge and other personal factors such as skills and capabilities, study habits and learning approach. This introductory accounting module is offered for Business Management, Marketing and Economics students. It covers basic accounting concepts, bookkeeping, preparation of financial statements and basic managerial accounting concepts and calculations. There are two examination assessments which contain both theories and calculations. The module has been a concern for the longest period due to its lowest pass rate among other modules. Statistical data available at the end of the AY 2017 – 2018 posed an upsurge to 50% failure percentage in the module. Of the 352 students of the 2nd semester AY 2017 – 2018, 32% failed the mid-term test while 43% failed in the final examination. Two batches with majority of repeaters have the highest failure of 67% and 61%. Of the total repeaters from the 1st semester AY 2017-2018, 63% failed again while 23% need to re-sit either midterm/final or both. There was high number of repeaters for second and third attempts as well. As this module is compulsory and common for most of the specializations, there were numerous cases of exit awards due to failure. Relative to the results of the FGD, this study presumes that the academic

performance of the students is highly influenced by the three student-related factors as prior knowledge in accounting, study habits and learning approach.

2. Literature Review

2.1. Theoretical background

2.1.1. Dynamic Skills Theory

The factors identified in the FGD are congruent with the Dynamic Skills Theory as popularized by Kurt W. Fischer (1980). This theory postulates that skills develop through levels of complexity which includes external, internal and interpersonal contexts. As the results refer mostly to the student-related factors, the internal world, referring to self, is the main focus of this study. Relative to the age-range of the respondents is the adulthood level of development which refers to the abstraction forming the principled tier.

According to Sobat (2003) new knowledge is founded on prior experience which enhances ability of the students to apply in real situations. Application of this theory in teaching suggests that students take active position in the classroom, lessons be in real-life scenarios, collaborative learning is encouraged and ample resources are provided (Liu & Zhang, 2014). In higher education, it can be applied in problem-based learning as suggested by Hendry, Frommer & Walker (1999) as teaching supports reflection, provides sufficient independent learning and provides formative and summative feedback. Pereira and Sithole (2019) also stated that the teaching of accounting results to an improved system of knowledge acquisition.

As this theory propel that support is essential (King & Van Hecke, 2006), the current study presumes that development of the students is a product of previous knowledge and experience in accounting. Thus the skills and capabilities are founded on the constructivist theory (Bruner, 1983). Constructivism explains how learner acquires knowledge through their previous experiences. The current study applied constructivism theory to determine the prior accounting knowledge of the students. This is fundamental to test any significant relationship with the learning approaches and teaching methodologies as applied in the accounting classes. Since the introductory accounting is taught at the level 4 with no pre-requisite accounting-based module, the previous accounting subjects in schools or other colleges as well as the other accounting-related experiences are taken.

2.1.2. Self-concept theory

To assess the study habits, the self-concept theory (Rogers, 1959) is applied. This theory postulates that self-concept includes cognitive and affective judgments in multi-dimensional aspects. According to Marsh, Xu & Martin (2012), it is an important mediating factor to choice behavior, persistence and achievements. As applied to higher education, the academic self-concept suggests that an individual develops and maintains a positive self-image (Eccles & Wigfield, 2002). According to Osborne & Jones (2011), the experience of higher education is strongly associated to self-concept. Rodriguez (2009) adds that the academic self relates to the fear of failure which is regarded as the negative self. Faye & Sharpe (2008) note that the 'academic self' motivates students to have certain behaviours. Since there are assessments which evaluate students' academic performance, it is a key to develop and maintain a positive self-concept. These behaviors towards their academic journey are reflected in their study habits. According to Gbore (2006), study habits combine study method and study skill which is closely connected to academic success.

With the presumption that habits become the personality trait overtime, the study anchored on the self-esteem and personality trait dimensions of the self-concept theory. The students' self-concept affects their study behavior and motivation in accounting module. It is characterized by their positive self-concept (positive study habits) and negative self-concept (negative study habits). This study upholds that knowing oneself determines behavior and responses to academic challenges thus reflecting in the actions towards these challenges. The theory was used to analyse the study habits of the respondents through which it determines the self-concepts of the students.

2.1.3. Kolb's Learning style

The last theory is Kolb's learning style (Kolb, 1985) which is used to analyse the applicability of the learning approaches of the respondents. Kolb and Kolb (2006) explain that learning style differs as well the various academic performances. In this theory, there are four prevalent learning styles emerging from genetics, experiences and effects of the environment. It also viewed learning as a four-stage cycle which includes concrete experience, reflective observation, abstract conceptualization and active experimentation. According to McLeod (2017), the concrete experience of students formed as a basis of future situations where students learn new experiences. The theory postulates the four learning styles: coverger (abstract conceptualization and active experimentation); diverger (concrete experience and

reflective observation); assimilator (abstract conceptualization and reflective observation) and accommodator (concrete experience and active experimentation). According to Kolb & Kolb (2006), diverging prefers to watch than do, works in groups and openly receives feedback while assimilating involves logical approach, prefers reading, lectures and critical thinking. Meanwhile, converging prefers technical tasks, experiments new ideas and works with practical applications. Lastly, accommodating takes on practical and experiential approach.

According to Williams, Brown & Etherington (2013) students' academic performance in the university is positively linked to their learning styles. Needles (2018) adds that diversity in assessment approaches is necessary because of multiple learning styles. In the context of Arab students, Chermahini, Ghanbari & Talab (2013) conclude in their study that learning styles are good predictor of any second language academic performance.

The use of Kolb's learning style assumes that non-accounting students' learning approaches affect their ability to pass the two major assessments of the accounting module. This will assess whether the preferred learning approach of the students is applicable to the study of the module as well as the strategies imposed by the teachers. The results of the study were mapped with the outcome of the cited relevant studies to critically analyse the assessment of the learning approaches.

