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A THREE CAMPUS COMPARISON OF BUNDLED CELLULAR TELEPHONE FEATURES AND THE YOUNG CONSUMER

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Useable surveys were completed and returned by 507 (174 rural, 156 urban, and 177 Historic Black College and University) consumers at three Midwestern universities. Regression analysis revealed selected demographic variables were predictive of the evaluation of bundled cell phone features; furthermore, stepwise regression models showed among features young consumers reported available on the phones they owned, DIGCAM, EMAIL, WARRANTY, and INSTANTM were significantly predictive (p< .001) of perceptions of importance of digital media bundles on cellular telephones. Moreover, ANOVA tests revealed young consumers' perceptions of the importance of cellular telephone features were significantly different among rural, urban, and HBCU young consumers, males and females, and among age groups, grade level, and states where cell phones were purchased (p< .05; p< .01; p< .001). Recommendations are offered that could help marketers develop strategic marketing mixes of phone features targeted to young consumers, rural or urban.

INTRODUCTION

In recent years executives have begun to realize that Facebook, MySpace, instant messaging, cellular telephones, chat rooms, and other forms of electronic media have emerged as a new "marketing ecosystem" that is fundamentally transforming how corporations sell to young consumers (Chester & Montgomery, 2008). Executives seeking marketing strategies to retain or gain market share in the highly competitive cellular telephone business need to understand young consumers' perceptions of the importance of bundled features on the cellular telephones (phones) they sell. Are demographic variables in any way predictive of the bundled features young consumers perceived important? Does the combination of cellular telephone features make a difference to young consumers in rural or urban markets? Can pre-existing phone features present on the phones young consumers already own be used to predict their perceptions of the importance of bundled phone features? This study was conducted at three Midwestern universities in order to answer these and related questions.

The explosive growth in the use of cellular telephones is well documented (Anderson & Jonsson, 2006; Joseph & Prakash, 2006). Eighty percent of Americans subscribe to a wireless service; ninety-nine percent of the U.S. population has access to at least one mobile carrier (Albanesius, 2008). McCasland (2005) believes young consumers aged between 18 and 22 are often the architects of change in the US culture. Cellular telephones have changed the US culture, and they have become a ubiquitous commodity. Thus, cellular telephone marketers must continue to change their strategic foci from routine product differentiation strategies (Reiner, Natter & Spectrum, 2007).

Globally, cellular telephone use is also pervasive (Chintagunta & Desiraju, 2005; Joseph & Prakash, 2006;

Landale, 2006; Miller, 2006). Nokia predicted that by 2010, world-wide usage of mobile phones will reach three billion users (Associated Press, 2005). Cellular telephones have developed beyond basic voice communication. Wireless carriers routinely offer additional features such as instant messaging, video, camera and music players. The CW network has partnered with Sprint to launch a mobile series spin-off from its drama, Smallville, with the aim of reaching their young core audience (Shields, 2007).

Cellular phones have always been used for communication, but they are used for online social networking as well. One of the most popular uses of the computer by college students, other than for class assignments, is accessing MySpace (with over 110 million users) and/or Facebook (with 70 million users). AT&T, Sprint Nextel, and Verizon Wireless have started a service that will allow users to post messages on Facebook's home pages or search for other users' phone numbers and e-mail addresses from a cellular telephone. MySpace has a pact with Hello, a wireless joint venture between SK Telecom and Earthlink, that will allow users to send photos and update their blogs or profiles by cellular telephone (Knowledge@Wharton, 2006). Sprint Nextel internet-accessible phones now have access to MySpace Mobile (MSM), the "first free direct access" to MSM through a U.S. wireless carrier, providing a rich set of features now available on a mobile device (Kansas City Business Journal, 2008).

In addition to accessing the Internet, watching TV, and sending text messages, cellular phone users can also use their phones for mobile banking. Bank of America allows its customers to access locations of ATM and banking centers using their mobile phone browsers and can receive e-alerts as either an e-mail or text message. Free mobile banking service became available in 2007. Its online banking

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customers with mobile internet access can use their cellular telephones and smart phones to pay bills, transfer money and check account balances. Currently, more the 85% of cellular telephone subscribers can access mobile Internet (Bank of America, 2007). Recently, Javelin Strategy & Research reported that mobile banking is being adopted by mainstream customers and will soon rival online banking for its convenience and accessibility. Currently about half of mobile phone users have access to mobile banking; the growing number of smart phone owners will increase both accessibility and use of mobile banking. It is forecasted that by 2014, 45 percent of mobile phone users will use mobile banking. Conditions are growing for consumers to be able to use mobile devices to send payments between one another (Shanbhag, 2009).

