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STUDENTS' PERSPECTIVES ON SATISFACTION WITH DISTANCE EDUCATION IN GHANA: A CLUSTER ANALYSIS

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STUDENTS' PERSPECTIVES ON SATISFACTION WITH DISTANCE EDUCATION IN GHANA: A CLUSTER ANALYSIS

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Abstract

Purpose: The study sought to categorise students based on the preferences that influence their choice of distance education in Ghana.

Methodology: Questionnaires were used to collect data from 120 students taking part in the UEW distance education programme at the Kumasi Girls SHS Study Center. Respondents were segmented into three clusters (highly, moderately, and least satisfied) based on four preferences (price, quality, packaging, and social boding) that influenced their satisfaction with the distance education programme.

Result: Findings from both hierarchical and non-hierarchical cluster analysis with squared Euclidean distance and Ward's method showed that the highly satisfied cluster was driven by quality of service and the fees (i.e. price) of the UEW distance education programme. A further analysis of the differences between the clusters indicated that satisfaction with the UEW distance programme significantly differs across the three segments.

Unique Contribution to theory and practice: UEW must take advantage of the significant impact of service quality and price factors on customer satisfaction that runs through all the segments to develop and implement strategic decisions in order to achieve a competitive advantage in the distance education market

Keywords: Distance education, price, quality, packaging, social bonding, Ghana



INTRODUCTION

The Report of the President's Committee on Review of Education Reforms in Ghana (2002) mandated Universities to embark on educational reforms at all levels to make education respond to our national developmental needs and skills training to the highest level for the development of all sectors of the economy and also contribute to the development of the industrial and technological base of the economy. There have been a lot of studies conducted in the area of distance education. A study by Manu and Agyapong (2014) on the prospects of providing distance education programmes for professional teachers in Ghana support the view that distance education is an alternative to conventional education as it enables most professional teachers to be able to combine their professional duties or work and studies through planning of their time. Distance education is an effective way to provide university education Statistics Agency (2000) in the United Kingdom revealed that the university with the highest number of students pursuing different academic programmes is a distance education university and that distance education has gained popularity all around the world in the last decade. This presupposes that distance education in invaluable in our educational system in Ghana.

Sujatha (2002) posits that distance education enables the over-aged, rejected reluctant or interested to enrol and learn. This means that distance education consists of cluster of students with difference characteristics which calls for different marketing strategies to attract different group of students. Therefore, the purpose of the study was to identify cluster of students with difference swhich could influence their satisfaction of distance education.

Based on the above discussion, the present study sought to achieve three main research objectives:

- 1. To segment/cluster students taking part in UEW distance education programme based in their satisfaction with the programme
- 2. Validate the segments identified in objective 1
- 3. To find out whether the factors that influence students' satisfaction with UEW distance education programme differ across clusters



LITERATURE REVIEW

The concept of distance education

Perraton (1988:43) defines distance education 'as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner'. Keegan (1996) goes further to identify the key characteristics of distance education. According to him, distance education is a form of education characterised by:

- the quasi-permanent separation of teacher and learner throughout the length of the learning process (this distinguishes it from conventional face-to-face education);
- the influence of an educational organization both in the planning and preparation of learning materials and the provision of student support services (this distinguishes it from private study and teach yourself programmes);
- the use of technical media-print, audio, video or computer to unite teacher and learner and carry the content of the course;
- the provision of two-way communication so that the student may benefit from or even initiate dialogue (this distinguishes it from other uses of technology in education); and
- the quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals rather than in groups, with the possibility of occasional meetings, either face-to-face or by electronic means, for both didactic and socialization purposes (Keegan, 1996:50).

In both the developed and developing countries, distance education has been used to increase access to education for a large number of people who would otherwise not have had the opportunity to benefit from formal education (Perraton, 1988, 2004). This expansion has been made possible through such media as print, radio or television (Perraton, 1998). The attractiveness of distance education lies in its ability to replace or supplement the conventional teaching methods (Stewart, 1988). The increased popularity of distance education methodologies has been the result of the need for continuing learning as well as the 'unprecedented innovation in communications' (Garrison, 2000:1).



