

# EVALUATING THE ATTITUDES OF REAL ESTATE STUDENTS TOWARD PROPERTY VALUATION

Augustina Chiwuzie<sup>1\*</sup>, Dabara Ibrahim Daniel<sup>2</sup>, Lukuman, Musibau<sup>3</sup>, Olusegun Joseph Omotehinshe<sup>4</sup>, Edith Mbagwu Prince<sup>5</sup>

*1,3,5 Department of Estate Management and Valuation, The Federal Polytechnic Ede, Nigeria*

*2 Faculty of Technology, Design and Environment, Oxford Brookes University, Oxford, United Kingdom*

*4Department of Building Technology, The Federal Polytechnic Ede, Nigeria.*

*\*okaugusta@yahoo.com; chiwuzie.augustina@federalpolyede.edu.ng (corresponding author)*

## Abstract

Property valuation is a capstone course for real estate professionals and an essential component of core knowledge in real estate education. The prominence of real estate in the investment market and information asymmetries have created a demand for property valuation all around the world. However, anecdotal evidence suggests that real estate students rarely have positive attitudes toward property valuation. This condition can hinder understanding the contents and acquiring the requisite valuation skills as attitudes are critical for learning. It has been contended that developing positive attitudes should be the desired course goal. This study employs quantitative research designs to evaluate the attitudes of real estate students toward property valuation to determine whether the desired goal has been achieved. A self-administered questionnaire containing a modified SATS-36 attitudes assessment scale was distributed to all 87 Higher National Diploma (HND) I students after the first semester's valuation course. The findings suggested that the sampled students' attitudes toward property valuation were not negative. The students recognise the importance of property valuation for their careers, are ready to put up the effort to understand and acquire valuation skills, and believe they can learn property valuation. This study recommends that the pilot instrument used in this study be expanded to other polytechnics, universities, and nations in order to gather general data that may be used to guide the development of positive attitudes.

**Keywords:** Achievement, Developing positive attitudes, Real estate valuation, teaching and learning.

# 1.0. Introduction

Property valuation is becoming increasingly important in the world's public and private sectors. Real estate has become an essential vehicle in the investment market, and the demand for property valuation has increased in various countries (Xiaoa and Chanb, 2016). The key characteristics of the real estate market have evolved significantly with an increase in the number of local and foreign institutional real estate investors. Due to the complexity of the real estate markets, their increasing interdependence with the capital markets and changes in legal requirements, property valuers must possess a broad range of professional skills, including technical, organisational, analytical, and leadership abilities (Zrobek and Grzesik, 2019).

Property valuation is a capstone course for real estate professionals and an essential component of core knowledge in real estate education. Zrobek and Grzesik (2019) noted that the main challenge for valuation professionals is to develop their analytical skills and market understanding in order to provide acceptable valuations. Therefore, real estate students will need to be adequately trained and equipped with the requisite valuation knowledge and skills to prepare them better for the market and industry needs. Valuation is a fundamental course in the Estate Management curriculum of Nigerian universities and polytechnics. However, it appears that the study of property valuation has been biased over time (Peter et al., 2016), posing significant challenges for many students. According to Peter et al. (2016), valuation has a higher failure rate than other estate management courses since it is difficult for many students. Property valuation may be perceived as difficult due to mathematical approaches. Many social science students are taught to have a weak mathematical foundation; therefore, they dislike and struggle with courses in quantitative methods.

Several factors, including students' attitudes toward the discipline, influence their learning and academic achievement (Mazana et al., 2019). It has been contended that students' attitudes may impact their academic achievement and that lecturers should consider promoting positive attitudes about the subject as a course aim (Cladera, 2021). Scholars believe that students who leave a course with a positive attitude about learning the content are more likely to use the skills and strategies they gained outside the classroom (Garfield et al., 2002). As a result, attitude is an essential factor that should not be disregarded, particularly in real estate education.

Anecdotal evidence suggests that real estate students rarely have positive attitudes toward

property valuation. This condition can hinder understanding the contents and acquiring the requisite valuation skills since attitudes are critical in the educational process. When students' performances are typically poor, understanding their attitudes about the subject is critical to assist and encourage them in gaining interest. In this case, using an instrument to analyse students' attitudes toward the discipline became critical for lecturers to see if the objective of developing positive attitudes in their students was met (Cladera, 2021). This research employs a modified SATS-36 attitude survey instrument to evaluate the attitudes of the real estate students toward property valuation after taking the first semester valuation course. This is to determine whether the objective of developing positive attitudes in the students has been achieved. Specifically, this study analyses the academic and demographic characteristics of the real estate students, the students' attitude toward property valuation, the difference in attitude toward valuation by students' academic and demographic characteristics, and the relationship between students' attitudes toward property valuation and their final course achievement. No such study has ever been attempted. This study demonstrates how instructors may utilise a questionnaire to evaluate whether the desired goal has been achieved in their course by measuring real estate students' attitudes toward property valuation.