2.2. Related Studies

2.2.1. Prior knowledge

Background knowledge acts as a foundation and building block of content and skill knowledge. In the context of student development, accumulation of prior knowledge helps skills and capabilities building. For a more effective teaching and learning, an assessment of prior knowledge ensures applicability of strategies and approaches. According to Zambrano, Kirschner, Sweller & Kirschner (2019), it benefits both the collaborative and individual learning. It also affects academic performance (Kamal & Ahuja, 2019). As Ambrose, Bridges, DiPietro, Lovett & Norman (2010) clearly put it '*prior knowledge can help or hinder learning*'.

On the test of relationship between prior knowledge and academic performance, several researchers applied the concept in the study of accounting students. In an Irish University, Byrne & Flood (2008) found significant association among prior academic achievement, prior knowledge of accounting, and students' academic performance. Similarly, Mei Tan & Laswad

(2015) in New Zealand yielded the same results. On a much broader context, Alfan & Othman (2005) identified that prior knowledge of economics, mathematics and accounting is beneficial in entering both business and accounting programmes in Malaysia. Meanwhile, Bein, Trzewik & Maril (2019) and Xiang & Hinchliffe (2019) provided contrasting generalizations on the prior knowledge of repeating students in accounting. Similar to other studies, the former found a continuous influence of prior knowledge on learning but repeating students are more likely with prior high school accounting education.

There are few studies on the prior knowledge of non-accounting majors. Two studies conducted in UK and USA by Lane & Porch (2002) and Kaighobadi & Allen (2008), respectively focused on business students' performance in core accounting modules. Fundamental results found that prior knowledge in the previous semester's core courses is strongest predictor of academic success (Kaighobadi & Allen, 2008) and non-specialist academic performance was heavily influenced by high school academic achievement. Studies in the Arab context found similar results. The study of Yousef (2019) on Emirati students in undergraduate Statistics found that high school performance has significant relationship in their academic performance. Same results were found by Alanzi & Alfraih (2017) in the cost accounting students in Kuwait. Alanzi (2015) concluded that previous knowledge in accounting motivates students to perform better and improves their self-confidence.

2.2.2. Study habits

Previous studies show that study habits greatly affect students' academic performance in all levels of studies. It keeps them focused on their academic goals and make intelligent use of their learning styles. There are many factors in study habits including learning plan, strategies, and motivational techniques. These factors include activities done by the students inside and out of the classrooms including their independent learning hours. There are a number of studies focused on the relationship between the different aspects of study habits and academic performance. Ahinful, Tauringana, Bansah & Essuman (2019) include motivation and engagement as factors while Icekson, Kaplan & Slobodin (2019) believe on optimism and its positive effect on academic performance.

Studies focused on the study habits of accounting students identified various variables such as self-efficacy (Byrne, Flood & Griffin, 2014), attendance (Paisey & Paisey, 2004; Schmulian & Coetzee, 2011) and communication apprehension (Gardner, Milne, Stringer &

Whiting, 2005). In a study among first year accounting students, Byrne, Flood & Griffin (2014) found that students lack self-efficacy to participate in academic activity which also affects their independent learning. Davies & Lee (2012) also found that the undergraduates in New Zealand who major on math skills had higher math self-concept which justifies their choice of faculty based on their skills and capabilities. However, Chilca (2017) on the study of basic mathematics students in Peru showed that self-esteem does not significantly impact academic performance, but study habits do influence academic performance. This also impacts on the students' communication which Gardner, Milne, Stringer & Whiting (2005) found in the study of accounting students in New Zealand. As there is association with communication apprehension and academic performance, the higher levels of communication apprehension in the earlier levels affect their performance in accounting. Moreover, Erer & Hazir (2017) found in the introductory accounting in Turkey that instruction language is also a predictor of academic success but this is not the case in Oman even if the 2015 Arab Youth Survey stated that in the Gulf Cooperating Countries 56% used English more than Arabic.

The studies of Paisey & Paisey (2004) and Schmulian & Coetzee (2011) in two different Scottish universities found positive relationship between class attendance and academic performance which is, interestingly, affected by culture and ethnicity. In both the UK and the US, class attendance has effects on academic performance (Andrietti, 2014; Dey, 2018). This suggests that attending class has a positive and significant effect on exam performance. The business students have lower self-efficacy according to Ali & Narayan (2019) and Gebka (2014). The low self-efficacy and culturally unresponsive pedagogical practices negatively affect the students of Pasifika (Ali & Narayan, 2019) while Gebka (2014) take self-esteem as the root to high academic performance in British university business statistics.

The other factors of study habits were the focus of other studies and showed relationship with academic performance. Martinez, Morgan, Chambel and Pinto (2019) focused on engagement and psychological capital resources in Spain and Portugal while Gracia and Jenkins (2002) on control, responsibility and participation in UK and De la Fuente and Elawar (2009) on emotion style in Spain. It was found that academically engaged students have higher levels of psychological resources (Martinez, Morgan, Chambel & Pinto, 2019). The levels of control, personal responsibility for learning and patterns of participation are excellent

predictors of students susceptible to academic failure (Gracia & Jenkins, 2002). Meanwhile, action–emotion style is a predictor for explaining students' individual differences in motivation and learning outcomes (De la Fuente & Elawar, 2009).

In terms of the study habits of Omani students, Puma-at & Hamed (2016) determined that business students in Gulf College frequently study at home, prepare their assignments, prioritize their college works, study before the examination day, spend more time studying, and do advance readings. These findings were in contrast with the identified factors affecting failure in the study of Alami (2016) among the Omani students taking English course. The identified study habits that affected their academic performance include: not studying/reviewing at home (16.50%); absenteeism (15.04%); finding subject difficult (6.79%); no focus during lecture (6.31%); coming late (5.58%); don't do homework (5.09%); laziness (4.61%); dislike to study (4.36%) and language barrier (3.64%).

