

## **IMPLICATIONS OF THE INTEGRATION OF COMPUTING METHODOLOGIES INTO CONVENTIONAL MARKETING RESEARCH UPON THE QUALITY OF STUDENTS' UNDERSTANDING OF THE CONCEPT**

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### **ABSTRACT**

It has been an ongoing concern among academicians teaching social sciences to develop a better methodology to ease understanding of students. Since verbal emphasis is at the core of the concepts within such disciplines it has been observed that the adequate or desired level of conceptual understanding of the students to transform the theories into practical derivations is usually quite frustrating. Thus with the introduction of highly sophisticated user friendly analysis and statistical software, integration of such computing methodologies into the teaching of theoretical courses could present a basis to overcome this problem. Hence within this concept a detailed study to enable the comparative evaluation of the understanding of students within the communication faculty regarding a major area of businesses and media industries, that is marketing research, is aimed. For this purpose two groups were traced, one getting the essentials of marketing research only on the theoretical basis during the marketing courses and the other learning the concepts through a marketing research course equipped with computer application practices. The findings of the study will be presented on a comparative display format to enable ease of understanding. Also the methodology of both courses will be presented to serve as a guideline for academicians who are interested in integration of innovative computer application facilities into their conventional theory based course formats.

**KEYWORDS:** Education, Computer Software Usage, Marketing Research Course, SPSS

### **INTRODUCTION**

The introduction of new technologies such as computers and advances in the development of software programs together with the ever-increasing demand towards them, force the academicians to alter their methods during the courses. The incremental usage of computers can be seen as a new methodology for various fields from profit to non-profit organizations. The computer usage causes the variations on student performance and aids better understanding with the transformation of theoretical concepts into the practical applications.

The courses cause changes with the new trends in the business sector. One of the deviations can be seen at the marketing research courses in the universities. In the past, the theoretical perspectives are learned by the students in the marketing research lecture without any application but now the new trend can be seen as the usage of the computing technologies within that course as application of theoretical frameworks. Here one of the most important software programs is SPSS (Statistical Package for Social Sciences or Statistical Product and Service Solutions) which is highly used in the universities and businesses for creating databases such as consumers, personnel, brand awareness etc. The research plays a vital role in the marketing research course which is inevitable for survival and viability of organizations. The changes or contingencies can be interpreted or analyzed with the help of SPSS program for creating solutions or describing the conditions of something such as the price sensitivity of consumers, students' attitudes towards tuition fees, new product developments and so on. With the help of computer usage, the students may increase their computer literacy and become familiar to the computer applications within the courses.

### **MARKETING, RESEARCH AND MARKETING RESEARCH**

The American Marketing Association' explanation of marketing is "The process of planning and executing the conception, pricing, promotion and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives." ( cited in Shao,2002)

The definition of research is "the systematic and objective investigation of a subject or problem to discover relevant information or principles." ( Shao,2002)

According to Eztel, Walker and Stanton defined the marketing research as " the development, interpretation, and communication of decision-oriented information to be used in all phases of marketing process." (Eztel, Walker and Stanton,2001)

Thus, the marketing research is the efficient planning, collecting, analyzing, and interpreting the information for making the decisions about marketing related issues.

In a marketing research all the process starting from data collection up to the presentation of analysis are the focal points in a study.

### **DECREASING THE THEORETICAL CONTENT AND INCREASING THE INTERACTIVITY**

Mostly, courses are designed with theoretical content for explaining the business situations in some departments. In recent years, the need of interactive learning, forces the academicians to a point to redesign their course contents. The competitive and hot issues in media industries cause the deviations in the nature of the communication faculty and its departments. The academicians and students have started to work on real cases, projects and topics which create a synergy within the faculty. The balance between the theory and practice in some courses change the environments in the lectures.

