

CHAPTER 6

ANALYSIS AND INTERPRETATION OF EMPIRICAL FINDINGS

6.1 INTRODUCTION

The purpose of this chapter is to report on, and interpret the empirical findings of this study. This includes an overview of the results of the pilot tests in section 6.2 and a description of the preliminary data analysis process in section 6.3. Section 6.4 describes the descriptive analysis of the data sets, including the reliability and validity of the main survey. Lastly, section 6.5 reports on the hypotheses tested.

6.2 PILOT TESTING OF QUESTIONNAIRE

As discussed in chapter five, the initial questionnaire (refer to Annexure A) was pre-tested on a group of respondents that included experienced researchers, information technology practitioners, marketing lecturers, marketing practitioners and senior marketing students to determine its face validity and content validity. After making the required adjustments and refinements, the questionnaire was then piloted on two non-probability, judgement samples of respondents to examine its reliability. The first sample was made up of third year marketing students and the second of fourth year marketing students. One hundred and thirteen questionnaires were used in the first pilot study and fifty questionnaires in the second pilot study. The reliability of Internet marketing content elements was obtained by computing the Cronbach-alpha coefficient for the overall scale.

The results obtained in both pilot studies provide a satisfactory indication of reliability. The four-point scale returned a Cronbach alpha of 0.87 in the first pilot and a Cronbach alpha of 0.83 in the second pilot, both of which exceed the recommended level of 0.70

(Litwin, 1995: 31). In addition, the standardised alpha was computed at 0.88 in the first pilot and 0.83 in the second pilot, exceeding the suggested level of 0.70.

Further, the average inter-item correlation was computed at 0.20 in the first pilot and 0.15 in the second pilot, again both falling within the recommended range of 0.15 and 0.50 (Clark & Watson, 1995: 316). This, according to Churchill and Iacobucci (2002: 412, 413), indicates that the items in the scale are both sufficiently correlated to provide evidence of convergent validity, yet not so highly correlated from measures from which they are meant to differ, that is, there is evidence of discriminant validity. This implies that the research instrument does measure the construct that it is intended to measure – Internet marketing content elements relevant to generic undergraduate marketing students (refer to Section 5.6.1). Table 6.1 summarises the results of the two pilot studies.

Table 6.1 Summary of pilot test results

Valid N	Mean	Standard deviation	Cronbach alpha	Standardised alpha	Average inter-item correlation
Pilot one					
92	52.10	10.81	0.87	0.88	0.20
Pilot two					
45	53.44	9.77	0.83	0.83	0.15

6.3 PRELIMINARY DATA ANALYSIS

Prior to analysing a data set, a researcher is advised to conduct preliminary data analysis in the form of coding and tabulation.

6.3.1 Coding

Coding is the process of classifying and assigning values to each response on the research instrument. Typically, this involves designating number or letter symbols that facilitate the transfer of data from the research instrument into a format suitable for computer processing (Luck & Rubin, 1987: 342). In the questionnaire, questions are classified into four sections, section A – demographical data, section B – Internet marketing content elements data, section C - implementation data, and section D – learning outcomes data. The same questionnaire with regard to sections B, C, and D was administered on both the academic sample of respondents and the practitioner sample of respondents. The data requested from the two samples differed in section A. Table 6.2 below summarises the variable codes and assigned values.

Table 6.2 Coding

Section A: Demographical data - Academics			
Question	Code	Variable	Value assigned to responses
Question 1	A1	Institution	-
Question 2	A2	Function	Junior lecturer (1); Lecturer (2); Senior lecturer (3); Principle lecturer (4); Head of department (5); Other (6)
Question 3	A3	Subject specialisation	Marketing management (1); Consumer behaviour (2); Marketing research (3); Service marketing (4); Personal selling (5); Sales management (6); Business marketing (7); Internet marketing (8); Marketing communications (9); Other (10)
Question 4	A4	Lecturing experience	0-5 years (1); 6-10 years (2); 11-15 years (3); 16-20 years (4); 20 + years (5)
Question 5	A5	Staff members	-
Question 6	A6	Exposure to Internet marketing principles/ concepts	No exposure (0) (1) (2) (3) (4) (5) (6) (7) (8) (9) Fully conversant (10)

Table 6.2 Coding (continued ...)

Section A: Demographical data - Practitioners			
Question	Code	Variable	Value assigned to responses
Question 1	A1	Company name	-
Question 2	A2	Job title	-
Question 3	A3	Marketing experience	0-5 years (1); 6-10 years (2); 11-15 years (3); 16-20 years (4); 20+ years (5)
Question 4	A4	Exposure to Internet marketing principles/concepts	No exposure (0) (1) (2) (3) (4) (5) (6) (7) (8) (9) Fully conversant (10)
Section B: Internet marketing content elements - Academics and practitioners			
Question	Code	Construct measured	Value assigned to responses
Question 1	B1	Internet-driven marketing environmental changes	No response (0)
Question 2	B2		Highly relevant (1)
Question 3	B3		Relevant (2)
Question 4	B4		Slightly relevant (3)
Question 5	B5		Not relevant (4)
Question 6	B6	Principles guiding the use of Internet as a marketing tool	No response (0)
Question 7	B7		Highly relevant (1)
Question 8	B8		Relevant (2)
Question 9	B9		Slightly relevant (3)
Question 10	B10		Not relevant (4)
Question 11	B11		
Question 12	B12		
Question 13	B13		
Question 14	B14		
Question 15	B15		
Question 16	B16		
Question 17	B17		
Question 18	B18		
Question 19	B19		
Question 20	B20		
Question 21	B21		
Question 22	B22		
Question 23	B23		
Question 24	B24		
Question 25	B25		
Question 26	B26		
Question 27	B27		
Question 28	B28		
Question 29	B29		
Question 30	B30		Other

Table 6.2 Coding (continued ...)