## 2.0. Background Literature

### 2.1. Attitude and Learning Outcome

Attitude is the learned proclivity of an individual to react favourably or unfavourably to an item, event, concept, or other people (Sarma and Puri, 2014). According to Hommik and Luik (2017), the nature of attitudes may be classified into three categories: cognitive, affective, and behavioural. The cognitive component deals with the knowledge, belief, opinion, and information that someone possesses regarding their attitudes; the affective is related to likes/dislikes or expectations, and the behavioural component outlines the expectations for behaviour in the future. In academics, positive attitudes are fundamental in the learning process. They can contribute to students' academic achievement while a negative attitude can commonly obstruct effective learning (Fullerton and Umphrey, 2001) and consequently affects the learning outcome, henceforth performance (Mensah et al., 2013; Joseph, 2013). With time, attitudes can develop and evolve (Syyeda, 2016); once a positive attitude is developed, it can enhance students' learning (Akinsola and Olowojaiye, 2008; Mutai, 2011). Students must believe in their abilities to understand the subject in order to do well in the course and be prepared to apply the ideas afterwards (Emmioglu and Capa-Aydin, 2012).

Previous research has revealed how important it is to understand attitudes in order to understand student achievement in general. The most dependable predictor of a student's performance is their perceived capabilities and success expectations (Wigfield and Eccles, 2000).

According to the literature on educational research, students' attitudes toward a field are crucial course outcomes, at least as crucial as knowledge and skills (Schau and Emioglu, 2012). The teaching strategies used by instructors should focus on developing students' positive attitudes about the discipline and their knowledge and skill growth so that they can adequately apply what they have learned (Cladera, 2021). Because negative student attitudes have been found to negatively influence the learning process (Schau and Emmioglu, 2012), it is vital to analyse instructional activities and techniques to make students "more comfortable" learning valuation. The initial step in this direction would be to develop methods to determine the students' attitudes toward property valuation. This study uses a measurement scale to assess students' attitudes to property valuation. When an instructor conducts an attitude assessment of his or her students, the instructor's efforts and instructional method will be focused on improving those aspects of the attitudes that the students have scored negatively (Cladera, 2021).

## **2.2. Attitude Survey Instruments**

Various attitude survey instruments that employ Likert-type<sup>1</sup> responses to statements have been developed to assess students' attitudes. The Statistics Attitude Survey (SAS) (Roberts and Bilderback, 1980) and the Attitudes Toward Statistics (ATS) survey (Wise, 1985) are the first recordings of studies that used the Attitude Survey instrument to study attitudes as an indicator of student achievement in statistics. These two instruments are among the most often used in statistical attitude research; however, the validity of the contents has been called into doubt (Ramirez et al., 2012), and their popularity has fallen.

According to Ramirez et al. (2012), SAS was criticised for being too one-dimensional because it only uses a single global attitude score. On the other hand, ATS was questioned for using only two attitude components, including "Field" (students' attitudes toward the use of statistics in their field of study) and "Course" (students' attitudes toward the course in which they were enrolled). Due to the limitations of these instruments, two more commonly used tools evolved in the years that followed: the Survey of Attitudes Toward Statistics SATS-28 (Schau et al., 1995) and the expanded SATS-36 (Schau, 2003). The SATS-36 consists of 6 attitude

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<sup>1</sup> A Likert-type scale "requires an individual to respond to a series of statements by indicating whether he or she strongly agrees (SA), agrees (A), is undecided (U), disagrees (D), or strongly disagrees (SD). Each response is assigned a point value, and an individual's score is determined by adding the point values of all of the statements" (Gay, Mills, and Airasian, 2009, 150- 151).

components (Affect, Cognitive competence, Value, Difficulty, Interest and Effort) made up of 36 questions with responses on a 7-point scale (the endpoints being strongly disagreed and strongly agreed). Details of the SATS -36 scale are provided in the methodology section. Several studies have thoroughly investigated the SATS's reliability and validity (e.g., Griffith et al., 2012; Pearl et al., 2012; Vanhoof et al., 2011; Chiesi and Primi, 2010). According to Nolan et al. (2012), SATS-36 appears to have the most substantial evidence of construct validity and internal consistency. However, studies such as Coetzee and Van Der Merwe (2010) and Hilton et al. (2004) reported that the Difficulty component of the SATS often presents questionable reliability.