### **COMPUTER ORIENTED MARKETING RESEARCH**

In today's competitive marketing field, we cannot separate the marketing research and computer applications because of the analysis, statistical and attitudes measurements, graphical presentations and so on. The role of computers in the marketing research has some pros such as time management, efficiency usage of collected data and presentation of them display the inevitable reality of computer applications. Because of this, the marketing research course tools and the applicable practices create a new way for research students with the user-friendly software package "SPSS". Also, students learn managing a database after building it in SPSS program as logical procedures.

### **RESEARCH METHODOLOGY**

The quantitative research methodology was used to analyze this research study. Descriptive research of Conclusive research techniques was used to test hypothesis, display the attitudes, situations, cross tabulations and analysis of the study with SPSS software package. This is a cross-sectional study in other words one-time study for displaying outcomes. The personal interview format was used to collect data from respondents. Population of the study is 486 public relations and advertising students who take PRA 396 (Marketing Research) and PRA 243 (Marketing in Communication) courses in the 2002-2003 academic year in the Communication Faculty. Firstly, we randomly planned to select 120 respondents as a random sampling technique but the n (sample size) was more than 10% of the population. Thus, we have calculated the sample according to finite population correction factor (fpc), the optimized sample size turned out to be 96 with the population size 486.

Finite population correction factor (fpc)

$$n_c = \frac{nN}{N+n-1}$$

n = sample size without fpc

N= Size of Population

n<sub>c</sub> = sample size with fpc

### **THE QUESTIONNAIRE**

The questionnaire consisted of 24 questions. Questionnaire design was formed by the closed-ended questions, multiple choice questions and 5-point Likert Scale (1=Strongly Agree, 2=Agree, 3=Undecided, 4=Disagree, 5=Strongly Disagree) was used to analyze the collected data. Also, the descriptive statistics of the research study is partially displayed in the study.

### **DATA ANALYSIS**

Initially to present a brief descriptive analytical outcome a cross tabulation, fixing the distinction point of students as those who has taken a core marketing course which involves the marketing research concept in theory alone and the latter being the ones who has additionally got marketing research course presented through simulative computing application formats, will be presented.

Out of 96 students surveyed with 1 missing value 41 students (43%) learned marketing research subject on theory only through their core marketing course, 54 students (57%) learned application through computing for marketing research additionally through their marketing research classes.

For ease of follow-up from now on we will refer the first group as "theory only" and the next group as "applied".

At the question to discover the level of understanding for the marketing research subject the theory group stated by 32% that it was not completely understood while this was only 13% for the applied group. Additionally groups with 44% and 41% respectively have agreed upon the essence of the need for marketing research.

In another question, the theory only group by 32% stated that they could not have an idea about application while this was only 7% in the applied group. Besides, both groups by 61% and 74% respectively stated that computing is important and necessary for marketing research analysis and understanding.

Beyond this point, we have conducted a more conclusive format study through testing of 4 hypotheses to reveal a final consensus point. The questions traced for this test was designed on a Likert Scale. The continuum was set in a scoring format as 1 point for SA, 2 points for A, 3 points for U, 4 points for D and 5 points for SD as stated at the questionnaire section.

Here we observed a positive skew (indicating that the mode is less than the assumed mean 3 which stands as the neutral point on the midway of the continuum). Then values below 3 would indicate a tendency for approval while those above 3 would be signaling disapproval. Since we have visually traced a positive skewness we would expect a consensus opinion pointing approval and we have passed upon the test of each of these hypotheses to reveal consistency or inconsistency with our visual expectation.

We have tested each hypothesis with a confidence interval of 95%. For this value the standardized z value to be read from any one-tailed z table is -1.645 to analyze a definite decrease.

$$\mu=3 \quad Zc = (\bar{\chi} - \mu) / (\sigma / \sqrt{n})$$

$$\mu < 3 \quad \begin{aligned} Zc &= \text{Calculated Z value} \\ Zt &= \text{Z value from table} \\ \bar{\chi} &= \text{mean of sample} \\ \sigma &= \text{standard deviation of sample} \\ \mu &= \text{mean of population} \\ n &= \text{sample size} \end{aligned}$$

Here a calculated z value less than -1.645 would make us reject our  $H_0$  null hypothesis and those greater than -1.645 would make us accept the  $H_0$  null hypothesis.