2.2.3. *Learning approach*

In a study conducted by Duff and McKinstry (2007), it was found that accounting students were effective learners with high deep learning approach whereas business economics were ineffective learners because of their high surface approach. The same results were obtained with the learning approaches of accounting students and arts, education and science students in Australia (Booth, Luckett & Mladenovic, 1999). On the contrary, Ballantine, Duff and Larres (2008), found that learning approach was not associated with the degree program of accounting and business undergraduates in Ireland which both manifested surface approach to learning. Duff, Boyle, Dunleavy & Ferguson (2004) conclude that approach to learning is a subset of personality that affects university students in Scotland. Wilding & Andrews (2006) found that deep approach is associated with altruistic life goals while surface approach to wealth and status life goals. Everaert, Opdecam & Maussen (2017) argue that high intrinsic motivation and extrinsic motivation have a significant positive influence on deep learning which leads to higher academic performance. However, Sikkema & Sauerwein (2015) insisted that there are culture-specific learning styles. In the study of Donald & Jackling (2007) comparing the first year undergraduate accounting program in Australia, it was found that there were no significant differences in the use of surface and deep learning strategies by the Chinese and Australian students. It refuted the claim that Asian students rely on rote memorisation and reproduction of factual information.

In the study of study skills inventory of auditing students in South Africa, Barac, Kirstein, Kunz and Beukes (2016), it was found that senior students were more inclined to adopt a surface approach as influenced by gender and race. These cultural factors were tested by Boland, Sugahara, Opdecam and Everaert (2011) through the learning style preferences of Japanese, Australian and Belgian undergraduate accounting students. It was found that Australia and Belgium students learn by individual doing while Japanese students learn by watching. On a more specific learning approaches, cooperative learning and seminar-based approach in undergraduate accounting improve problem solving and analytical skills (Baird & Munir, 2015). On the other hand, visualization is less preferred by undergraduate and postgraduate accounting students (Bracci, Tallaki & Castellini, 2019).

The learning approach of non-accounting students in their accounting modules shows varied results. Through Kolb's learning style inventory, Loo (2002) found moderate difference in the learning style preferences of business students as compared to accounting, finance, and marketing majors. In the study of Novin, Arjomand & Jourdan (2003), business students were predominantly *Assimilators* or *Convergers* who have higher assessment performance that *Diverger* and *Accommodators* which is the same with the study of Cekiso, Arends & Mkabile (2015) in South Africa where accounting students were mostly Convergers and in Mei Tan & Laswad (2015) assessment of the business students in introductory accounting that students with 'assimilating' learning style perform better in their assessments than 'diverging' or 'accommodating'. Meanwhile, the Thai business students have adaptive learning styles (Sandman, 2014).

3. Methodology

3.1. Research design and strategy

Descriptive qualitative method of research was utilized in this study. The open-ended survey was the data collection strategy. The assessment of the three student-related factors was supplemented by quantitative measurements. The use of numbers in qualitative research is supported by Maxwell (2010) as '*legitimate and valuable strategy'*. As the purpose of the numerical values was to complement the results generated, the expressed percentages in the results and findings depict logical representation of the samples. Chivanga (2017) asserts that numbers are necessary following the qualitative methodology.

3.2. Instrumentation

The main tool for gathering data was an open-ended questionnaire which assessed the three factors prior knowledge in accounting, study habits and the learning approach. The tool was written in English with Arabic translation.

3.3. Population and sampling

There were 300 respondents chosen as samples from the registered students in the basic accounting module in both semesters of the Academic Year 2017-2018. There were 411 registered students in the first semester and 352 in the second semester. While some of the repeaters from the first semester were also enrolled in the second semester, a total of 150 respondents gathered from each semester accounted for sample sizes of 36.49% and 42.61%, respectively. Of the average five batches in the morning and evening sessions, the three batches of students were visited in each semester for the actual conduct of survey. Each batch has an approximate average number of 55 students. Quota sampling was utilized in the selection of respondents to equally get 50 student-respondents in each batch.

3.4. Data collection process

There were two phases of data gathering. The first survey was conducted in December 2017, first semester of the AY 2017 – 2018 while the second survey was conducted in May 2018, second semester of the same academic year. The data gathering was personally administered by the author after the mid-term test in both semesters. The data were sorted and tabulated only after the second phase of the data gathering.

3.5. Data analysis

Thematic analysis was used to analyze data. Through the use of open-ended survey, student-respondents provided a more comprehensive evaluation of their personal qualities. These raw data were examined to identify patterns or themes. Subsequently, themes were grouped into categories. The entire thematic analysis involve six key stages: data familiarization, initial coding, identifying themes, reviewing themes, naming themes and the final report. To supplement the proper analysis and evaluation, the percentage of the responses were added for each category.

4. Results and Discussion

Table 1

The students' prior knowledge of accounting

Theme	Category	%
Academic	High school accounting	63%
	Readings on accounting	29.33%
	Accounting from other college	18%
Work	Seminars/training	19.67%
	Work in accounting department	7%
Relational	Family members teach accounting	31.33%
No prior knowledge	No background	32%

The majority of the business students have prior knowledge of accounting as shown in Table 1. Most of the students have taken accounting course in their senior high school as reflected by 63%. Other than their high school, they also have family members teach them accounting (31.33%), readings on accounting (29.33%), work-related seminars and trainings (19.67%), accounting course from other college (18%) and work in accounting department (7%). Of the 300 business students surveyed, only 32% do not have prior knowledge of the module. Since the majority of the students have background of accounting, this study finds that the teachers' supposition on the students' lack of prior knowledge in accounting as the primary cause of poor academic performance is incorrect. This clearly asserts Ambrose, Bridges, DiPietro, Lovett and Norman (2010) findings that prior knowledge can either help the students pass the module or hinder due to other factors inconsistent with the prior knowledge attained.