Although the SATS-36 survey was initially developed to examine students' attitudes toward statistics, Cladera et al. (2019) and Posner (2011) noted that the SATS-36 scale had been modified and applied in various educational contexts, interventions and teaching methods. This attitude survey instrument is mainly applied at the beginning and end of a specific course to assess the instruction's effectiveness (Posner, 2011; Gundlach et al., 2015). Researchers have used the SATS instruments for attitude studies in statistics (Male and Lumbantoruan, 2021; Hommik and Luik, 2017; Stanisavljevic et al., 2014; Khavenson et al., 2012; Ashaari et al., 2011; Chiesi and Primi, 2009). The SATS instrument has also been modified and applied in Mathematics (Mazana et al., 2019; Parnis and Petocz, 2016) and Econometrics (Cladera, 2021). Findings from these studies suggest that questionnaire has good reliability. In addition, students' attitudes to the subject under consideration were found to be slightly higher than the value that indicates indifference towards the subject, at least in some attitudinal components. Usually, the component related to the difficulty of the discipline is the one with the lowest assessment.

Furthermore, studies including Cladera et al. (2019), Rejon-Guardia et al. (2019), Stanisavljevic et al. (2014), Emmioglu and Capa-Aydin (2012) and Parnis and Petocz (2016) reported that students' attitudes toward a subject are related to students' gender, age, expected grade and achievement. Other studies also suggested that attitude influences expectations (Hood et al., 2012) and achievement (Mills, 2004). Cladera (2021) emphasised the importance of examining attitudes differences based on student characteristics, suggesting that this information may be utilised to identify students who are more likely to have negative attitudes and, as a result, will have more difficulty learning the content.

When studying differences in attitudes based on student characteristics, previous studies reported diverse outcomes for the six attitudes components. For example, Hommik and Luik

(2017) identified gender differences in four attitudinal components: male students had higher mean scores than female students on the Competence, Value, and Interest components, whereas female students had significantly higher scores on the Effort component. Hannigan et al. (2014) previously discovered that, while there were no significant gender differences for any of the six components, female students tended to score lower on all components except Effort. Cladera (2021) revealed significant differences in men and women for Difficulty and Effort, noting that women demonstrated a more positive attitude than males regarding Effort and Difficulty. Significant variations in specific attitudinal components have also been discovered for other student factors, such as expected grade, prior interest in the subject, past success, and achievement (see Cladera, 2021, Hemmings and Kay, 2010).

The literature has emphasised the importance of attitudes to students' effective learning. There are currently no studies in the real estate field that evaluate students' perspectives on property valuation and no specialised tools for assessing students' attitudes toward this subject. The teaching of property valuation can face the same challenges as teaching statistics, mathematics, and econometrics. The SATS-36 is adapted in this study to assess real estate student attitudes to property valuation to provide an instrument to measure students' attitudes within the real estate educational context. The purpose is to offer a tool that instructors can use to assess their course outcomes. At the end of the course, valuation instructors can examine students' attitudes about the course to assess if the aim of instilling positive attitudes in students was met. If the data demonstrate that students' attitudes about valuation are not positive, the course's content and methods must be changed to support the emergence of positive attitudes.

### **3.0. Methodology**

This study is based on the SATS attitudes assessment scale. This scale is a primary instrument that lecturers may use to assess whether the course's purpose of cultivating positive attitudes among students was met. This study used a modified version of the SATS-36 attitudes measurement scale to assess how real estate students feel about valuation at the end of the first property valuation course. The target population for this study is all the 87 Higher National Diploma (HND) Estate management students at the Federal Polytechnic Ede Nigeria. These are undergraduate students who enrolled and finished their first semester's property valuation course in 2019. A survey was conducted at the end the valuation course. The students were asked to participate voluntarily and were also informed about the survey's goals and that the procedure would be completely confidential. At the end, all the 87

questionnaires were completed and returned. The scope of the research is to assess real estate students' attitude toward property valuation, analyse the differences in the attitudinal components by students' demographic and academic characteristics, and explore the relationship between students' attitudes to property valuation and academic performance.