Students' perception of courses

Student perception of the value of their courses and educational experience is inextricably connected to persistence, retention, and student success, amongst other outcomes (Kuo et al., 2013). High satisfaction, in turn, "leads to lower attrition rates, higher persistence in learning, and higher motivation" (Kuo et al., 2013).

In their studies of student perceptions, both de Lourdes Machado et al. (2011) and Gibbons (2012) found that academic aspects of university life were strongly associated with student satisfaction. For instance, in de Lourdes Machado et al.'s study, the importance of teaching quality, interactions with faculty both in and out of class, knowledge assessment, and quality of academic advising is stressed as being key to improving student satisfaction. Gibbons (2012) again found that satisfaction is strongly related to students' reaction to faculty in the classroom and that one of the most repeated statements made by students concerning their satisfaction was the importance of faculty who came to class well prepared.

Market segmentation

Numerous marketing gurus have looked at the term market segmentation and given different definitions. Salami and Adewoye (2006) believe that when market segmentation is well undertaken, the end result is the maximisation of returns on marketing expenditure. According to Kotler (2004) market segments can be identified by classifying customers demographically and that market segmentation consists of a group of customers who share a similar set of wants. Kotler (2002) states that a market segment has present or potential customers with common features appropriate in explaining customer's response to suppliers' market stimuli. Kotler and Keller (2005) emphasised market segment as a subgroup of people or organizations sharing one or more characteristics that cause them to have similar product and/or service needs. Doyle (2004) viewed market segmentation, pricing and other variables of marketing mixes. Pickton and Broderick (2005) point out that segmentation and targeting are critical in the marketplace allows the market ro plan, develop and deliver a product or service that satisfies the needs and wants of the target market. Kotler (2004) looked at two factors when evaluating the market segment. These



factors are the firm must the segments overall attractiveness and the company's objectives and resources. Wood (2007) concludes that market segmentation is the process of grouping customers within a market according to similar needs, habits, or attitudes that can be addressed through marketing. Therefore, dividing a market into distinct groups of buyers who have distinct needs, characteristics, or behaviour and who might require separate products or marketing mixes (Armstrong and Kotler, 2005). That is by dividing the market, factors such as psychographic, demographic, geographic, psychological and behavioural will enable the marketers to have a better understanding of the dynamics of the target market to help improve marketing effectiveness (Gunter and Furnham, 1992).

Factors influencing the patronage of product/service

• Price

According to Hinterhuber (2008) pricing strategies differ in diverse ways across industries, countries and customers. Price is the amount a customer is asked to pay for a product or the total of the values that consumers exchange for the benefits of having or using a product or service (Bearden et al 2004). Therefore, price means different things to different customers and price charge for different products or services has different names. It is a fare to the transport sector, toll to the driving of car, rent to the tenants, bill to the water and electricity, retainer to the lawyers and commission to the salesperson etc. (Kotler et al., 2006). According to Rondan (2004) many studies have shown that price is an important factor in purchase decision, especially for frequently purchased products, affecting choices for store, product and brand. Agwu and Carter (2014) echo that price is the only income producer and it is the value attached to a product among the four 'Ps' and that price is considered to be the most significant factor that affects consumer's choice of goods and services (Kotler, Armstrong, Saunders, & Wong, 2002). Al Khattab and Aldehayyat (2011) argue that pricing is an indicator of luxury and that a higher price is an indicator of separating luxury hotels from non-luxury ones. Dolnicar (2002) believes that a higher price leads to the expectation of good service, a good location, pleasant atmosphere, large rooms and comfort in general, as well as the availability of the Internet in the hotel. Kotler (2009) mentions that customer sees a higher price as an indicator quality of good or service. Kotler and Keller (2009)



again state that many customers use price to make judgments about products and services quality. Wang (2006) postulates that customers want good quality products or services with reasonable prices which is easily affordable and available at the marketplace. Oliver (1997) believes that customers perceive price and quality of product and service to match and when price does not match quality of products or services, customers will experience dissonance. Peng and Wang (2006) point to the fact that customers want good quality products or services with reasonable prices which is easily affordable and this indicates that customers look for quality products or services or services with reasonable prices which is easily affordable and this indicates that customers look for quality products or services with reasonable price. Agyapong, Acheampong and Kwakye (2015) found in their study that brand name, brand image, flexible payment terms, location and worldwide acceptance of certificate by students are the factors that influence students' decision in choosing a university for distance education.