Section C: Internet marketing content element implementation methods - Academics and practitioners			
Question	Code	Variable	Value assigned to responses
Question 1	C1	Implementation method	Integration into existing subjects (1) Separate marketing major (2) Separate compulsory module (3) Separate elective module (4) Separate marketing programme (5)
Section D: Learning outcomes for Internet marketing content elements - Academics and practitioners			
Question	Code	Variable	Value assigned to responses
Question 1 Question 2 Question 3	D1 D2 D3	Learning Outcomes	No response (0) Strongly disagree (1) Disagree (2) Agree (3) Strongly agree (4)

6.3.2 Tabulation

According to Churchill and Iacobucci (2002: 577), tabulation is basically the act of counting the number of responses per item, that is, performing a frequency analysis. This section reports on the frequency analysis conducted on items pertaining to Internet content elements – B1 to B30, item C1, pertaining to suitable implementation methods and items D1 – D3, pertaining to suggested learning outcomes for Internet marketing principles within generic undergraduate marketing programmes. The frequency table for marketing academics and marketing practitioners pertaining to Internet marketing content elements is set out below in table 6.3.

Table 6.3 Frequency table for marketing academics and marketing practitioners pertaining to Internet marketing content elements

Scale item	Marketing academics					Marketing practitioners				
	No response	Highly relevant	Relevant	Slightly relevant	Not relevant	No response	Highly relevant	Relevant	Slightly relevant	Not relevant
	0	1	2	3	4	0	1	2	3	4
B1	1	21	20	5	0	0	24	23	3	1
B2	1	20	22	4	0	1	20	25	3	2
B3	0	19	22	5	1	0	23	22	5	1
B4	0	23	21	3	0	0	18	23	9	1
B5	0	14	19	14	0	3	10	9	25	4
B6	0	27	17	3	0	0	26	20	3	2
B7	0	31	13	3	0	0	26	21	2	2
B8	0	21	22	3	1	2	23	16	8	2
B9	0	14	27	6	0	1	11	25	13	1
B10	0	20	17	10	0	2	14	20	11	4
B11	0	20	22	5	0	0	22	20	6	3
B12	0	23	16	8	0	0	23	22	5	1
B13	0	22	20	5	0	2	19	16	11	3
B14	1	30	14	2	0	1	30	16	3	1
B15	1	18	23	5	0	1	31	16	2	1
B16	1	10	23	12	1	1	18	19	9	4
B17	0	19	20	8	0	0	24	16	9	2
B18	0	17	23	6	1	0	18	24	7	2
B19	0	9	22	12	4	0	14	19	15	3
B20	1	23	16	6	1	0	27	12	5	7
B21	0	30	13	4	0	0	30	19	1	1
B22	0	27	12	8	0	0	10	31	8	2
B23	0	21	21	4	1	0	25	17	8	1
B24	0	19	17	11	0	0	11	24	12	4
B25	2	16	20	9	0	0	19	24	7	1
B26	0	22	20	5	0	0	33	12	5	1
B27	1	18	19	9	0	2	17	24	6	2
B28	1	27	12	7	0	1	25	17	5	3
B29	0	26	12	9	0	1	30	3	6	1
B30	47	0	0	0	0	51	0	0	0	0

The frequency table for marketing academics and marketing practitioners pertaining to suitable methods of implementing Internet marketing content elements within undergraduate marketing programmes is set out in table 6.4.

Table 6.4 Frequency table for marketing academics and marketing practitioners pertaining to implementation methods

		Marketing academics	Marketing practitioners
No response	0	1	0
Integrated into existing undergraduate marketing subjects	1	22	25
Separate marketing major within undergraduate marketing programmes	2	5	8
Compulsory core module within undergraduate marketing programmes	3	14	14
Separate elective module within undergraduate marketing programmes	4	3	4
Separate undergraduate marketing programme	5	2	0

Table 6.5 sets out the frequency table for marketing academics and marketing practitioners pertaining to learning outcomes of Internet marketing principles within undergraduate marketing programmes.