A self-administered questionnaire comprising a modified SATS attitudes assessment scale, students' academic and demographic characteristics was developed. The SATS's traditional purpose is to assess students' attitudes toward statistics. The item writing was somewhat modified to assess students' attitudes toward valuation. For example, the first item ("I am scared by statistics" of the original scale was changed to "I am scared by property valuation"). Six attitude components and 36 items were utilised to assess Affect, Cognitive Competence, Value, Difficulty, Interest, and Effort (see Table I). These items were evaluated using a seven-point Likert scale ranging from 1 (Do not agree at all) to 7 (Totally agree) in line with the recommendation in Schau (2003). Following that, data on the students' performance after the valuation course was obtained and analysed. The performance measure was determined by taking average grades on a scale of 1 to 10 for all course tests, assignments, and examinations. The SATS-36 was chosen for this study because of its validity and reliability. In Parnis and Petocz (2016), a modified version of the SATS was used to assess attitudes toward mathematics, and the authors claim that attitudes and academic outcomes are correlated. SATS has been subjected to extensive statistical analysis, establishing the questionnaire's overall validity in different countries and with students from various backgrounds (Parnis and Petocz, 2016). Besides, studies in statistics, where there is a considerable body of research on students' attitudes, have revealed that past learning experiences and the relationship between the subject and mathematics impact attitudes (Anastasiadou, 2005; Schau, 2003). The challenge for statistics lecturers is to illustrate how statistics is entrenched in a context and how it needs a certain mode of thinking in which the data are not simply numbers but are numbers engaged in a context (Cobb and Moore, 1997). This might also apply to property valuation. Many students identify valuation courses with previous Mathematics and Statistics courses when they are initially introduced to them. As a result, many see it with apprehension and as a difficult course.

The data collected was analysed in line with the guideline provided in Schau (2003) and previous studies that used SATS as a tool to assess students' attitudes following the completion of a specific course (e.g., Cladera, 2021; Khavenson et al., 2012; Ashaari et al., 2011). First, all negatively expressed items were reversed so that all items may be interpreted the same way: the higher the item score, the better the student's attitude towards the item.

Second, the mean score for the individual item and each of the six components was determined and analysed. Based on the 7-point Likert scale used for this study, a mean score of 4 indicates a neutral attitude toward the item or component under consideration. Positive attitudes are represented by components and items with mean scores significantly greater than 4, whereas negative attitudes are represented by components and items with mean scores significantly lower than 4. Third, a reliability assessment using Cronbach's alpha was conducted for the total scale and each attitudinal component. It is helpful to evaluate the reliability of a measuring scale in order to demonstrate that it works in a new setting (Conroy, 2018). Fourth, using the t-test and ANOVA, differences in the mean scores of the attitudinal components by demographic and academic characteristics of the students were investigated. Finally, the relationship between students' attitudes to property valuation and academic performance was examined.

**Table 1 Description of SATS-36 Attitude Components**

Components	Number of items	Designed to Measure
Affect	6	Students' feelings concerning statistics
Cognitive Competence	6	Students' attitudes about their intellectual knowledge and skills when applied to statistics.
Value	9	Students' attitudes about the usefulness, relevance, and worth of statistics in personal and professional life
Difficulty	7	Students' attitudes about the difficulty of statistics as a subject
Interest	4	Students' level of individual interest in statistics
Effort	4	Amount of work the student expends to learn statistics

(Schau, 2003).

## 4.0. Results and Discussion

This section discusses the findings on real estate students' attitudes toward property valuation, organised by the research objectives. The first subsection presents the academic and demographic characteristics of real estate students. The result of the analysis of students' attitudes to property valuation followed. Next, the differences in attitudes toward valuation by students' academic and demographic characteristics were examined. Finally, the relationship between students' attitudes to property valuation and their final course performance was assessed.



#### 4.1. Characteristics of the Real estate students

Most of the students were men, 69.00 per cent. A total of 48.3 per cent ranked their earlier interest in valuation as high or very high and 43.7 per cent as medium. Regarding the expected grade on the course, 67.8 per cent of the students expect grades (out of ten) between five and seven, and 15.0 per cent expects higher than seven.