• Product/ Service quality

According to Bitner et al., (1990) service quality is a predictor of customer satisfaction and Parasuraman et al., (1985) posit that service quality is the degree of difference between the customers' expectations for service and their actual perceptions of performance. Therefore, highly satisfied customers signify that the customer's actual performance is greater than their expectations (William, 2002). Kotler, Bowen and Makens (1996) acknowledged that there are several views of quality and is based on product features, freedom from deficiencies and categories. Agyapong, Acheampong and Kwakye (2015) believe that organizations have many images, but not just one, therefore, the university should use it image as an influential indicator of perceived service quality to its advantage in delivering distance education to influence customer expectations of the service. Wu and Liang (2009) also maintained that for customers to be satisfied with a high quality of service, there should be pleasant atmosphere and an entertaining experience at the place where the service is delivered. Berry, Parasuraman and Zeithaml (1991) service quality has become a significant differentiator and is the most powerful competitive weapon for organizations. According to Heskett et al., (1994) service quality drives customer satisfaction, which creates customer loyalty leading to growth.



• Packaging

According to Hill (2005) when individual preferences become complex and diverse, packaging is the major product branding strategy. Underwood (2003) echoes that package design with product images attract consumers' attention for brand. Rundh (2005) package attracts consumer's attention to particular brands, enhances image, and influences consumer's perceptions about a particular product. Packaging is also important in the marketing environment (louw, 2006) and that the packaging form is one way to gain consumer notice in terms of goods and services (Berkowtiz, 1987). According to Wells, Farley and Armstrong (2007) packaging works as an instrument for differentiation, and a means to make consumers decide the product from wide range of parallel products. Adelina and Morgan (2007) believe that packaging is one of the most valuable tools in today's marketing communications and that packaging has an important impact on consumers buying behavior. Saeed, Lodhi, Mukhtar, Hussain, Mahmood and Ahmad (2011) emphasis that organisations should integrate the brand image, brand attachment and environmental effects to have impact on consumer purchase decision and that packaging also stimulates customer's buying behaviour (Wells, Farley and Armstrong, 2007).

• Bonding (student-teacher interaction)

In the words of Berry (1995) there are two level strategies that are related to social bonds through personalisation and customisation. According to Chiu (2002) social bonds positively influence customer's emotions toward feelings associated with service experience according to Chiu (2002) social bonds contribute to the formation of an effective component of attitude. From the view point of the customer, the social bonding strategy seems to provide an important psychological benefit (Chiu, 2002). Social bonds dispose customers to self-disclosure, listening and caring, which in turn improve the mutual understanding between the customer and the service provider, their openness and their degree of closeness. Damkuviene and Virvilaite (2007) also noted that the elements in relationship should be interdependence, long term orientation, commitment and trust. Kandampully and Duffy (1999) pinpoint that a customer's interest in maintaining a loyal relationship is depended on the organisation's ability to anticipate customers' future needs and offering them before any other company.



• Customer satisfaction and loyalty

Customer satisfaction is a widely researched field in marketing and has been the topic of numerous studies. According to Chavan and Ahmad (2013) Customer satisfaction is a strategy adopted by companies to satisfy a customer's needs. Customer satisfaction is a key factor in increasing customer loyalty leading to increase profits (Chavan and Ahmad, 2013). Kotler (2000) echo that customer satisfaction, in general is customer attitude or behaviour towards the difference between what customers expect from the product and what they receive, regarding fulfilment of a goal. Walsh et al. (2006) opine that there is a strong relationship between customer satisfaction and corporate reputation of an organization. According to Wood (2008) an effective marketing covers everything about an organisation and must consistently provide value to win customers and earn their loyalty. Anderson and Jacobsen (2000) see customer loyalty as organization's creating a benefit for customers in order to maintain and increase customers repeat business with the organization. Oliver (1997) on the other hand believes that a true customer loyalty is created when customers become advocate of an organization without any incentive. Rust and Zahorik (1993) mentions that, greater customer satisfaction leads to greater intent to repurchase a product by customers. According to Anderson and Sullivian (1993) a high level of customer satisfaction decreases the perceived need to switch service provider and increase customer repurchase of the organization's product leading to higher profitability in the long-run as asserted by Bowen and Chen (2001). A strong emphasis is placed on the importance of service quality, perceptions and the association between service quality and customer satisfaction in the service sector of an economy (Cronin & Taylor, 1992; Taylor, & Baker, 1994). According to Schulz (2012) retaining loyal customers is an essential factor in keeping the industry competitive and serves as a key indicator for a company's performance. Customer satisfaction has been identified as one of the major determinants of customer loyalty in an organization (Parasuraman et al. 1988; Anderson and Sullivan, 1993). In the words of Dick and Basu (1994) repeated patronage of product is motivated by favourable cognitive behaviour towards the supplier and is critical for customer loyalty. However, customer satisfaction is viewed by Anderson et al., 1994; Jones and Sasser, 1995; and Reichheld, 1996, as a necessary step for creating customer retention and impact on market share positively. Corporate and brand image have also emerged as determinants of customer loyalty