Table 6.5 Frequency table for marketing academics and marketing practitioners pertaining to learning outcomes

	Marketing academics					Marketing practitioners				
	No response	Strongly disagree	Disagree	Agree	Strongly agree	No response	Strongly disagree	Disagree	Agree	Strongly agree
	0	1	2	3	4	0	1	2	3	4
D1	1	1	0	18	27	0	4	0	17	30
D2	1	1	1	25	19	1	2	3	24	21
D3	1	3	3	21	19	1	4	7	21	18

6.4 DESCRIPTIVE ANALYSIS

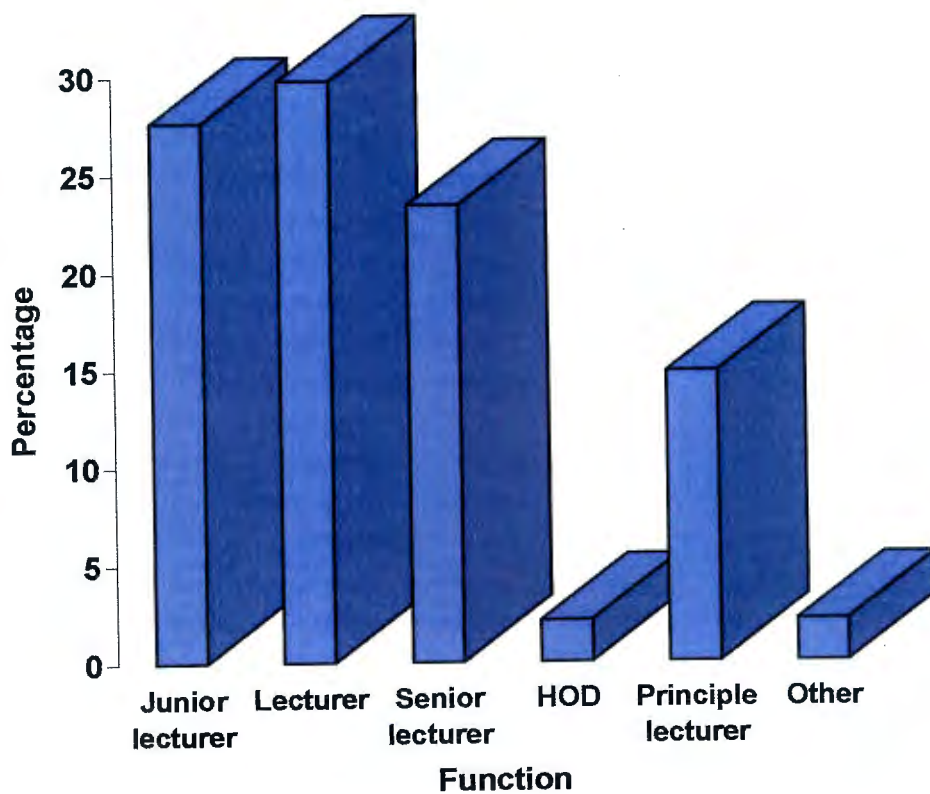
The purpose of descriptive statistics is to provide a summary of the data obtained from respondents (Welman & Kruger, 2001: 208), which then facilitates more in-depth analysis, including comparisons of data sets (Neter *et al.*, 1993: 69.) Typically, this involves conducting measures of central tendency and measures of dispersion (Luck & Rubin, 1987: 395). Descriptive statistics for the two samples are set out below. The first section involves the descriptive statistics of marketing academics and the second, those of marketing practitioners.

6.4.1 Descriptive statistics pertaining to marketing academics

The measures of central tendency and measures of dispersion for respondents in the marketing academic sample are presented in table 6.6. The minimum and maximum values presented refer to the respective response values for each variable.

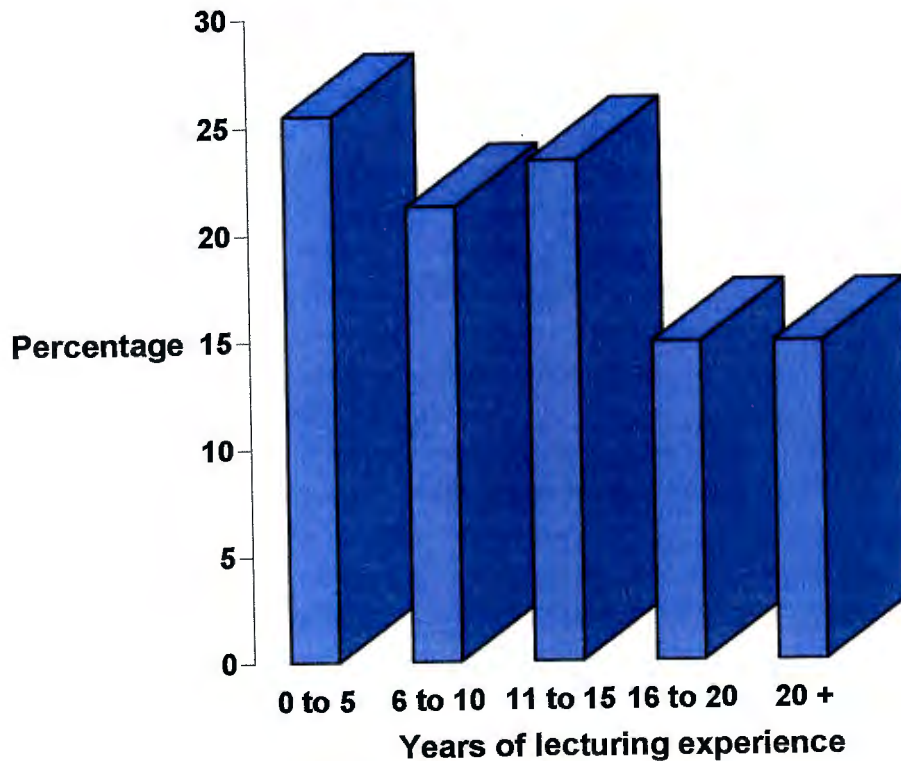
The majority, 30 percent, of the 47 marketing lecturers that responded to the questionnaire fell into the lecturer category, followed by 28 percent falling in the junior lecturer category and 23 percent in the senior lecturer category. Of the marketing academic respondents, 15 percent indicated that they were principle lecturers, 2 percent head of departments (HODs) and 2 percent fell in the other category. All 6 categories provided were thus covered. These results are graphically illustrated in figure 6.1 below.