In fact, the cellular telephone may one day replace the wallet. Japan is a forerunner in this area. In Japan, E-cash is accepted in stores and restaurants, allowing shoppers to carry nothing but their cellular telephones, which transmit infrared signals. Value is added to phones at automated docking stations where paper money is inserted and credit for E-cash is added to the phones (Failoa, 2005). Japan's top mobile phone operator (NTTDoCoMo) and McDonald's Japan have announced an agreement to jointly promote e-marketing based on e-wallet services through an upcoming joint venture which will include mobile-phone credit cards (Cellular News, 2007). The proliferation of the availability of individual features available for cellular telephones raises the question to be considered in this report; "are there combinations of cellular telephone features that could be bundled and used a as basis to differentiate products in the marketplace to gain advantage"?

LITERATURE REVIEW

At the beginning of the twenty-first century, researchers were just beginning to focus on the importance that wireless and 3G technologies would play in business and marketing. Wireless and radio technologies were predicted to be at the heart of many disruptive business activities (Manning & Cosier, 2001). Access and usage prices were found to have different relative effects on demand and retention (Danaher, 2002).

By 2005 researchers began to focus on the application of wireless technology. The difference between "pushing" information onto consumers through wireless media devices such as cellular telephones and "pulling" information from consumers was examined (Hosoe, 2005). This paper introduced an alternative use of cellular telephones-the capturing of scenes of ongoing consumption moments by using a Web-based database system, which could lead to a better understanding of consumer behavior. Inspired by a unique data collecting process termed as the Experience Sampling Method, the study developed a system for recording its informants' consumption as "data in progress." Text and image data are recorded with internet accessible

cellular telephones, wirelessly transmitted to a database, and used for real-time analysis by an observer group.

One study in 2005 examined the relevance of mobile phone technology in marketing to young consumers aged between 18 and 22; these are the millennials who are heavy mobile phone users and often the architects of change in US culture (McCasland, 2005).

A study of mass customization strategies (MC) by Sigala in 2006 revealed that MC strategies that are customer centered are vital, as users of customized mobile phone services perceive both "give" and "get" customer value dimensions. As MC does not come for free, to persuade customers to get involved and invest time and effort in value chain operations for designing customized services, companies need to identify and provide enhanced customer values.

Another study (Shim, Ahn & Shim, 2006) presented an overview of digital multimedia broadcasting (DMB) and explored the users' perception on DMB cellular phone or "cellevision", video-on-the-go services that deliver television to cellular telephones. The authors concluded that the millennial generation will have a major impact on the DMB market due to their mindset and lifestyle.

Other applications of cellular phones were examined. Next to television sets and computer monitors, today's mobile telephones offer a "third screen" that delivers information, entertainment, communication, and even transactional services to an increasingly mobile society (Sylvia & Chan-Olmsted, 2006).

METHODOLOGY

Survey, Sample and Descriptive Statistics

A convenience sample of young consumers was surveyed from a population of 4,572. The survey, in which young consumers were asked to rate various features on cellular telephones and report demographic information, was conducted at a rural Midwestern university from a population of 872 business students; there were 174 respondents from the rural university. The survey was also conducted at an urban Midwestern university from a population of 2,700 business students. There were 156 respondents from the urban university. The survey was also conducted at a Historic Black College and University (HBCU) from a population of 1,000 business students. There were 177 respondents from the HBCU. The core course classroom samples were drawn from a population of 4,572 and resulted in 507 useable surveys.

Brand of cellular telephone ownership, monthly usage, gender, urban vis-à-vis rural or HBCU, etc., age, major, grade level, and monthly billing options were compared (using One-Way ANOVA tests and multiple regression analyses) against young consumers' ratings of the importance of various features to determine if significant differences existed. A ten items Likert-type scale (0 = not

important to 3= very important) was used to assess young consumers' perceptions of the importance of bundled of cellular telephone features.

There were 507 completed useable surveys. The statistical analyses presented in this study were based on those 507 observations. The frequency and percent of brands of cellular telephones owned by young consumers, their billing habits, and monthly minutes used with means and standard deviations, and the features they reported available to them (rural, urban, and HBCU) on the phones they owned are presented in Tables 1, 2, and 3.