**Table 2: Characteristics of the Respondents**

Variables	Percentage (n=87)
<b>Gender</b>	
Male	69.0
Female	31.0
<b>Earlier interest</b>	
Small	8.0
Normal	43.7
High	37.9
Very high	10.4
<b>Expected grade</b>	
Lower than 5	17.2
Between 5 and 7	67.8
Higher than 7	15.0

#### 4.2. Attitudes of real estate students towards property valuation

Property valuation is an important subject in real estate education. The exposed perspective is that instructors should value the development of positive attitudes toward their courses as much as the acquisition of skills and knowledge. As a result, determining whether or not this goal has been met at the conclusion of the course is crucial. It is proposed that an attitude measurement scale be used for this purpose. The SATS is adapted in this work since there is no specialised scale for measuring attitudes toward property valuation. Earlier research that adapted and utilised the SATS instrument in in statistics and other subjects such as Mathematics (Mazana et al., 2019; Parnis and Petocz, 2016) and Econometrics (Cladera, 2021) demonstrated that the scale had high reliability. Property valuation as a quantitative approach might confront the same challenges as statistics, mathematics, and econometrics, where students frequently see quantitative methods as difficult, "unpleasant," and complicated. Table 3 presents the mean scores for the SATS individual items and components, the standard deviation and the Cronbach's alpha (which shows the reliability of the measurement scale). The mean score indicates the attitude level; the higher the mean score,

the more positive the attitude.

**Table 3 Mean scores of adapted SATS-36© items and components, the standard deviation of the components, Cronbach's alpha of the total scale and components**

	Mean score	SD	Cronbach's alpha
<b>Affect</b>	<b>4.19</b>	<b>1.04</b>	<b>0.761</b>
I have liked valuation	4.48		
<sup>R</sup> I still feel insecure when I have to do valuation exercises	3.51		
<sup>R</sup> I have felt frustrated going over valuation tests in class	4.06		
<sup>R</sup> I have been under stress during valuation classes	3.77		
I have enjoyed taking valuation courses	3.63		
<sup>R</sup> I am scared by valuation	5.66		
<b>Cognitive Competence</b>	<b>4.64***</b>	<b>1.14</b>	<b>0.782</b>
<sup>R</sup> I have had trouble understanding valuation because of how I think	5.16		
<sup>R</sup> I have no idea of what's going on in this valuation course	5.68		
<sup>R</sup> I have made a lot of math errors in valuation	4.54		
I could learn valuation	4.50		
I will understand valuation equations	4.34		
<sup>R</sup> I have found it difficult to understand valuation concepts	3.59		
<b>Value</b>	<b>4.65***</b>	<b>0.97</b>	<b>0.772</b>
<sup>R</sup> Valuation is worthless	5.88		
Valuation should be a required part of my professional training	5.60		
Valuation skills will make me more employable	3.76		
<sup>R</sup> Valuation is not useful to the typical professional	5.62		
<sup>R</sup> Valuation thinking is not applicable in my life outside my job	4.66		
I use valuation in my everyday life	1.98		
<sup>R</sup> Valuation knowledge is rarely presented in everyday life	4.23		
<sup>R</sup> I will have no application for valuation in my profession	4.93		
<sup>R</sup> Valuation is irrelevant in my life	4.47		
<b>Difficulty</b>	<b>3.68</b>	<b>1.47</b>	<b>0.620</b>
Valuation formulas are easy to understand	3.56		
<sup>R</sup> Valuation is a complicated subject	3.42		
Valuation is a subject quickly learned by most people	2.22		
<sup>R</sup> Learning valuation requires a great deal of discipline	3.34		
<sup>R</sup> Valuation involves massive computations	4.67		
<sup>R</sup> Valuation is highly technical	3.71		
<sup>R</sup> Most people have to learn a new way of thinking to do valuation	4.82		
<b>Interest</b>	<b>4.12</b>	<b>1.23</b>	<b>0.754</b>
I am interested in being able to communicate valuation information to others	4.05		
I am interested in using valuation	3.76		
I am interested in understanding valuation information	4.24		
I am interested in learning more valuation	4.43		
<b>Effort</b>	<b>5.70***</b>	<b>1.32</b>	<b>0.824</b>
I have done all my valuation assignments test	6.13		
I have worked hard in my valuation course	5.34		
I have studied hard for every valuation	5.59		
I have attended every valuation class session	5.74		
<b>Total</b>			<b>0.863</b>

<sup>R</sup> Reversed item.

\*\*\* Significantly different from 4 at 1% significance level.