Figure 6.1 Functions of marketing lecturers



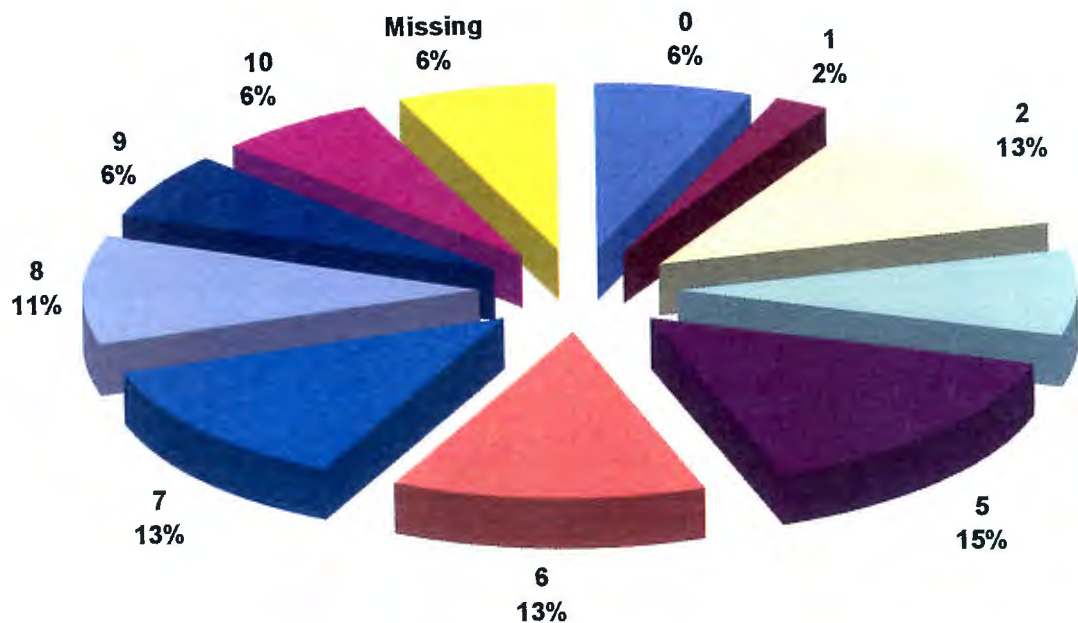
Regarding years of lecturing experience, 26 percent of the respondents indicated that they had between 0 and 5 years experience, 21 percent indicated between 6 and 10 years experience, and 23 percent between 11 and 15 years experience. Respondents in the 16-to-20 year lecturing experience category comprised 15 percent, as did those in the more than 20-year lecturing experience category. Marketing lecturers' years of lecturing experience are graphically illustrated in figure 6.2 below. As indicated in table 6.6, this gives a lecturing experience mean of 2.72, with the median being 3. Marketing lecturing experience of respondents is illustrated below in figure 6.2.

Figure 6.2 Marketing lecturing experience of marketing academic sample



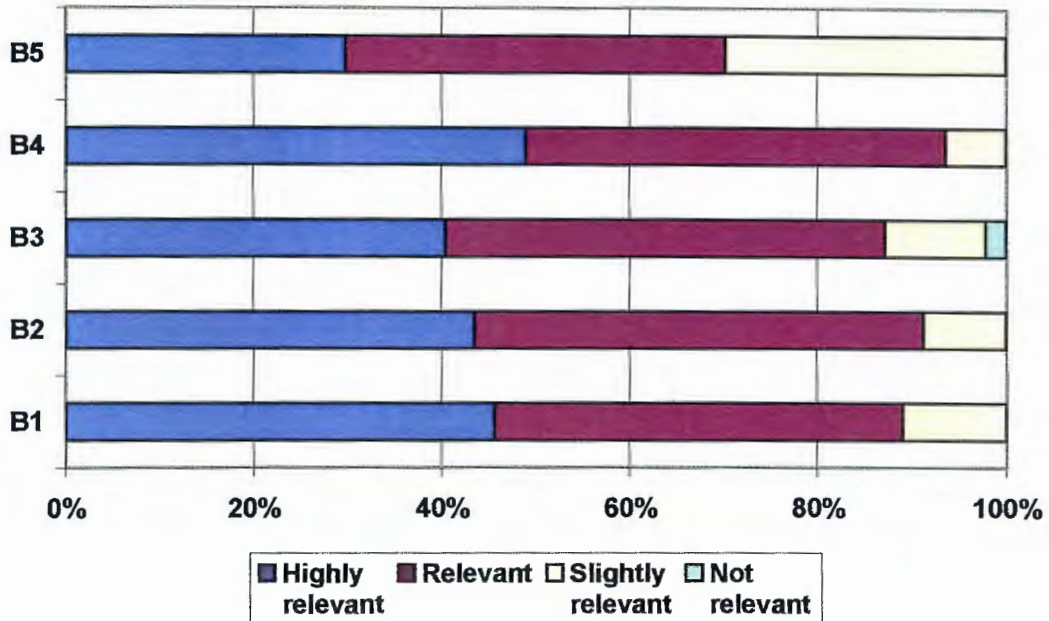
As reflected in table 6.6 and illustrated in figure 6.3, the mean exposure to Internet marketing principles/concepts was recorded as 5.43, with the median being 6. No or zero exposure to Internet marketing principles was indicated by 6 percent of respondents, while 13 percent indicated exposure levels of 2, 6 and 7 respectively. The percentage of respondents reporting to be being fully conversant with Internet marketing principles amounted to 6 percent. A total of 36 percent of these respondents indicated having an exposure level of 7 and higher. Of the responses received, 6 percent failed to answer this question.