$H_0 1 =$  I am not sure whether marketing research through analytical computing software usage enables better understanding of the course.  $\mu=3$

$H_a 1 =$  I agree that marketing research through analytical computing software usage enables better understanding of the course.  $\mu < 3$

$$Zc = (\bar{\chi} - \mu) / (\sigma / \sqrt{n}) = -13.76 \quad \begin{aligned} \bar{\chi} &= 1.72 \\ \sigma &= 0.91 \\ \mu &= 3 \\ n &= 95 \end{aligned}$$

$$-5.36 (Zc) < -1.645 (Zt)$$

reject  $H_0 1$  accept  $H_a 1$

$H_0 2 =$  I am not sure whether I could not completely understand the marketing research subject at the marketing course (theory only).  $\mu=3$

$H_a 2 =$  I agree that I could not completely understood the marketing research subject at the marketing course (theory only).  $\mu < 3$

$$Zc = (\bar{\chi} - \mu) / (\sigma / \sqrt{n}) \quad \begin{aligned} \bar{\chi} &= 2.41 \\ \sigma &= 1.08 \end{aligned}$$

$$\mu = 3$$
$$n = 95$$

$$-5.36 (Z_c) < -1.645 (Z_t)$$

reject H<sub>0</sub>2 accept H<sub>a</sub> 2

H<sub>0</sub> 3= I am not sure whether through application I can better understand the subject besides improving my creativity.  $\mu=3$

H<sub>a</sub> 3= I agree that through application I can better understand the subject besides improving my creativity.  $\mu < 3$

$$Z_c = (\bar{\chi} - \mu) / (\sigma / \sqrt{n})$$
$$\bar{\chi} = 1.74$$
$$\sigma = 0.91$$
$$\mu = 3$$
$$n = 95$$

$$-13.55 (Z_c) < -1.645 (Z_t)$$

reject H<sub>0</sub>3 accept H<sub>a</sub> 3

H<sub>0</sub> 4= I am not sure whether with the format in marketing course I've only learned the basics of marketing research subject on theory.  $\mu=3$

H<sub>a</sub> 4= I agree that with the format in marketing course I've only learned the basics of marketing research subject on theory.  $\mu < 3$

$$Z_c = (\bar{\chi} - \mu) / (\sigma / \sqrt{n})$$
$$\bar{\chi} = 2.31$$
$$\sigma = 1.15$$
$$\mu = 3$$
$$n = 94$$

$$-5.75 (Z_c) < -1.645 (Z_t)$$

reject H<sub>0</sub>4 accept H<sub>a</sub> 4

## CONCLUSION

Throughout all the levels of this study and the analysis findings either at the frequency descriptive or hypothesis testing platforms we could observe a consistent approval of our research anticipation of the significant leverage of computing application integrations into the theory based marketing research course formats.

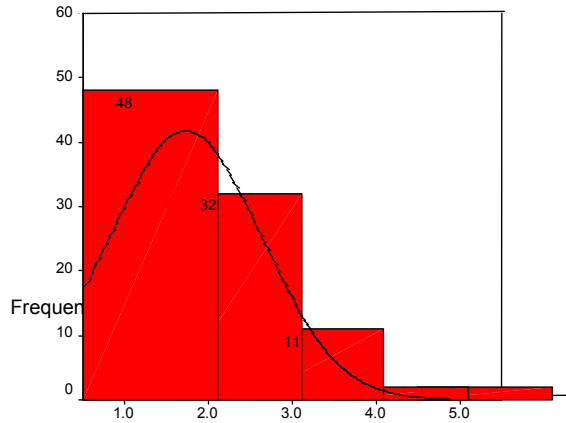
We could not identify any evidence of inconsistency exceeding the set error range of 5% with our proposed statement presenting the benefits of redesigning theory based courses into a style enabling computing methodologies integration where applicable like marketing, management etc. A careful reengineering of course syllabuses to include the relevant software package usage would be the initial point to depart. Hence a similar pilot term application could be tested before freezing the ultimate pattern for the academician interested in such integration.