Prior knowledge does not assure a passed accounting module at it does not predict academic performance. It partly refutes Byrne and Flood (2008), Mei Tan and Laswad (2015) and Alfan and Othman (2005), Yousef (2019), Alanzi & Alfraih (2017) and Alanzi (2015) on the positive association of prior knowledge and academic performance. Although students have prior knowledge of accounting, Alfan & Othman (2005) and Xiang & Hinchcliffe (2019) believe on the need for a prerequisite related module to improve academic peformance. As the tested introductory accounting module has no pre-requisite, there is limited knowledge of core contents of the module. Furthermore, the explorations of Kaighobadi & Allen (2008) on prior

semesters' core courses and Lane & Porch (2002) on high school academic achievement form a related argument on the issue.

There are two valuable points on this matter: contents and retention. Although assumed that module contents were same regardless of levels, the area of concentration and manner of delivery tell all the difference. In addition, the amount of knowledge retained, having no accounting-related pre-requisite module is another factor. The prior knowledge obtained by the students was weak compared with the demands of the introductory accounting module. The study of Zambrano, Kirschner, Sweller & Kirschner (2019) formed a related analysis on the study habits and learning style. The degree of influence on the study habits of the students is relatively high due to the pre-conceived notion of prior knowledge. The reliance on prior knowledge to pass the assessment tends to decrease the drive to further acquire additional knowledge on the module. Although prior knowledge has no direct effect on academic performance, it has indirect impact on study habits and learning styles.

In Table 2, the study habits were grouped accordingly as positive or negative. The enumerated study habits were mostly personal positive habits with assessment-related habits on top with 62.835%. There were 40.67% students who have negative study habits on procrastination and poor management during assessment periods while some have tendency not to work with peers (20.5%). The good personal study habits include preparation for assessments, attendance and class participation, use of independent learning and study plan. It could be inferred from the statistics that majority of the students are mainly focused on the assessments and not on knowledge and skills building. While almost 60% of the students have good relations with their classmates and teachers, still the collaborative learning habit is not enhanced. While majority put studies on top priority, there were still 40.67% of the students who have limited time for their studies. These data strongly show that there is strong tendency for the students to develop negative study habits.

Table 2

The students' study habits in introductory accounting

Theme	Category	%
Positive - personal	Assessment-related	62.84%
	Attendance and participation	61.56%
	Independent learning	43.75%
	Study plan/management	52.22%
Positive - relational	Consult peers	50%
	Consult teacher	59.33%
Negative	Personal habits	40.67%
	Relational	20.5%

The identified study habits were similar to the findings of Puma-at & Hamed (2016) which itemized good study habits of Omani business students in a private college. These habits were also focused on the assessment readiness and not on knowledge and skills building. However, the negative habits were similar to the study of Alami (2016) on the factors affecting failure of Omani students in English module. Although these cited studies were different in nature and modules, the same study habits of the Omani students in the private colleges were obtained. This is a clear indication that there are lapses on the study habits of the Omani undergraduate students.

The focus on assessments and not knowledge and skills-building might have affected the academic performance of the students. The limited habit on independent learning is similar to the findings of Byrne, Flood & Griffin (2014) and the findings of Gardner, Milne, Stringer & Whiting (2005) on communication apprehension. However, there are no traces of language barrier in the study habits as identified by Erer & Hazir (2017) in the Arab students in Turkey. Since majority of the students have high regard on class attendance, the findings of Andrietti (2014) and Dey (2018) were invalidated. Class attendance is not associated with assessment performance. Meanwhile, the studies of Ali & Narayan (2019) and Gebka (2014) on self-efficacy can only be measured through the positive study habits of the students. Since students have complete control over their study habits, their positive personal habits reflect higher self-efficacy.

Generally, the business students have healthy learning habits. However, the focus on assessments rather than knowledge acquisition is a highly significant element. Accounting module requires more than rote memorization of pertinent concepts and rules but rather a complete understanding of the sequential procedures. Understanding to complete a puzzle is totally different from knowing how to solve it. As accounting does not only require a wider comprehension, a complete gist of the concepts is necessary. In this scenario, a positive study habits is not an assurance of a higher academic performance but a mere reflection of academic focus. Students tend to neglect the importance of skills and knowledge building by focusing more on the contents and structure of the two assessments.

Table 3

The learning approach of the students

Theme	Category	%
Accommodating	Practice tests/Quizzes	54%
	Small group discussion	51%
	Roleplaying	23%
Diverging	Pair activities	51.67%
	Peer discussion	30.67%
Converging	One to one instruction	39%
	Individual presentation	30%
	Board works	19%
Assimilating	Lecture/Discussion	65.67%
	Case analysis	25.33%

The learning approaches of the students were categorized according to Kolb's learning style as shown in Table 3. The business students were mostly assimilating, accommodating and diverging. The majority of the students still prefer the lecture/discussion style as reflected by the highest stat of 65.67% (assimilating). This is seconded by preference to practice tests/quizzes with 54% (accommodating). The lowest approach is board works with 19% (converging).

Framing within the Kolb's learning style inventory, the results of the current study partly agrees with the studies of Novin, Arjomand & Jourdan (2003) and Mei Tan & Laswad (2015) that business students are predominantly assimilators. However, it contrasts the results of Cekiso, Arends & Mkabile (2015) wherein accounting students in Africa were convergers. As Duff & McKinstry (2007) argue that effective learners have high deep approach, the majority of the business students in the current study prefer watching and thinking equating to surface approach to learning. This upholds the study of Ballantine, Duff & McCourt Larres (2008) with the surface approach of Irish business and accounting students. As Duff & McKinstry (2007) and Booth, Luckett & Mladenovic (1999) noted that effective learners have high deep learning approach, this proves that the learning approach of the Omani business students does not match with this type of module. As Wilding & Andrews (2006) argued that surface approach is associated to wealth and status life goals, the profile and status of the Omani business students matter. As these students are mostly working adults with fixed income, their learning style is not for challenging situations. Further, as Sikkema & Sauerwein (2015) insisted on culture-specific learning styles and Donald & Jackling (2007) on rote memorization of Asian students, the Omani learning styles were mostly characterized by the traditional watching and thinking.