Figure 6.3 Marketing lecturers' exposure to Internet marketing principles



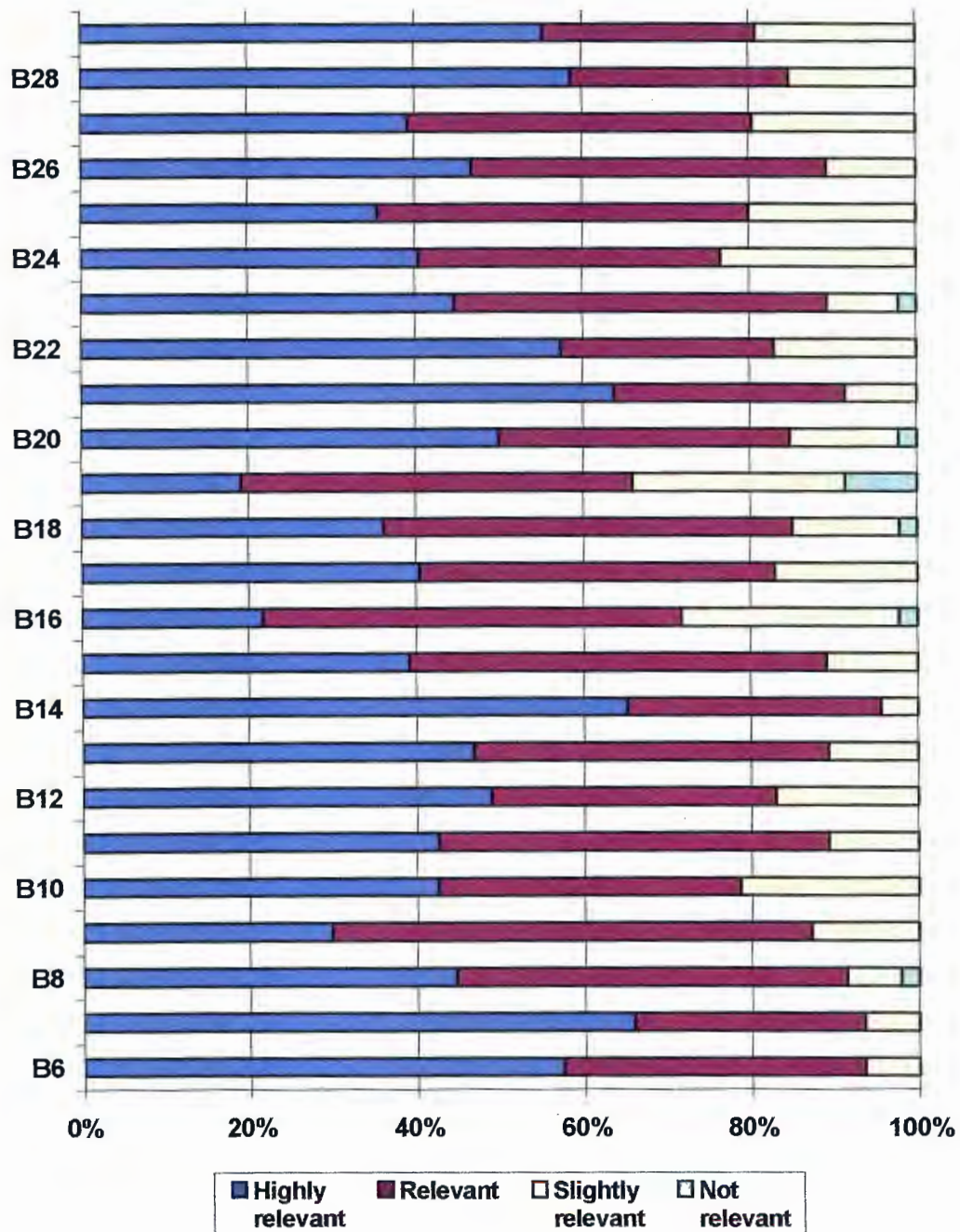
For the section dealing with the Internet-driven marketing environmental changes, construct 1 – B1 to B5 – the overall median computed was 1.60, with a mean of 1.73 and standard deviation of 0.44. This indicates that the majority of marketing lecturers judge these Internet marketing content elements to be relevant to generic undergraduate marketing students, as illustrated in figure 6.4 below. Greater standard deviation occurred on item B5, which deals with Internet's influence on the networked environment. For this question, the standard deviation was computed at 0.78. The lowest mean reported was 1.57 for B4, indicating that respondents in this sample place a high emphasis on the relevance of organisational buyers' use of the Internet to optimise their procurement activities.