(Gronroos, 1988,). According to Anderson et al. (1994), higher levels of customer satisfaction increases loyalty by building a positive corporate image of an organization. Andreassen's study (1999) posits that there is a positive relationship between corporate image and customer satisfaction which in the long-run leads to customer loyalty and Kotler and Armstrong (2008) saw loyalty as a factor of consistent superior customer service. Kapiki (2012) concludes that when there is excellent service quality delivery by an organization, it results in better customer satisfaction and loyalty.

• Word of mouth communication

Effective mode of presenting personal selling activities is through communication and this has helped to have shaped the marketplace behaviour and enable consumers to present their preferences and standards to organizations that are poised to listen and respond. Research has shown that interpersonal communication has an effect on consumer buying behavior. Studies conducted by Stafford (1966) and Venkatesan (1966) ascribed the effect to normative social influence. Mangold, Miller, and Brockway (1999) state that word of mouth communication affect the decision-making process about purchase of goods and services by the consumers. The study by Brown, Barry, Dacin, and Gunst (2005) confirm that satisfaction, commitment and recognition are the antecedents of word of mouth communication. This means that customer satisfaction, customer commitment and recognition of a company and its product are a critical tool of word of mouth communication. According to Herr, et al (1991) word of mouth communication has effect on customer product judgments than printed information. It is opined by Wilson and Peterson (1989) that word of mouth communication often related to customers' satisfaction or dissatisfaction with previous purchase experience. In the words of Yu and Tang (2010) word of mouth communication has the following as it features; vividness and usefulness, and this has effect on purchase pattern of consumers leading to increase of goods and services of an organization.

METHODOLOGY

Sample

One-hundred and twenty (120) students taking part in the UEW distance programme at the Kumasi Girls SHS Study Center were used for the study. To gather data, we approached students who had



reported for classes for the distance education programme the Kumasi Girls SHS Center. Participation was voluntary and anonymous. Based on the recommendations of Mooi and Sarstedt (2011) the sample size of 120 was deemed to be adequate for cluster analysis. Mooi and Sarstedt (2011), recommend that for a sample size to be sufficient for cluster analysis the number of observations should be at least 2^m; where **m** is the number of clustering variables. In this study the number of clustering variables were four (service quality, social bonding, packaging, and price) suggesting that a sample size of 16 will be sufficient for the study. The sample size of 120 was therefore more than sufficient for the study.

Measures

Self-administered questionnaires were used to elicit responses regarding students' overall satisfaction with the UEW distance education programme. Respondents were expected to indicate the extent to which they agreed or disagreed with certain statements about satisfaction. These items were measured using a five-point, Likert scale with the following anchors: 1 =Strongly Disagree, 2 =Disagree, 3 =Neutral, 4 =Agree and 5 =Strongly Agree. We also collected data on two separate factors that are related to satisfaction (i.e. positive word of mouth and likelihood to recommend) about/the UEW distance education programme.