Looking at the values of the mean score in Table 3, most of the individual items obtained a mean score above 4, indicating a positive attitude from the students. Table 3 also shows the average mean score for the attitudinal components. Cognitive competence, Value and Effort have positive mean scores (at least 4.64), which is significantly higher than 4. The mean scores of the Affect (4.19) and Interest (4.12) are neutral, while the Difficulty component obtained a negative mean score (3.68). These results suggest that students acknowledge the value of valuation for their professions, are willing to put in the effort required to acquire and improve their valuation skills and feel capable of learning property valuation. The students do, however, feel that valuation is a difficult course to take. The students do not particularly enjoy or show much interest in valuation but do not particularly despise it. These findings indicate that the surveyed students' attitudes toward valuation are not negative. Except for the difficulty component, all components score neutral or marginally positive ratings. As observed in Cladera (2021), the component relating to the difficulty of the discipline typically receives the lowest rating. Although no research on students' attitudes to valuation has been conducted, these findings are consistent with those of earlier studies on students' attitudes toward statistics (Cladera et al., 2019; Stanisavljevic et al., 2014; Ashaari et al., 2011).

Furthermore, as suggested in Conroy (2018), the internal consistency for each component score of the SATS scale was calculated to determine its reliability. The results of the Cronbach's alpha, as seen in Table 3, indicates that the entire scale's reliability (0.863) is good. This result is consistent with earlier studies that applied the modified SATS instruments in Mathematics (Mazana et al., 2019; Parnis and Petocz, 2016) and Econometrics (Cladera, 2021). In terms of each of the components, the reliability of Affect, Cognitive Competence, Value, and Effort are acceptable, while Difficulty is questionable. This conclusion is consistent with findings in other studies; nevertheless, the reliability of the difficulty component is typically the lowest, generating values that are in dispute (Cahyawati et al., 2018; Coetzee and Van Der Merwe, 2010; Hilton et al., 2004).

#### **4.3. Differences in attitudes towards Property valuation by students' characteristics**

In this subsection, the differences in students' attitudes about valuation were examined by their academic and demographic characteristics. A test of normality using the Kolmogorov-Smirnov test indicates that the scores for all attitudinal components have a normal distribution. Consequently, t-test and ANOVA were employed to test if there were differences in the mean scores of the attitudinal components based on the students' characteristics. Table

4 presents the mean scores of the attitudinal components by the student's characteristics.

**Table 4 Mean scores for the attitudinal components by students' characteristics.**

	Affect	Cognitive Competence	Value	Difficulty	Interest	Effort
<b>Gender</b>				**		***
Male	4.11	4.61	4.32	3.69	4.08	5.23
Female	4.40	4.92	4.87	3.97	4.24	6.02
<b>Earlier interest</b>			***			
Small	4.20	4.48	3.66	3.01	4.04	5.68
Normal	4.63	4.72	4.42	3.92	4.10	5.42
High	4.32	4.42	4.79	3.48	4.17	5.78
Very high	4.99	4.33	4.99	3.88	4.98	5.99
<b>Expected grade</b>	***	***		***		
Lower than 5	3.03	3.96	4.22	3.39	3.98	5.64
Between 5 and 7	3.94	4.52	4.65	3.62	4.31	5.44
Between 7 and 9	4.25	5.86	4.37	4.31	4.63	6.10

\*\*\* significantly different at 1% significance level.

\*\* significantly different at 5% significance level

The results in Table 4 indicate that men and women differ significantly regarding Difficulty and Effort components. Women show more positive attitudes about these components than men. Previous studies (Rejon-Guardia et al., 2019; Cladera et al., 2018; Homlik and Luik, 2017; Hannigan et al., 2014; Stanisavljevic et al., 2014) documented that the female gender is more positive when it comes to Difficulty and Effort. Regarding the students' earlier interest in valuation, significant differences exist in Value. The mean score for the value attitudinal component rises as students' interest in valuation grows. Based on the grade the student expected to get in the course, there are significant differences in the mean scores of Affect, Cognitive Competence, and Difficulty. The higher the expected grade, the more positively these components portray students' attitudes. Hood et al. (2012) earlier confirmed that attitude influences expectations. Students with a more positive attitude toward a course tend to have higher expectations for themselves and better achievement in the classroom.

#### **4.4. Relationship between students' attitudes and achievement in Property valuation**

This study also investigated the relationship between students' attitudes to property valuation and their final course performance by measuring their correlations. The performance measure was computed using the average grade earned on all the course

assignments, tests and examinations on a scale of 1 to 10. Table 5 presents the correlation coefficients between attitudinal components and students' performance in the property valuation.

**Table 5 Correlations between the attitudinal components and students' performance.**

<b>Dimensions of students' attitudes</b>	<b>Performance</b>
Cognitive Competence	0.634**
Affect	0.603**
Value	0.562**
Difficulty	0.454**
Interest	0.423**
Effort	0.197

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