Figure 6.4 Relevance of Internet-driven marketing environmental changes to generic undergraduate marketing students from a marketing academic viewpoint



For the section dealing with the construct 2, principles guiding the use of the Internet as a marketing tool – B6 to B29 – the overall median computed was 1.67, with a mean of 1.70 and standard deviation of 0.44. Again, this infers that respondents believe these content elements to be relevant to generic undergraduate marketing students. The computed median was 2 in 67 percent of the items and 1 in 29 percent of the items. Question B20 resulted in a 1.5 median due to one missing element resulting in an even number of readings. The lowest mean, and hence the highest indicated relevance occurred on question B14 that deals with the use of the Internet to improve service-marketing efforts. The highest reported mean, 2.23, and thus the lowest indicated relevance occurred on question B19, which relates to the use of the Internet to enhance the pricing process. This question also encountered the greatest amount of standard deviation at a level of 0.87. Figure 6.5 graphically illustrates the relevance of the principles guiding the use of the Internet as a marketing tool to generic undergraduate marketing students, from a marketing academic perspective.

Figure 6.5 Relevance of the principles guiding the use of the Internet as a marketing tool to generic undergraduate marketing students, from a marketing academic viewpoint



In section C, the median reading was 2 and the mean was computed at 2.09. A high standard deviation of 1.21 was encountered on this question. The majority of respondents, 48 percent, indicated that Internet marketing content elements should be integrated into existing undergraduate subject offerings. Even so, 30 percent indicated that it should rather be offered as a separate compulsory (core) module within undergraduate marketing programmes. Only 4 percent of respondents indicated that Internet marketing principles should be offered as a separate undergraduate marketing qualification.

For section D, the highest mean recorded was for D1, indicating that respondents strongly agreed that generic undergraduate marketing students should be knowledgeable regarding descriptive Internet marketing principles. While question D3, which relates to skill-based Internet marketing learning outcomes had a median of 3; it also had the lowest mean in this section, 3.22, and the highest standard deviation at 0.84. As discussed in chapter four, there is a split opinion as to whether generic marketers should be equipped with Internet technical skills or merely with knowledge of Internet marketing principles.

The majority (86 percent) of the median and mean values for items in the questionnaire are close in value, indicating the distribution to be fairly normal. Regarding measures of dispersion, the highest standard deviations occurred in items related to demographical data and in section C – suitable implementation methods. The kurtosis measures of peakedness of the value distributions indicate that all variables differ from zero, meaning that the distributions were either flat (negative) or more ‘punched-in’ than normal.

Table 6.6 Descriptive statistics: total marketing academic sample

Scale item	Valid N	Mean	Median	Minimum	Maximum	Standard deviation	Skewness	Kurtosis
A2	47	2.53	2.00	1.00	6.00	1.43	0.80	-0.33
A4	47	2.72	3.00	1.00	5.00	1.39	0.27	-1.14
A5	47	7.28	6.00	1.00	20.00	4.90	0.79	-0.31
A6	44	5.43	6.00	0.00	10.00	2.81	-0.32	-0.68
B1	46	1.65	2.00	1.00	3.00	0.67	0.55	-0.68
B2	46	1.65	2.00	1.00	3.00	0.64	0.46	-0.62
B3	47	1.74	2.00	1.00	4.00	0.74	0.79	0.52
B4	47	1.57	2.00	1.00	3.00	0.62	0.58	-0.54
B5	47	2.00	2.00	1.00	3.00	0.78	0.00	-1.33
B6	47	1.49	1.00	1.00	3.00	0.62	0.89	-0.16
B7	47	1.40	1.00	1.00	3.00	0.61	1.27	0.62
B8	47	1.66	2.00	1.00	4.00	0.70	0.98	1.32
B9	47	1.83	2.00	1.00	3.00	0.64	0.15	-0.50
B10	47	1.79	2.00	1.00	3.00	0.78	0.40	-1.23
B11	47	1.68	2.00	1.00	3.00	0.66	0.46	-0.68
B12	47	1.68	2.00	1.00	3.00	0.75	0.61	-0.97
B13	47	1.64	2.00	1.00	3.00	0.67	0.58	-0.65
B14	46	1.39	1.00	1.00	3.00	0.58	1.17	0.47
B15	46	1.72	2.00	1.00	3.00	0.66	0.37	-0.67
B16	46	2.09	2.00	1.00	4.00	0.76	0.18	-0.42
B17	47	1.77	2.00	1.00	3.00	0.73	0.40	-1.00
B18	47	1.81	2.00	1.00	4.00	0.74	0.66	0.28
B19	47	2.23	2.00	1.00	4.00	0.87	0.36	-0.38
B20	46	1.67	1.50	1.00	4.00	0.79	0.95	0.22
B21	47	1.45	1.00	1.00	3.00	0.65	1.18	0.29
B22	47	1.60	1.00	1.00	3.00	0.77	0.86	-0.76
B23	47	1.68	2.00	1.00	4.00	0.73	0.93	0.89
B24	47	1.83	2.00	1.00	3.00	0.79	0.32	-1.31
B25	45	1.84	2.00	1.00	3.00	0.74	0.26	-1.08
B26	47	1.64	2.00	1.00	3.00	0.67	0.58	-0.65
B27	46	1.80	2.00	1.00	3.00	0.75	0.34	-1.12
B28	46	1.57	1.00	1.00	3.00	0.75	0.92	-0.57
B29	47	1.64	1.00	1.00	3.00	0.79	0.76	-0.97
B30	0							
C	46	2.09	2.00	1.00	5.00	1.21	0.70	-0.53
D1	46	3.54	4.00	1.00	4.00	0.62	-1.62	4.35
D2	46	3.35	3.00	1.00	4.00	0.64	-0.99	2.46
D3	46	3.22	3.00	1.00	4.00	0.84	-1.14	1.17
Constructs	Valid N	Mean	Median	Minimum	Maximum	Standard deviation	Skewness	Kurtosis
Construct 1	47	1.73	1.60	1.00	2.80	0.44	0.32	-0.18
Construct 2	47	1.70	1.67	1.00	2.79	0.44	0.39	-0.30