Ten additional items were included on the survey instrument to measure differences between pre-existing telephone features young consumers reported available on the phones they owned (1 = Yes, I own this feature and 0 = No, I do not own this feature) and their perceptions of the importance of telephone features (the four derived factors). That list of the forced choice items can be found in Table 3; the SUM column represent number of items completed on the survey instrument among rural, urban, and HBCU consumers.

Table 1: Cellular Telephone Ownership by Brand*

Telephone Brand	Frequency	Percent
Other Brands	220	46.4%
AT&T	23	4.9%
Motorola	142	30.0%
Nokia	87	18.3%
Panasonic	2	0.4%
Totals	474	100%

*474 respondents reported the type of phone they owned on the survey.

Table 2: Monthly User Minutes & Billing among Rural, Urban & HBCU Campuses*

Campus (Respondents)	SUM	Billing	Minutes (Mean)	SD	Percent
Rural	174	$8,892	51,705 (294)	125	34.3
Urban	156	$8,612	47,045 (321)	113	30.8
HBCU	177	$12,776	53,996 (337)	106	34.9
Totals	507	$30,280	152,746		

*Denotes billing of $30,280 and minutes of 152,746 used by young consumers respective to campuses.

Table 3: Frequency and Percents of Features among Rural, Urban, & HBCU

Features	SUM	%	Rural Frequency	%	Urban Frequency	%	HBCU Frequency	%
GAME	478	94.3	96	20.1	121	25.3	137	28.7
INSTANTM	476	93.9	117	24.6	121	25.4	147	30.9
FREEMIN	475	93.7	146	30.7	123	25.9	159	33.5
INTERNET	475	93.7	92	19.4	103	21.7	128	26.9
WARRANTY	472	93.1	141	29.9	96	20.3	133	28.2
DIGCAM	471	92.9	24	5.1	61	13.0	105	22.3
EMAIL	471	92.9	42	8.9	86	18.3	116	24.6
EARPIECE	469	92.5	45	9.6	76	16.2	110	23.5
HANDFREE	468	92.3	65	13.9	79	16.9	109	23.3
INTERCOM	463	91.3	32	6.9	55	11.9	103	22.2

*SUM denotes 10 different types of pre-existing features students indicated they had on their cell phones.

Furthermore, 266 males and 218 females (reporting gender) completed the survey. Among the age groups, 116 respondents were 20 years old, 273 respondents were 21 years old, 48 respondents were 24 years old, 56 respondents were 26 years old and one respondent was 36 years old. Eighty percent of the respondents reporting age (389/493) in this study were within the range McCasland (2005) labels

"millennial users": young consumers aged between 18 and 22.

There were 381 business majors and 112 non-business majors. There were 71 freshmen, 110 sophomores, 181 juniors, 95 seniors, and 26 graduate students. A Chi-Square test was used to test for significant relative frequencies between rural, urban and HBCU student vis-à-vis brand of

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cellular telephone ownership; furthermore, gender and brand of cellular telephone ownership was assessed by using a Chi-Square test, and no significant difference was found between gender and the brand of cell phone they owned, nor for grade level and brand of cell phone owned.

However, the Chi-Square test revealed that rural, urban, and HBCU young consumers differ significantly in their choice of cellular telephone ownership, with a critical value of 59.076 being larger than the 15.51 (with a .05 alpha) critical value found in the Chi-Square Table, with df = 8 and

p= .000. Motorola is significantly different in its relative frequency between rural and urban users. Rural users clearly favored the Motorola brand. HBCU consumers preferred other brands. Chi-Square findings are presented in Table 4. The implication of this difference will be discussed in a later section. The ten items measured with a Likert-type scale were tested for reliability.