The results on the learning style of Omani students clearly emphasize suitability and methodology. It clearly reflects that the Omani learning approach does not suit the demands of the accounting module. As the surface approach focuses mainly on comprehension of rules and concepts with or without application and critical analysis, the module requires more critical analysis and application of theories to calculations. As majority of the students prefer lecture/discussion, which was also confirmed by the teachers in FGD, the approach is not sufficient for students to master the concepts and procedural approach of accounting. Critical thinking and mathematical skills are necessary since the assessments contain both theories and calculation. Knowledge and skills building are more importance than plain comprehension through series of lectures.

5. Conclusion and Recommendation

This paper evaluated the student-related factors associated with the academic performance of the non-accounting Omani students in their first undergraduate accounting

module. Qualitative research method was employed through a self-made survey tool. To supplement the gathered themes and categories, percentages were integrated in the tabular presentation.

The analysis of the three student-related factors showed that there was high inclination on the learning approach as the key variable associated with the students' performance. There was strong bargain on the mismatch between the module demands and the learning approach of the students. The preference to surface learning approaches does not fit the demands of the accounting module. Since Omani students are highly challenged on the accounting terms and concepts caused by the English comprehension; the preference of lecture/discussion as teaching and learning methodology does not equip them with the necessary basic comprehension skills. There was also indication that the study habits of the students contribute to their academic performance. However, there was no strong direct link between these variables because majority of the students still showed positive study habits that are mainly focused on passing the assessments than building knowledge and skills. This, however, strongly shows that the students are more immersed with the assessments rather than learning the basics of accounting concepts.

There is a strong need for a student-centered classroom which are focused on knowledge acquisition than assessments. As a bridging strategy, the curriculum can include a pre-requisite module to introduce basic accounting concepts. This will aid in the knowledge accumulation of the struggling Omani students. The teachers are also expected to employ methodologies that will enhance the students' learning and entice effective habits. Formative assessments will play a vital role in this context. There are two ways to form: guided learning and independent learning. Focus on knowledge and skills building activities during the guided learning and utilize the independent learning hours of the students.

This study has various statistical and scope limitations. For this, other student-related factors such as demographic profile, performance in other modules and commitment to learning should also be considered in the future studies. Moreover, the actual module performance of the students can be statistically correlated to their prior knowledge, study habits and learning approach.

References

Ahinful, G., Tauringana, V., Bansah, E.A. & Essuman, D. (2019). Determinants of academic performance of accounting students in Ghanaian secondary and tertiary education institutions, *Accounting Education*, 28:6, 553-581, DOI: 10.1080/09639284.2019.1679204

Alami, M. (2016). Causes of Poor Academic Performance among Omani Students. *International Journal of Social Science Research*. Vol. 4, No. 1. DOI: https://doi.org/10.5296/ijssr.v4i1.8948

Alanzi, K. & Alfraih, M. (2017). Does accumulated knowledge impact academic performance in cost accounting? *Journal of International Education in Business*.10. 10.1108/JIEB-08-2016-0019.

Alanzi, K.A. (2015). Determinants of Students' Performance in Cost Accounting – Further Evidence from Kuwait. *World Journal of Management*. Vol. 6. No. 1. pp. 136 – 152.

Alfan, E. & Othman, M. (2005). Undergraduate students' performance: The case of University of Malaya. *Quality Assurance in Education*. 13. 329-343. 10.1108/09684880510626593.

Ali, I. & Narayan, A. (2019). Self-efficacy and self-regulatory factors as impediments to Pasifika students' success in accounting education. *Pacific Accounting Review*, Vol. 31 No. 3, pp. 394-412. https://doi.org/10.1108/PAR-06-2018-0040

Almajed, A.K. & Hamdan, A. (2015). English Language and Accounting Education. European *Journal of Accounting Auditing and Finance Research*, Vol.3, No. 6, pp.12-25.

Al-Mutairi, A. (2011). Factors Affecting Business Students' Performance in Arab Open University: The Case of Kuwait. *International Journal of Business and Management*. Vol. 6, No. 5.

Al-Sohbani & Muthanna, A. (2013 July). Challenges of Arabic-English Translation: The Need for Re-Systematic Curriculum and Methodology Reforms in Yemen. *Academic Research International*. Vol. 4, No. 4.

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works: 7 research-based principles for smart teaching*. San Francisco, CA: Jossey-Bass.

Andrade, M. S. (2006). International students in English-speaking universities: Adjustment factors. *Journal of Research in International Education*; 5; 131. DOI: 10.1177/1475240906065589

Andrietti, V. (2014). Does lecture attendance affect academic performance? Panel data evidence from an introductory macroeconomic course. *International Review of Economics Education* 15: 1–16. http://dx.doi.org/10.1016/j.iree.2013.10.010

Baird, K. & Munir, R. (2015). The effectiveness of workshop (cooperative learning) based seminars. *Asian Review of Accounting*, Vol. 23 No. 3, pp. 293-312. https://doi.org/10.1108/ARA-03-2014-0038

Ballantine, J.A., Duff, A. & Larres P.M. (2008). Accounting and business students' approaches to learning: A longitudinal study. *Journal of Accounting Education*, 26, 188–201. DOI: 10.1016/j.jaccedu.2009.03.001.

Barac, K., Kirstein, M., Kunz, R. & Beukes, B. (2016). Factors influencing students' learning approaches in auditing. *Meditari Accountancy Research*, Vol. 24 No. 3, pp. 390-413. https://doi.org/10.1108/MEDAR-06-2013-0018

Bean, R.A., Bush, K. R., McKenry, P.C., & Wilson, S.M. (2003). The Impact of parental, support, behavioral control, and psychological control on the academic achievement and self-esteem of African-American and European American adolescents. *Journal of Adolescent Research*, 18(5), 523-541. DOI: 10.1177/0743558403255070

Bein, O., Trzewik, M., & Maril, A. (2019). The role of prior knowledge in incremental associative learning: An empirical and computational approach. *Journal of Memory and Language*, 107, 1–24. https://doi.org/10.1016/j.jml.2019.03.006

Boland, G., Sugahara, S., Opdecam, E. & Everaert, P. (2011). The impact of cultural factors on students' learning style preferences: A global comparison between Japan, Australia and Belgium. *Asian Review of Accounting*, Vol. 19 No. 3, pp. 243-265. https://doi.org/10.1108/13217341111185155

Booth, P., Luckett, P. & Mladenovic, R. (1999) The quality of learning in accounting education: the impact of approaches to learning on academic performance*, Accounting Education*, 8:4, 277-300, DOI: 10.1080/096392899330801

Borges, I.T., dos Santos, A., Abbas, K., Marques, K.C.M. & da Fonseca Tonin, J. M. (2014). *Journal of Education and Research in Accounting REPeC*, Brasília, Ver. 8, No. 4, Art. 5, p. 411- 426.