6.4.2 Descriptive statistics pertaining to marketing practitioners

The measures of central tendency and measures of dispersion for respondents in the marketing practitioner sample are presented in table 6.8. The minimum and maximum values presented again refer to the respective response values for each variable.

Responses were received from companies that comprised 21 of the 39 sectors in South Africa. These sectors, together with the percentage of respondent companies falling within each sector are presented in table 6.7 below. Note that the percentages have been rounded-off.

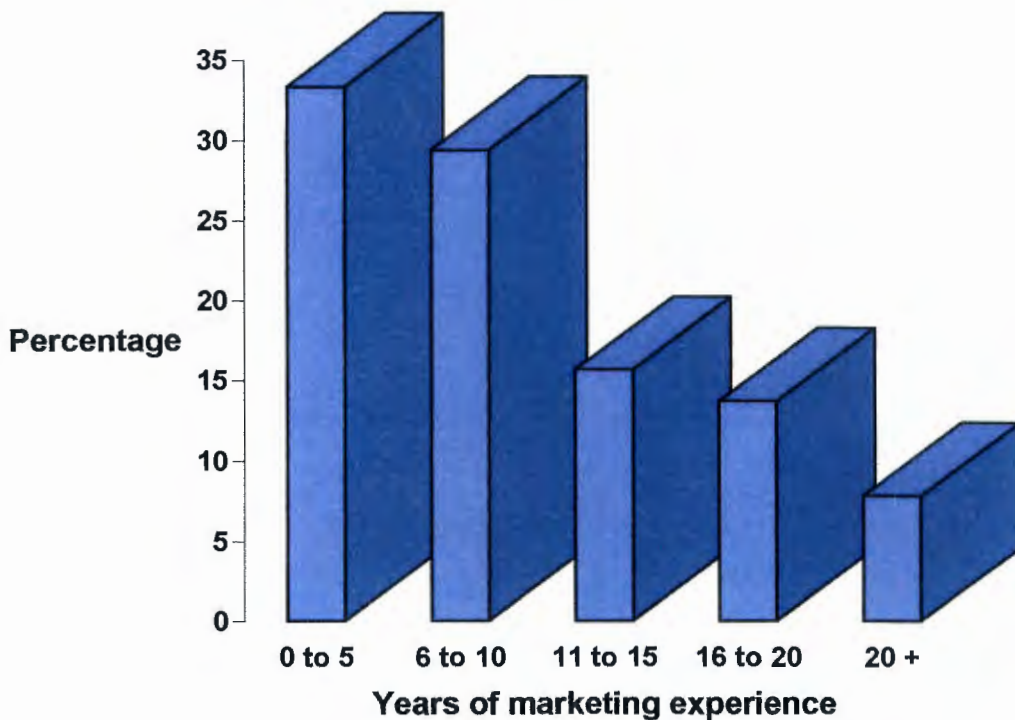
Table 6.7 Industry sectors represented by respondents

Sector		
1	Basic Industries – Chemicals	6%
2	Basic Industries - Steel & Other Metals	2%
3	Cyclical Consumer Goods - Automobiles & Parts	2%
4	Cyclical Consumer Goods - Household Goods & Textiles	4%
5	Cyclical Services - General Retailers	8%
6	Cyclical Services - Support Services	4%
7	Cyclical Services - Transport	6%
8	Financials - Banks	6%
9	Financials - Insurance	10%
10	Financials – Life assurance	10%
11	General Industrials - Diversified Industrials	2%
12	General Industrials - Electronic & Electrical Equipment	4%
13	Information Technology - Software & Computer Services	4%
14	Non-Cyclical Consumer Goods - Beverages	4%
15	Non-Cyclical Consumer Goods - Food Producers & Processors	6%
16	Non-Cyclical Consumer Goods - Health	4%
17	Non-Cyclical Services - Food & Drug Retailers	2%
18	Non-Cyclical Services - Telecommunication Services	2%
19	Resources - Mining – Gold Mining	6%
20	Resources - Mining – Other Mineral Extractors & Mines	6%
21	Resources - Oil & Gas – Oil & Gas	2%
	Total	100%

Regarding years of marketing experience, 33 percent of the respondents indicated that they had between 0 and 5 years experience, 29 percent indicated between 6 and 10 years experience, and 16 percent between 11 and 15 years experience. Respondents in the 16-to-20 year marketing experience category comprised 14 percent and those in the more

than 20-year marketing experience category comprised 8 percent. Practitioners' years of marketing experience are graphically illustrated in figure 6.6 below. As indicated in table 6.8, this gives a marketing experience mean of 2.33, with the median being 2.