Table 4: Chi-Square Test of Male Female & Rural Urban vis-à-vis Brand Ownership***

Demographics	Others	AT&T	Motorola	Nokia	Panasonic
Rural	53 (76.6)	2(8)	70(49.4)***	38(30.3)	2(.7)
Urban	67 (63.6)	16(6.6)	24(41)	30(25.1)	0(.6)
HBCU	100 (79.8)***	5(8.3)	48(51.5)	19(31.6)	0(.7)
Total	220 (220)	23 (23)	142 (142)	87 (87)	2 (2)

***Denotes p< .001; parentheses ( ) denotes expected count. N=474 Valid cases.

RELIABILITY TEST

The ten items measured with a Likert-type scale was tested for reliability using a Cronbach's (1984) alpha. The overall scale reliability for this study is 0.76, which exceeds the Nunnally (1978) criteria of 0.70 for an acceptable alpha. Devellis (1991) says an alpha "between .70 and .80" is respectable (1991: 85). The reliability did not improve if any item were deleted; therefore, the entire ten items scale was left intact for data analysis. A factor analysis was conducted after testing and accepting the instrument's alpha reliability.

FACTOR ANALYSIS

Five hundred seven students' responses to the ten items measured with the Likert-type scale were subjected to an un-rotated principal component analysis, with a Scree test (in SPSS 15.0). Three factors were suggested by the Scree test. Those three factors explain 58.73% of variance (Factor 1 = 33.51%, Factor 2 = 12.79%, and Factor 3 = 12.43%, respectively). Principal Component Analysis was used with Varimax Rotation to extract the three factors, as shown in Table 5. The three factors, using Eigenvalue of 1 criterion, were produced with 5 iterations.

Table 5: Principal Component Factor Analysis of Cellular Phone Features*

Items	Component Loadings		
	Factor 1: Digital Media	Factor 2: Safety	Factor 3: Bargains
EMAILIMP	**.829**	.026	.009
INTIMP	**.775**	.220	.005
DIGCIMP	**.740**	.108	.101
INSTIMP	**.562**	.051	.365
INTERIMP	**.501**	.462	.085
GAMEIMP	.357	.173	.056
HFREEIMP	.132	**.867**	.137
EPIECIMP	.172	**.861**	.012
FREEIMP	.110	-.049	**.822**
WARRIMP	.054	.213	**.765**

*Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization and a Rotation converged in 5 iterations.

A variable was said to load on a factor if it had a component loading of .50 or higher on that factor and less than .50 on any other factors (Devellis, 1991; Hatcher; Kachigan, 1991). The derived factors were indicative of the utility of features available on the phones millennial users

owned; thus, each of the derived factors represents a dimension or bundle of features pertaining to a user's perceptions. Factors 1, 2, and 3 were subsequently labeled according to consumers' perceptions of the importance for bundled features and those features' obvious utilities: 1) Digital Media, 2) Safety, and 3) Bargains. To ascertain if

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there were any significant differences in students' perceptions among the demographic variables (grade level, declared major, age and gender) data were further analyzed using traditional multivariate statistical methods to test the null hypotheses.

RESULTS

This study investigated if demographic variables or pre-existing telephone features included on phones students already owned were predictive of young consumers' perceptions of bundled features. In addition, this study set out to determine if there were any significant differences in students' perceptions of bundled features across demographic variables (rural vis-à-vis urban, gender, class standing, cellular telephone brand, major, income, and age). The formal hypotheses are stated as follows:

Hypothesis 1: Young consumers' demographic characteristics are not predictive of their perceptions of the importance of bundled cellular telephone features.

Hypothesis 2: The telephone features included on phones young consumers already own are not predictive of their perceptions of the importance of bundled cellular telephone features.

Hypothesis 3: There is no statistical difference among the means of young consumers' demographic variables (rural vis-à-vis urban, gender, business or non-business major, grade level, age, monthly billing, or minutes use per month) and their perceptions of the importance of bundles of cellular telephone features.

Multiple regression analysis on factor 1 (as criterion/dependent variable) was run since it accounts for 33.5 percent of the variance explained; school, brand, state, major, class, gender, monthly billing, age, and used minutes were used (dummy coded were necessary) as predictor/independent variables on tests. The variables school, gender, monthly billing, and age among the groups were significantly predictive of factor 1 or the perception of the importance of digital media included on the phones they already owned. Results are presented in Table 6 below.

Therefore, Hypothesis 1 was rejected on the school, gender, billing, and age variables because they are predictive of young consumers' perceptions of the importance of specific digital media features. Hypothesis 1 was not rejected for the brand, major, grade level, and user minutes variables because they did not predict the students' perceptions of the importance of digital media bundles included on the phones they owned.