RESULTS

Variable	Ν	Min.	Max.	Mean	SD	1	2	3	4
1. Service Quality	120	2	10	7.28	2.08	-			
2. Social Bonding	120	1	5	3.71	1.34	.76*	-		
3. Packaging	120	1	5	2.72	1.37	.58*	.46*	-	
4. Price	120	1	5	2.66	1.40	.74*	.63*	.76*	-

 Table 1: Descriptive statistics and correlation matrix for cluster variables

Note: SD = Standard Deviation; Min. = Minimum; Max. = Maximum; *p < .01

Table 1 contains detail of the data collected on the variables of the study which involve; service quality, social bonding, packaging, and price. From the 120 respondents that participated in the study, the minimum score was 1 whereas the maximum was 5. It was observed that these variables



averaged 7.28, 3.71, 2.72, and 2.66 respectively. Service quality obtained the highest mean with a corresponding standard deviation of 2.08. The correlation analysis in this study sought to establish the relationships between the variables so as to ascertain the existence of multicollinearity which talks about the extent to which a variable can be explained by another. This was essential because an increase in multicollinearity obscures the interpretation of the variate as it complicates the establishment of the effect of any single variable because of the interrelationships. Considering the table 1, it was examined that a significant positive relationship exists between service quality and social bonding, packaging, and price with .76, .58, and .74 respectively. This establish a moderate correlation among the variables of the study which explains that as service quality increases, it strengthens social bonding, packaging, and as well increases price.

Hierarchical cluster analysis based on squared Euclidean distance using Ward's method was conducted to group respondents. The analysis yielded three groups. The F-values in Table 2 shows that the means of the three groups are significantly different in terms of the four factors the influence students' satisfaction with UEW's distance education programme. The k-means cluster analysis was then used to segment students into groups (see Table 3). The first cluster has 18 respondents and has relatively low means across all the factors that influence satisfaction with UEW's distance education programme. This shows that this segment should not be a likely target for UEW in its distance education programme.

The second cluster has 54 respondents. It is the largest cluster and is most distinguished by relatively higher means on service quality and price. The means for the other variables for this cluster are also relatively higher than the other clusters. Thus, this segment can be seen as highly satisfied with the UEW distance education programme and that UEW provides high quality service at affordable prices in its distance education programme. The third cluster has 48 respondents. This cluster showed average mean scores across all the clusters. This indicates that this cluster in moderately satisfied with the UEW distance education programme.



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Table 2Means and One-Way ANOVA results from hierarchical cluster analysis

		Mean Values <u>Cluster Number</u>			Mean-Centered Values <u>Cluster Number</u>			
Variable	1	2	3	1	2	3	F	Sig.
Service Quality	5.50	7.14	9.45	-1.78	-0.14	2.17	65.22	.000
Social Bonding	2.44	3.76	5.00	-1.27	0.05	1.29	65.91	.000
Packaging	1.11	2.94	4.12	-1.61	0.22	1.40	80.24	.000
Price	1.08	2.71	4.30	-1.58	0.05	1.64	89.34	.000
Cluster size (N)	36	51	33	36	51	33		

Table 3

Means and One-Way ANOVA results from k-means cluster analysis

Variable	Mean Values <u>Cluster Number</u>			Mean-Centered Values <u>Cluster Number</u>				
	1	2	3	1	2	3	F	Sig.
Service Quality	3.61	8.94	6.79	-3.67	1.66	-0.49	212.51	.000
Social Bonding	1.56	4.57	3.54	-2.15	0.86	-0.16	83.66	.000
Packaging	1.44	3.78	2.00	-1.28	1.06	-0.72	61.06	.000
Price	1.17	3.98	1.73	-1.49	1.32	-0.93	180.79	.000
Cluster size (N)	18	54	4 8	18	54	<i>48</i>		



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We further collected data on positive word of mouth and likelihood to recommend UEW to test the validity of the cluster. The results (see Table 4) show that the overall MANOVA model is significant (F = .203, df = 3, p = .000)

Table 4MANOVA results assessing cluster solution criterion validity

Variable	Cluster Number	Cluster Mean	Multivariate F (Wilks' Lambda)	Univariate F	p
			.203		.000
Positive word of mouth	1	1.59		70.091	.000
	2	3.94			
	3	2.38			
Likelihood to recommend	1	1.46		146.152	.000
	2	4.44			
	3	2.83			

Note: Multivariate F has 3 degrees of freedom; Univariate F has 2 degrees of freedom