## REFERENCES

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Kotler P., Armstrong G.(1999) Principles Of Marketing, Prentice-Hall International Inc. 8<sup>th</sup> edition.  
Shao A.T. (2002). Marketing Research: An Aid to Decision Making. South-Western Publishing. 2<sup>nd</sup> Edition.

## APPENDIX

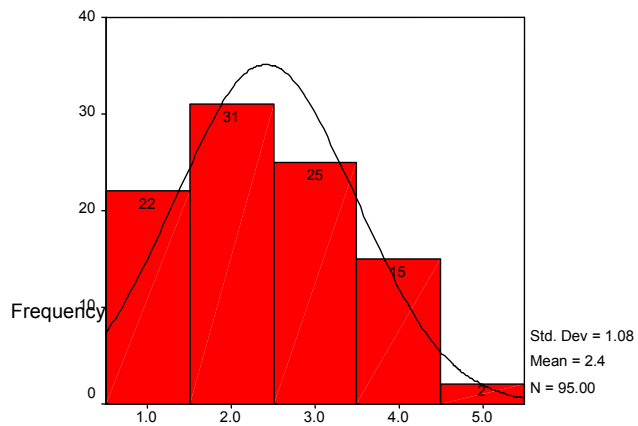
Marketing research through analytical computing software use enables better understanding of the course.



Marketing research through analytical computing software usage enables better understanding of the course.

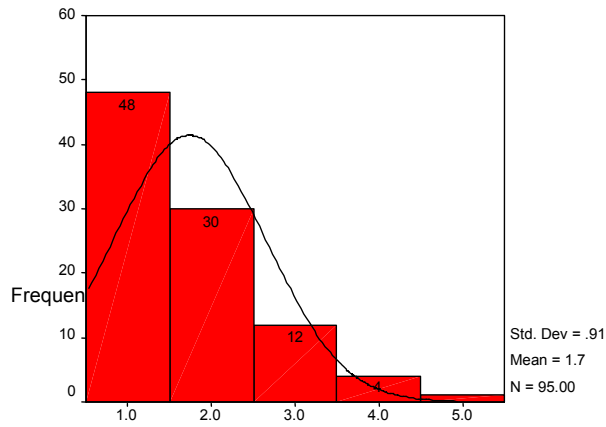
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I could not completely understand the Marketing Research subject at the marketing course (theory only).



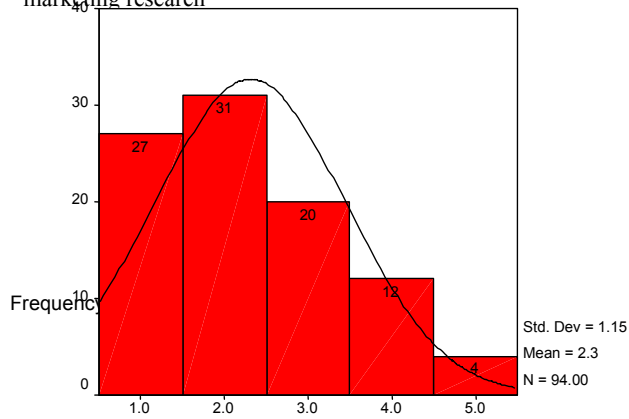
I could not completely understand the Marketing Research subject at the marketing course (theory only).

Through application I can better understand the subject besides Improving my creativity.



Through application I can better understand the subject besides improving my creativity.

With the format in Marketing course I've only learned the basics of M.R subject on theory. Learned the basics of marketing research



With the format in marketing course I've only learned the basics of M.R. subject on theory.

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