Table 6: Multiple Regression Model – Factor 1, Digital Media

Variable	Coefficient	t statistics	Beta	Sig.
Constant	.641	1.237		.217
SCHOOL	**.171**	**2.856**	**.151**	**.004****
BRAND	-.046	-1.352	-.058	.177
MAJOR	.077	.819	.034	.413
CLASS	-.041	-.925	-.047	.355
GENDER	**-.218**	**-2.725**	**-.113**	**.007****
BILLING	**.005**	**3.064**	**.141**	**.002****
AGE	**-.071**	**-2.897**	**-.141**	**.004****
USEMIN	.001	1.689	.075	.092

[*]Denotes $p<.05$; [**]Denotes $p< .01$

Diagnostic Statistics

N = 507	Adjusted R^2 = 0.157
Overall significance test	F statistic = 10.399 (p value = 0.00)

On the survey instrument, students were asked to indicate if a feature were available on the cellular telephone they owned (0= No, I do not own this feature and 1 = Yes, I do own this feature). Thus, a dummy code pre-existed in the data allowing variables to be tested in a regression model against all three bundled phone features as criterion variable one at a time (Digital Media, Safety, and Bargains). Those pre-existing features were: 1) Game, 2) free minutes, 3) instant messaging, 4) warranty, 5) hands-free device, 6)

earpiece, 7) internet access, 8) intercom, 9) digital camera, and 10) email access.

A stepwise regression analysis on all three factors (as criterion/dependent variable one at a time) was run since cumulatively the three factors accounted for 58.8 percent of the variance explained. The ten pre-existing phone features were used as predictor/independent variables in these tests. The stepwise regression revealed owning a phone with an

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available feature was significantly predictive of students' perceptions of the importance of that feature.

Therefore, Hypothesis 2 was rejected because telephone features included on phones young consumers already owned were predictive of young consumers' perceptions of the importance of digital media (factor 1) safety (factor 2) and bargains (factor 3) as a bundled cellular telephone features.

The independent variables most predictive on factor 1 (Digital Media) were DIGCAM, EMAIL, WARRANTY, and INSTANTM (cumulatively presented: Adjusted R square = .143, .189, .195 and .200; Beta = .271, .226, -.096, and .085; and Significant t= 6.075, 4.968, -2.383, and 2.013 with p= .000, .000, .018, and .045, respectively). The other variables were excluded from the model. It makes sense that digital camera, email, a service warranty, and instant messaging capability would be predictive of bundled cellular telephone features associated with young consumers being in the loop. These digital features enable young consumers to upload video files onto the World Wide Web.

The independent variables most predictive on factor 2 (Safety) were HANDFREE, EARPIECE, INTERCOM, and INSTANTM (cumulatively presented: Adjusted R square = .141, .178, .191 and .199; Beta = .227, .231, .086, .110, and -.101; and Significant t= 4.540, 4.901, 2.165, and 2.478, and -2.455 with p= .000, .000, .031, .014 and .014, respectively). The other variables were not predictive in the model. It makes sense that earpiece and a hands-free device would be predictive of the Safety, a pre-existing feature on the cellular telephone associated with consumer safety, especially when the consumer is operating an automobile while talking on the phone or classroom distress requiring a text message where voice is impractical or academically dangerous.

The independent variables most predictive on factor 3 (Bargains) were WARRANTY, FREEMIN, and INSTANTM (cumulatively presented: Adjusted R square = .070, .099, and .107; Beta = .222, .171, and .097; and Significant t= 5.156, 3.953, and 2.294 with p= .000, .000, and .022, respectively). The other variables were excluded from the model. It makes sense that warranty, free minutes, and instant messaging be predictive of the bargains bundle, a pre-existing feature on the cellular telephone associated with bargains, especially when contracts are associated with usage.

Although multiple regression analysis is a very useful tool in helping researchers determine the predictive nature of variables, a need still existed to determine the significant difference between and among means for groups being compared. Therefore, One-Way ANOVA tests were run on the three derived factors and each of the independent variables consumers reported in the survey.

Hypothesis 3 was rejected because there are statistically significant differences among the means of young consumers' demographic variables and their perceptions of the importance of bundled phone features (Digital Media, Safety, and Bargains).

Hypothesis 3 was tested using One-Way ANOVA, and significant differences among the means for rural, urban and HBCU young consumers and their perceptions of the importance of phone features were revealed; therefore, null hypothesis 3 was rejected for the school variable.