DISCUSSIONS AND CONCLUSIONS

Tables 2 and 3 above display the results of the hierarchical and a non-hierarchical *k*-means cluster analysis using simple Euclidean distance as the similarity measure to conduct and specify a threecluster solution and the initial cluster centres that were generated from the hierarchical cluster analysis. The three factors were drawn based on the results from the hierarchical cluster solutions to affect the non-hierarchical cluster. These clusters which are the segments as regard the study comprise of highly satisfied, moderately satisfied, and least satisfied. Hair et al. (2012) state cluster size and significance of clustering variable differences as the two distinguished differences between the hierarchical cluster sizes produced 18, 54, and 48 as against 36, 51, and 33 for the hierarchical and this is attributed to the fact that the non-hierarchical is able to redistribute observations among its clusters and also has the ability to demarcate clusters that are mostly distinctive than the hierarchical solutions.

Table 3 contains ANOVA results that projects the variations among variable means across the three clusters. The results are expected to be statistically significant because the clusters were formed from the four-clustering variable (Hair et al., 2014). The F- values specify that all the four variables are significantly different. Predominantly, service quality and price have very large F-values of (212.51, and 180.79) respectively. This non-hierarchical results suggest that the cluster solution is satisfactorily discriminating observations.

The first cluster has 18 observations and most distinguished by relatively low means for social bonding, packaging, and price. The only exception is service quality but it recorded the lowest among all the clusters. This implies that generally, the cluster is a representation of a market segment touted as underperforming, where students are least satisfied mainly in social bonding, packaging, and price of the UEW distance education programme and the overall lower means suggest that this segment should not be considered as a probable target for the institution.

The second cluster has 54 observations and distinguished by comparatively higher means on service quality and price. This is interpreted as a segment touted as one that UEW highly satisfies with the distance education programme by providing high quality service at affordable prices.



UEW will be right to conclude that the segment is as well favourable for other variables like social bonding and packaging because they have higher means compared to all other segments, and it is the highest segment by far.

The final cluster has 48 observations and is distinguished by fairly higher mean for service quality. However, it falls behind cluster 2 in pecking order in terms of the high means but comes before cluster 1 and for that reason automatically positioned average segment. This implies that although the services derived from the UEW distance education is quality, the packaging does not please the students, and the prices charged are considered to be outrageous. Bonding becomes somewhat difficult, and for that reason, the segment is a moderately satisfied one. Nonetheless, UEW can improve in the of service quality and other variables to turn the tables around.

Table four (4) estimates a MANOVA model using a two criterion validity variables as the dependent and cluster segment membership as the independent variables. This was done because a correlation was established among the dependent variables (Hair et al., 2014). The criterion variables in this case were positive word of mouth and likelihood to recommend UEW to test the validity of the cluster. The overall was significant at (F = .203, df = 3, p = .000) which provides grounds for the variables to be predicted by knowing which segment a student belongs. The individual F-values were all significant and validated the findings (F=70.091, 146.152; p=0.000, 0.000) for positive word of mouth and likely to recommend respectively.

The current study classified 120 students of the UEW distance learning based on their preferences that influence their choice of distance education in Ghana. respondents were segmented into three clusters that comprised of (highly, moderately, and least satisfied) based on four preferences (price, quality, packaging, and social bonding) that influenced their satisfaction with the distance education programme of UEW. In all, 18 of the respondents were in the segment of least satisfied, 54 were highly satisfied, and 48 were in the segment of moderately satisfied. In addition to differences in the mean values of clustering variables, there were statistically significant differences between the groups in terms of positive word of mouth and likely to recommend UEW to others.



The results from the study observed both differences and similarities in customer satisfaction among the three segments. The findings ranked cluster two as the highest among the three. It made 54 observations and distinguished by comparatively higher means on service quality and price. Meanwhile, all the other variables recorded higher means in the segment that exceeded all the other segments and the interpretation is that UEW highly satisfies the segment with the distance education programme by providing high quality service at affordable. The results are in line with the argument of Heskett et al., (1994) that posit that service quality drives customer satisfaction, which creates customer loyalty leading to growth. Additionally, the quality of the service serves as a key predictor of customer satisfaction because it is positioned between the continuum of customer's expectation and the actual perception of the service performance (Bitner et al., 1990; Parasuraman et al., 1985). In such instances, customers employ price in their evaluation and judgement of product and service quality of which availability and affordability is central in order for the price to be considered as reasonable (Wang, 2006; Kotler & Keller, 2009). Importantly, the attitude of the students in this segment demonstrate that the perception of a customer is for the price charged to match the quality delivered (Oliver, 1997).