Bowen, H. (2011*). Spelling it out! Accounting for Spelling Difficulties for Arab Learners of English*.

Bracci, E., Tallaki, M. and Castellini, M. (2019). Learning preferences in accounting education: a focus on the role of visualization. *Meditari Accountancy Research*, https://doi.org/10.1108/MEDAR-02-2018-0286

Bruner, J. (1983). *Child's Talk: Learning to Use Language*. New York: Norton.

Byrne, M. & Flood, B. (2008). Examining the relationships among background variables and academic performance of first year accounting students at an Irish University. *Journal of Accounting Education*, Volume 26, Issue 4, pp. 202-212. https://doi.org/10.1016/j.jaccedu.2009.02.001

Byrne, M., Flood, B. & Griffin, J. (2014). Measuring the Academic Self-Efficacy of First-year Accounting Students, *Accounting Education*, 23:5, 407-423, DOI: 10.1080/09639284.2014.931240

Cekiso, M., Arends, J. & Mkabile, B. (2015). Exploring the Learning Style Preferences Used by Accounting Students in a University of Technology in South Africa. *J Soc Sci*, 43(3): 237-244

Chermahini, S.A. Ghanbari, A. & Talab, M.G. (2013). Learning styles and academic performance of students in English as a second-language class in Iran. *Bulgarian Journal of Science and Education Policy (BJSEP)*, Volume 7, Number 2, 2013.

Chilca, L. (2017). Self-Esteem, Study Habits and Academic Performance Among University Students. *Propósitos y Representaciones*, 5(1), 71-127. DOI: http://dx.doi.org/10.20511/pyr2017.v5n1.145

Davies, C.M.R. & Lee, K. (2012). Self-concept of students in higher education: Are there differences by faculty and gender? *Educational Studies*, 2012, 1 – 12. DOI: 10.1080/03055698.2012.671513

De la Fuente, J., & Cardelle-Elawar, M. (2009). Research on action–emotion style and study habits: Effects of individual differences on learning and academic performance of

undergraduate students. *Learning and Individual Differences*, 19(4), 567–576. https://doi.org/10.1016/j.lindif.2009.07.009

De Villiers, L. & Farrington, S. (2017). *Predicting At-Risk First Year Accounting Students: The Case of Nelson Mandela University*. Southern African Accounting Association Biennial International Conference Proceedings.

Dey, I. (2018). Class attendance and academic performance: A subgroup analysis. *International Review of Economics Education*. Volume 28, May 2018, pp. 29 – 40. https://doi.org/10.1016/j.iree.2018.03.003

Donald, J. & Jackling, B. (2007). Approaches to learning accounting: a cross-cultural study. *Asian Review of Accounting*, Vol. 15 No. 2, pp. 100-121. https://doi.org/10.1108/13217340710823341

Duff, A. & McKinstry, S. (2007). Students' Approaches to Learning. *Issues in Accounting Education*. Vol. 22, No. 2, pp. 183-214. https://doi.org/10.2308/iace.2007.22.2.183

Ballantine, J., Duff, A., & McCourt Larres, P. (2008). Accounting and business students' approaches to learning: A longitudinal study. *Journal of Accounting Education*, 26(4), 188-201. https://doi.org/10.1016/j.jaccedu.2009.03.001

Duff, A., Boyle, E.A., Dunleavy, K.A. & Ferguson, J. (2004). The relationship between personality, approach to learning and academic performance. *Personality and Individual Differences* 36 (8), 2004, pp. 1907 - 1920.

Duve, M. (2016). Non-accounting students' academic performance and introductory financial accounting course: A case of Great Zimbabwe University. *Journal of Business Administration and Education*. Volume 8, Number 2, 2016, 36-62.

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109-132.

Erer, M. & Hazir, C.A. (2017). Student self-efficacy in introduction to accounting: A case study from Turkey. *Journal of International Scientific Publications*, Volume 15, pp. 246 – 253.

Everaert, P., Opdecam, E. & Maussen, S. (2017). The relationship between motivation, learning approaches, academic performance and time spent, *Accounting Education*, 26:1, 78-107, DOI: 10.1080/09639284.2016.1274911

Fakoya, M.B. (2014). Failure Modes and Effects Analysis of Repeating Accounting Students. *Journal of Social Science*, 41(1): 37-43.

Faye, C., & Sharpe, D. (2008). Academic motivation in university: The role of basic psychological needs and identity formation. *Canadian Journal of Behavioural Science*, 40(4), 189–199. https://doi.org/10.1037/a0012858

Gardner, C.T., Milne, M.J., Stringer, C.P. & Whiting, R.H. (2005). Oral and written communication apprehension in accounting students: Curriculum impacts and impacts on academic performance, *Accounting Education*, 14:3, 313-336, DOI: 10.1080/06939280500077269

Gbore, L.O. (2013). Relationship between Cognitive Entry Characteristics and the Academic Performance of University Undergraduates in South West, Nigeria. *Journal of Educational and Social Research*. Vol. 3 (1). DOI: 10.5901/jesr.2013.v3n1p19

Gębka, B. (2014). Psychological determinants of university students' academic performance: An empirical study, *Journal of Further and Higher Education*, 38:6, 813-837, DOI: 10.1080/0309877X.2013.765945

Ghazal, R. T. (2019*). Education in Arab world needs more Arab culture*. Asia Times. Available online at: https://www.asiatimes.com/2019/09/opinion/education-in-arab-world-needs-more-arab-culture/. Date accessed: December 2019.