A significant difference was found to exist among the means of rural, urban and HBCU (school) groups with a p=.000. The means for rural, urban and HBCU young consumers on factor 1 (digital media) were -.38, .08, and .33 respectively. A Tukey's post-hoc test in SPSS 15.0 showed rural consumers care less about digital media features, digital cameras, instant messaging, and internet access on their phones than do urban and HBCU consumers. A significant difference was found to exist among the means of rural, urban, and HBCU consumers with a p=.000 on factor 2 (Safety). The means for rural, urban and HBCU on factor 3 were -.21, -.19, and .40 respectively. HBCU consumers had a positive perception on Safety features and seem more concerned about earpieces and hands free than rural or urban consumers.

This difference among groups could be due to availability and variety of phones, up-charges for add-ons in metropolitan areas, and types of accessories offered in the HBCU area. A significant difference was found to exist among the means of rural, urban, and HBCU consumers with a p=.000 on factor 3 (Bargains). The mean for rural, urban and HBCU on factor 3 were .19, -.32, and .11 respectively. The urban group cared less about bargains than did the rural and HBCU groups.

An ANOVA test for Grade Levels revealed a significant means difference on factor 1 (Digital Media) only. With a mean difference of .048, a Tukey's post-hoc test showed freshmen and graduate students differed with means of .27 and .69 respectively; therefore, it appeared graduate students were more influenced by their perceptions of the importance of having these features on their cell phones than were freshmen.

An ANOVA test between Genders revealed a significant difference on factor 1 (digital media) and factor 2 (Safety) with means of .011 and .033 respectively. Males and females have inverse perceptions of the importance of the digital media feature. Females have a -.13 mean and males have a .12 mean on factor 1. Women appear less interested in owning cell phones with email, internet, digital camera, or instant messaging features than men. On factor 2, the factor mean for men is -.09 and for women it is .11, thus, an inverse perception for safety is present for men. Men appear less concerned with safety features than do women.

Table 7: One-Way ANOVA Tests for Independent Variables on Four Factors

Source	Sum of Squares	df	Mean Square	F	Sig.
School	Between 40.944	2	20.472	22.431	.000***
Factor 1	Within 407.056	446	.913		
Digital Media	Total 448.000	448			
School	Between 36.936	2	18.468	20.037	.000***
Factor 2	Within 411.064	446	.922		
Safety	Total 448.00	448			
School	Between 22.432	2	11.216	11.754	.000***
Factor 3	Within 425.568	446	.954		
Bargains	Total 448.00	448			
State	Between 60.545	6	10.091	11.539	.000***
Factor 1	Within 371.668	425	.875		
Digital Media	Total 432.213	431			
State	Between 26.845	6	4.474	4.677	.000***
Factor 2	Within 406.602	425	.957		
Safety	Total 432.213	431			
State	Between 13.766	6	2.294	2.273	.036**
Factor 3	Within 428.915	425	1.009		
Bargains	Total 442.681	431			
Grade Level	Between 9.766	4	2.441	2.423	.048*
Factor 1	Within 426.198	423	1.008		
Digital Media	Total 435.964	427			
Gender	Between 6.660	1	6.660	6.595	.011*
Factor 1	Within 430.217	426	1.010		
Digital Media	Total 436.877	427			
Gender	Between 1.763	1	4.572	4.574	.033*
Factor 2	Within 407.107	426	1.000		
Safety	Total 408.870	427			
Age	Between 21.878	3	7.293	7.615	.000***
Factor 1	Within 414.652	433	.958		
Digital Media	Total 436.530	436			
Age	Between 16.051	3	5.350	5.410	.001**
Factor 3	Within 428.251	433	.989		
Bargains	Total 444.302	436			

* Denotes $p < .05$; ** denotes $p < .01$; and ***denotes $p < .001$

An ANOVA test among age groups reveled a significant difference on factor 1 (digital media) and factor 3 (bargains) with means of .000 and .001 respectively. Age groups clustered into age groups of 20, 21, 24, and 26. The one 36 year old student was removed because ANOVA requires at least two subjects per cell. For factor 1, the 26 year old group differed significantly from 20, 21, and 24 year olds. A Tukey's test revealed means of -.64, .17, .01, and .10 respectively; thus, the 26 year olds have an inverse perception of the importance of the digital media feature. On factor 3, the 26 year old group differs from 20 and 21 year olds, but they are statistically the same with the 24 year old group. The means for 20, 21, 24, and 26 year olds are .07, .09, -.28, and -.47; therefore, it appears the older the consumer the less important the bargains features are.