The findings of the study also revealed that cluster three (3) which represented the moderately satisfied segment emerged closely after cluster two with 48 respondents. Service quality among the other variables recorded a higher mean value less than that of cluster 2 but greater than cluster one and the remaining variables were marginally differentiated among members of the segment. This implies that UEW satisfies this segment moderately with moderate prices, and a moderation impact of packaging and social bonding. This is in line with previous postulations from researchers that when a customer perceives the fairness of the price given by the service provider, it develops positive feelings toward the service provider gradually which in turn evolve into behavioural intention (Yieh et al., 2007), and the satisfaction of the customer due to value placed on the service received (Lenka et al., 2009; Kaura & Datta, 2012). This segment is placed at the mid-point of the continuum where members are neither satisfied nor dissatisfied with distance education programme that UEW delivers. The institution can employ some business strategies to target this segment in order to convert them into profitable customers in the future.



Finally, the last cluster realised 18 respondents who have least satisfaction as regard the services of UEW distance education programme. The members had similarities among all the other variables (social bonding, packaging, and price) with service quality as the only exception. Although, service quality was differentiated among the other variables, it was the least of all the segments. This segment was the least among the three and the implication is that the members are the least satisfied with all the offerings of UEW and for that reason targeting it for future growth will be a misplaced priority.

Our findings further reveal that the strongest relationships among the variables existed between service quality, price and customer satisfaction affirm prior studies which argue that service quality dimensions have positive impact on customer satisfaction except tangibility (Lenka et al., 2009; Kaura and Datta, 2012; Kapiki, 2012) and Kaura, (2013) who made a similar observation in the banking sector and for that reason it must be taken seriously because it is the vehicle on which organisations drive to earn their corporate reputation (Walsh et al., 2006), through effective marketing programmes to provide value for customers and earn their loyalty in the end (Wood, 2008).

This is however interlinked with pricing in the sense that price is noted as an indicator that significantly influences customer satisfaction particularly in the service industry (Singh & Sirdeshmukh, 2000; Jiang & Rosenbloom, 2005; Han & Ryu, 2009). Nonetheless, the success of price effects hinges on the perception of the customer regarding value creation and fairness of price that produces positive behaviour toward future actions (Yieh et al., 2007; Kaura, 2013). Although, packaging and social bonding were among the variables of the study, they had minimal impact on the students across all the segments.

Finally, the respondents varied significantly among the various segments as regard positive word of mouth and likelihood to recommend UEW distance learning to others and the results are consistent with the argument of Brown, Barry, Dacin, and Gunst (2005) that maintain that positive word of mouth accompanied by recommendation evolve as a result of customer satisfaction, commitment and recognition, that usually occur from a previous experience (Wilson and Peterson, 1989). Additionally, word of mouth communication influences the decision-making process of



consumers in their purchases (Mangold, Miller, and Brockway, 1999) because information from colleagues are deemed as much credible than that of the organization.

In conclusion, we therefore argue that UEW must take advantage of the significant impact of service quality and price factors on customer satisfaction that runs through all the segments to develop and implement strategic decisions in order to achieve a competitive advantage in the distance education market.

4. Limitations and Future Research

Even though the study is of importance to distance education in Ghana, the study has some limitations. First, the study did not include all variables potentially related to students' satisfaction in distance education, although covering all the variables of interest in this particular context. Further researches should look at other variables of students' satisfaction to provide a more holistic view of the study.

Second, this paper only concentrated on Kumasi Girls study center in Ghana without taken into consideration other study centers in Kumasi. Future researchers who are interested in students' satisfaction with distance learning education should include other study centers to increase the sample size to also broaden the scope of the study.

Finally, the study did not explore the potential role of lecturers in students' satisfaction in distance education. Future studies might bring new light to this matter, by looking at lecturers' role in students' satisfaction to give the study a broader view.

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