Gracia, L. & Jenkins, E. (2002). An Exploration of Student Failure on an Undergraduate Accounting Programme of Study. *Accounting Education*, 11:1, 93 – 107. DOI: 10.1080/09639280210153290.

Hendry, G.D., Frommer, M. & Walker, R.A. (1999). Constructivism and Problem-based Learning. *Journal of Further and Higher Education*, 23:3, 369-371, DOI: 10.1080/0309877990230306

Icekson, T., Kaplan, O. & Slobodin, O. (2019). Does optimism predict academic performance? Exploring the moderating roles of conscientiousness and gender, *Studies in Higher Education*, DOI: 10.1080/03075079.2018.1564257

Jameel, S.H., & Hamdan, A. (2015 June). Effects of student's attendance on accounting student's performance. *International Journal of Business and Management Review*, Vol.3, No.5, pp. 79.

Joyce, J., Hassall, T. Arquero-Montano, J. & Donosoanes, J.A. (2006). Communication Apprehension And Maths Anxiety As Barriers To Communication And Numeracy Skills Development In Accounting And Business Education. *Education and Training*, 48 (6), 454-464.

Kaighobadi, M. & Allen, M.T. (2008). Investigating Academic Success Factors for Undergraduate Business Students. *Journal of Innovative Education*, Volume 6, Issue No. 2, Pp. 427-436. DOI: https://doi.org/10.1111/j.1540-4609.2008.00184.x

Kamal P., Ahuja S. (2019) Academic Performance Prediction Using Data Mining Techniques: Identification of Influential Factors Effecting the Academic Performance in Undergrad Professional Course. In: Yadav N., Yadav A., Bansal J., Deep K., Kim J. (eds) Harmony Search and Nature Inspired Optimization Algorithms. *Advances in Intelligent Systems and Computing*, Vol 741. Springer, Singapore

Khadijah AlHaddad S., Mohamed, M. & Musa AlHabshi, S. (2004). An Exploratory Study On English Language Proficiency And Academic Performance In The Context Of Globalization Of Accounting Education", *Journal of Financial Reporting and Accounting*, Vol. 2 No. 1, pp. 55-71. https://doi.org/10.1108/19852510480000661

Khan, F.R. & Al Mamari, A.S.H. (2019). Business major students' perception towards basic accounting courses in higher education institutions of Oman. *International Journal of Management, Innovation & Entrepreneurial Research*, 5(2), 17-28. https://doi.org/10.18510/ijmier.2019.523

King, P.M., & VanHecke, J.R. (2006). Making Connections: Using Skill Theory to Recognize How Students Build and Rebuild Understanding: About Campus Enriching. *The Student Learning Experience*. Volume 11, Issue 1, pp. 10 – 16. DOI: https://doi.org/10.1002/abc.155

Kolb, A.Y. & Kolb, D.A. (2006). *Learning styles and learning spaces: A review of the multidisciplinary application of experiential learning theory in higher education*. In: R.R. Sims & S.J. Sims (eds). Learning Styles and Learning. Nova Science Publishers, Inc. pp. 45 – 91.

Kolb, D.A. (1985). *Learning style inventory*. Boston, MA: McBer & Company.

Fischer, K.W. (1980). *Stages and individual differences in cognitive development*. Psychology Update Series, No. 4.

Lane, A. & Porch, M. (2002). The impact of background factors on the performance of nonspecialist undergraduate students on accounting modules - a longitudinal study: a research note, *Accounting Education*, 11:1, 109-118, DOI: 10.1080/09639280210153308

Loo, R. (2002). A Meta-Analytic Examination of Kolb's Learning Style Preferences Among Business Majors, *Journal of Education for Business*, 77:5, 252-256, DOI: 10.1080/08832320209599673

Marsh, H.W., Xu, K., & Martin, A.J. (2012). *Self-concept: A synergy of theory, method, and application*. In K. Harris., S. Graham., & T. Urdan (Eds). APA Educational Psychology Handbook. Washington, DC: American Psychological Association.

Martínez, I.M., Morgan, C.M.Y., Chambel, M.J. & Pinto, A.M. (2019). Antecedents of academic performance of university students: academic engagement and psychological capital resources, *Educational Psychology*, 39:8, 1047-1067, DOI: 10.1080/01443410.2019.1623382

Maxwell, J.A. (2010). Using Numbers in Qualitative Research. *Qualitative Inquiry*, 16 (6) 475 – 482. DOI: 10.1177/1077800410364740

McLeod, S. A. (2017, Oct 24). *Kolb - learning styles*. Simply Psychology. Available online at: https://www.simplypsychology.org/learning-kolb.html. Date accessed: December 2019.

Mei Tan, L. & Laswad, F. (2015). Academic Performance in Introductory Accounting: Do Learning Styles Matter? *Accounting Education*, 24:5, 383-402, DOI: 10.1080/09639284.2015.1075315

Meixner, W., Bline, D., Lowe, D. and Nouri, H. (2009). An examination of business student perceptions: the effect of math and communication skill apprehension on choice of major. Arnold, V. (Ed.) *Advances in Accounting Behavioral Research*, pp. 185-200. DOI: https://doi.org/10.1108/S1475-1488.

Mintz, S. (2019). *Strategies for improving student success So what is to be done?* Available online at: https://www.insidehighered.com/blogs/higher-ed-gamma/strategies-improving-student-success. Date accessed: December 2019.

Muda, S., Hussin, A.H., Johari, H., Sapari, J.M. & Jamil, N. (2012). *The Key Contributing Factors of Non-Accounting Students' Failure in The Introduction to Financial Accounting Course*. Procedia - Social and Behavioral Sciences, 90, 712 – 719.