DISCUSSION

Targeted Marketing with Features as Differentiators

Cellular telephone features were analyzed using the traditional multivariate techniques with a significance level of .05. The bundled telephone features pre-existing on phones young consumers owned were examined regarding their ability to be used as predictors of perceptions of the importance of these types of features. Student phones and how the students evaluated the feature in terms of importance of features was measured with a Likert-type scale (0=not important, 1=somewhat important, and 3=very important). We now know a lot more about millennial cell phone users than before.

We now know that pre-existing features can be used to predict perceptions of those features' importance. Once

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manufacturers have developed their cellular phone technologies those dollars are vested. What can be better news for cell phone producers than knowing that features pre-existing on their phones can be bundled to enhance sales and be differentiated in the market? Advertising and marketing initiatives can be tailored to perceptions, shifting some of the burden from research and development to sales and marketing professionals. These aesthetic changes will require a focus on bundling pre-existing features to meet the perceptions of importance of those features to the targeted young consumers at the point of purchase.

This analysis identified three cellular telephone feature "bundles" that may be used for marketing segmentation and target marketing. Those bundles are "digital media bundle", "safety bundle" and the "bargain bundle". Specific differences in the evaluation of these "bundles" is presented in table 8. This study identified differences that may be bases for product differentiation and evaluation.

Table 8: Strategic Basis for Market Segmentation

1	Students who HAD cellular telephones with the features of safety, warranty and digital capacity tended to rate those features higher than those who did not have the features on their phones.
2	URBAN AND HBCU students rated the "digital media bundle" higher than the RURAL students.
3	HBCU STUDENTS rated the "safety bundle" higher than both RURAL or URBAN students
4	URBAN students rated the "bargain bundle" higher than the RURAL or URBAN students
5	GRADUATE students rated the "digital media bundle" higher than FRESHMEN students
6	MEN students rated the "digital media bundle" higher than WOMEN students
7	WOMEN students rated the "safety bundle" higher than men
8	YOUNGER students rated the "bargain bundle" higher than OLDER STUDENTS

These findings will allow marketers of cellular telephones to review their marketing strategy as related to the method and basis for marketing the segmentation they use. There is opportunity to segment the market based on differentiating the product by "bundling" cellular telephone features based on the evaluation of selected "bundle mixes" by identified target groups. For example, a "safety bundle" could be a platform for marketing to women students, a "bargain bundle" for younger students while one might focus on a "digital bundle" as a platform for promoting to men students.

CONCLUSION AND RECOMMENDATIONS

The market for cellular telephones is saturated; nearly nine of ten university students reported cellular telephone ownership. As cellular telephone marketers compete in the marketplace, it is logical they will attempt to differentiate their product and yet maintain the economics of "mass customization". As Sigala wrote, "mass customization strategies that are customer centered are vital since users of customized mobile phones services perceive both "give" and "get" customer value dimensions. As mass customization does not come free, to persuade customers to get involved and invest time and effort in value chain operations for designing customized services, companies need to identify and provide enhanced customer values (Sigala, 2006). This study focused on the "bundling" of cellular telephone features as basis for mass customization marketing strategy. Three bundles were identified: "digital media bundle", "safety bundle" and "bargain bundle".

Examples of using these bundles to achieve both mass customization and increasing value dimensions might be urban marketers using variations of the "digital media bundle" in conjunction with "bargain bundle" to mass customization and differentiate their product in the urban marketplace. A focus on women students might entail a "safety bundle". That bundle includes pre-existing features of earpiece and hand-free operation. The main change would be the marketing of the aesthetic (perception) of safety with the purchase itself. Perhaps an insurance discount could be arranged in addition to a safety slogan such as "Hands-free, Guilt free" to increase the perception of safety. Younger students are candidates for iterations of the "bargain bundle", while men might be a target for the "digital media bundle".

The domestic market for cellular telephones is generally considered to be approaching saturation, which means competitors in the market can no longer expect growth by marketing to nonusers. The normal response to saturated markets is to add value by product "line extension", i.e. adding new features to the existing product or by "product development", replacing the old product with one which includes new features. Either approach requires an appreciation of the value placed on the "bundle of features" being added or replaced. This study presented a methodology to identify the value of product "bundles" for cellular telephones which may be a basis for marketing the aesthetic (perception) of bundled cellular telephone features.

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