Nayebzadeh, S., Aldin, M. M. & Heirany, F. (2011). Educational Performance: The Role of Background Variables. *International Journal of Information and Education Technology*, Vol. 1, No. 5.

Needles, B.E. (2018). *Do learning styles matter in introductory accounting*? A White Paper posted in Engagement and Motivation. Available online at: https://blog.cengage.com/whitepaper/do-learning-styles-matter-in-introductory-accounting/. Date accessed: December 2019.

Novin, A.M. Arjomand, L.H & Jourdan, L. (2003). An Investigation into the Preferred Learning Styles of Accounting, Management, Marketing, and General Business Majors. *Teaching & Learning: The Journal of Natural Inquiry and Reflective Practice*, Volume 18, Number 1, pp. 24-31.

Osborne, J. W., & Jones, B. D. (2011). Identification with academics and motivation to achieve in school: How the structure of the self-influences academic outcomes. *Education Psychology Review*, 23(1), 131–158.

Owusu, G., Bekoe, R., Okyere, S. & Welbeck, E. (2019). What influences the course major decision of accounting and non-accounting students? *Journal of International Education in Business*, Vol. 12 No. 1, pp. 26-42. DOI: https://doi.org/10.1108/JIEB-02-2018-0004

Ozpeynirci, R., Yücenur, M., Duman, H., & Apak, I. (2013). *The Underlying Reasons of Students' Success or Failure in Accounting Lessons, A Suggested Model: The Case of KMU – ASU*. Procedia - Social and Behavioral Sciences, 103, 1181 – 1188.

Paisey, C. & Paisey, N.J. (2004). Student attendance in an accounting module – reasons for non-attendance and the effect on academic performance at a Scottish University. *Accounting Education*, 13:sup1, 39-53, DOI: 10.1080/0963928042000310788

Pereira, L. & Sithole, B.M. (2019). Towards constructivist learning and teaching in Accounting education. *Journal of Emerging Trends in Educational Research and Policy Studies*, Volume 10 Number 1, Feb 2019, p. 1 – 9

Puma-at, R. & Hamed, M. (2016). Study Habits of Business Students Towards Achieving Academic Performance. *International Journal of Liberal Arts and Social Science*, Vol. 4, No. 5.

Rivero-Menendeza, M. J., Urquia-Grandeb, E., Lopez-Sanchez, P. & Camacho-Minanoa, M.M. (2018). Motivation and learning strategies in accounting: Are there differences in English as a medium of instruction (EMI) versus non-EMI students? *Spanish Accounting Review*, 21 (2), 128–139.

Rodriguez, C. M. (2009). The impact of academic self-concept, expectations and the choice of learning strategy on academic achievement: The case of business students. *Higher Education Research & Development*, 28(5), 523–539.

Rogers, C. (1959). *A theory of therapy, personality and interpersonal relationships as developed in the client-centered framework*. In (ed.) S. Koch, Psychology: A study of a science. Vol. 3: Formulations of the person and the social context. New York: McGraw Hill.

Sandman, T.E. (2014). A Preliminary Investigation into the Adaptive Learning Styles of Business Students. *Journal of Innovative Education*. Volume 12, Issue1. Pp 33-54. DOI: https://doi.org/10.1111/dsji.12020.

Schmulian, A. and Coetzee, S. (2011). Class absenteeism: reasons for non-attendance and the effect on academic performance. *Accounting Research Journal*, Vol. 24 No. 2, pp. 178-194. https://doi.org/10.1108/10309611111163718

Sebrina, N., Serly, V. & Taqwa, S. (2018). The determinant factors comprising students' performance in the digital era. A paper presented in the 1st International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2018). *Advances in Economics, Business and Management Research*, 57.

Shafei, A. (2018). The quality of higher education in the Arab region: Which tools of assessment to use. Wiseman, A. and Davidson, P. (Ed.) Cross-nationally Comparative, Evidence-based Educational Policymaking and Reform. *International Perspectives on Education and Society*, Vol. 35, pp. 47-70. https://doi.org/10.1108/S1479-367920180000035003

Shylet Yvonne Chivanga (2016) Qualitative Research Methodology and Numbers, *Journal of Social Sciences*, 47:2, 119-122, DOI: 10.1080/09718923.2016.11893551

Sikkema, S. E., & Sauerwein, J. A. (2015). Exploring culture-specific learning styles in accounting education. *Journal of International Education in Business*, 8, 2, pp. 78 – 91.

Sobat, T. (2003). Observations of constructivist teaching: A comparison of methods used in introductory and advanced instruction. *Transactions of ID* 705, 1, 1-8.

Wilding, J. & Andrews, B. (2006). Life goals, approaches to study and performance in an undergraduate cohort. *British Journal of Educational Psychology*. Volume 76, Issue 1, pp. 171 – 182. DOI: https://doi.org/10.1348/000709904X24726

Williams, B., Brown, T., & Etherington, J. (2013). Learning style preferences of undergraduate pharmacy students. *Currents in Pharmacy Teaching and Learning*, 5, 110-119. DOI: https://doi.org/10.1016/j.cptl.2012.09.003

Xiang, M. and Hinchliffe, S. (2019). Determinants of Students' Repeating the First College-level Accounting Course. Calderon, T. (Ed.). *Advances in Accounting Education*, Vol. 22, pp. 71-88. https://doi.org/10.1108/S1085-462220190000022004

Yousef, D. (2019). Determinants of the academic performance of undergraduate students in statistics bachelor's degree program: A study in an Arabic setting. *Quality Assurance in Education*, Vol. 27 No. 1, pp. 13-23. https://doi.org/10.1108/QAE-12-2016-0087.

Zambrano, J., Kirschner, F., Sweller, J. & Kirschner, P.A. (2019). Effects of prior knowledge on collaborative and individual learning. *Learning and Instruction*. Volume 63, 101214. https://doi.org/10.1016/j.learninstruc.2019.05.011