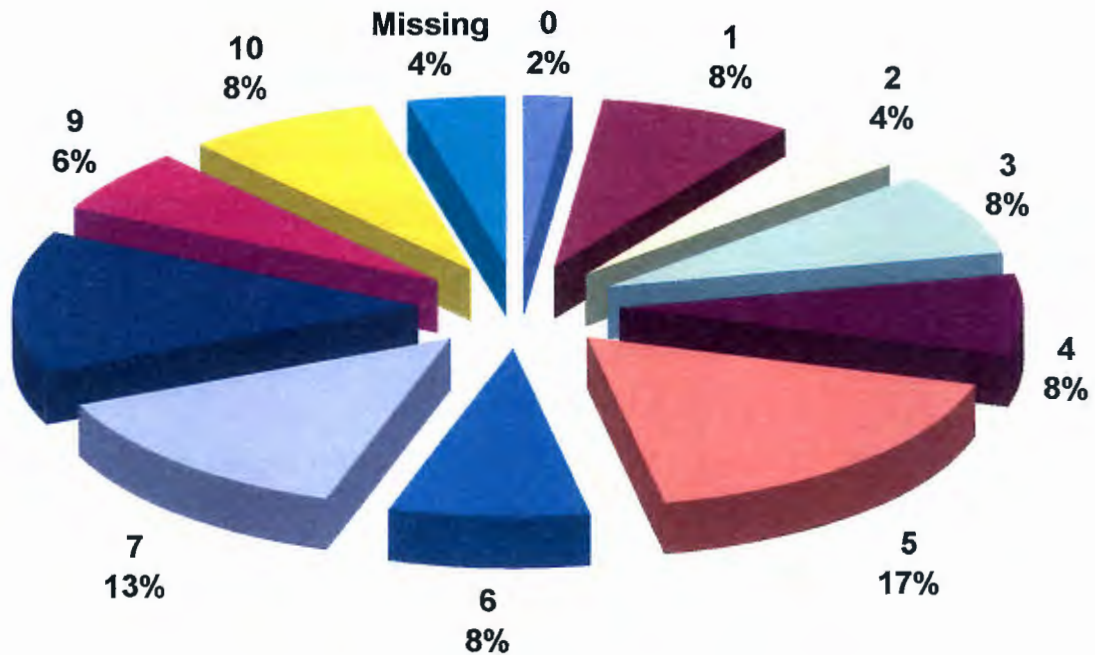
Figure 6.6 Marketing experience of practitioner sample



As reflected in table 6.8 and illustrated in figure 6.7, the mean exposure to Internet marketing principles/concepts was recorded as 5.65, with the median being 6. No or zero exposure to Internet marketing principles was indicated by 2 percent of the marketing practitioner respondents, while 18 percent indicated exposure levels of 5 and 14 percent reported an exposure level of 7 and 8 respectively. The percentage of marketing practitioner respondents reporting to be being fully conversant with Internet marketing principles amounted to 8 percent. A total of 41 percent of these respondents indicated having an exposure level of 7 and higher, which, compared to the 36 percent in the

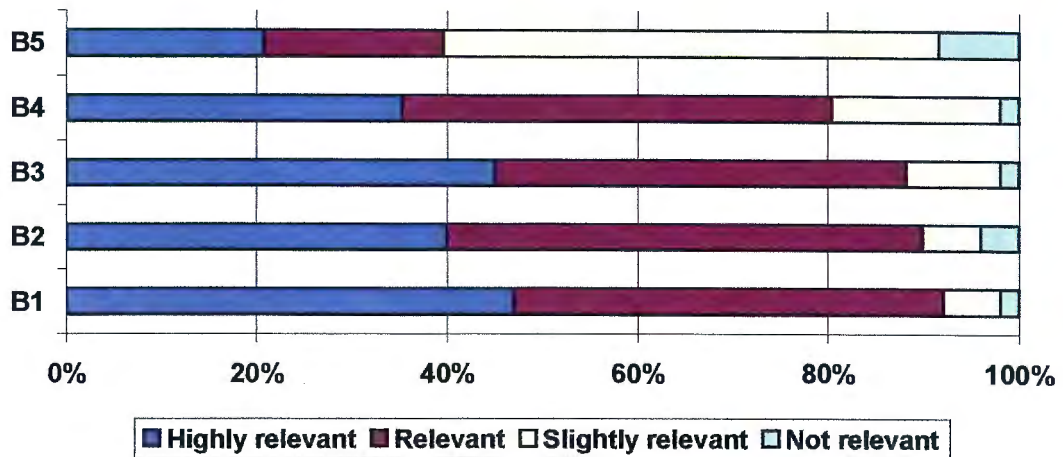
academic sample, indicates that this sample has a greater exposure to Internet marketing principles. Of the responses received 4 percent failed to answer this question.

Figure 6.7 Marketing practitioners' exposure to Internet marketing principles



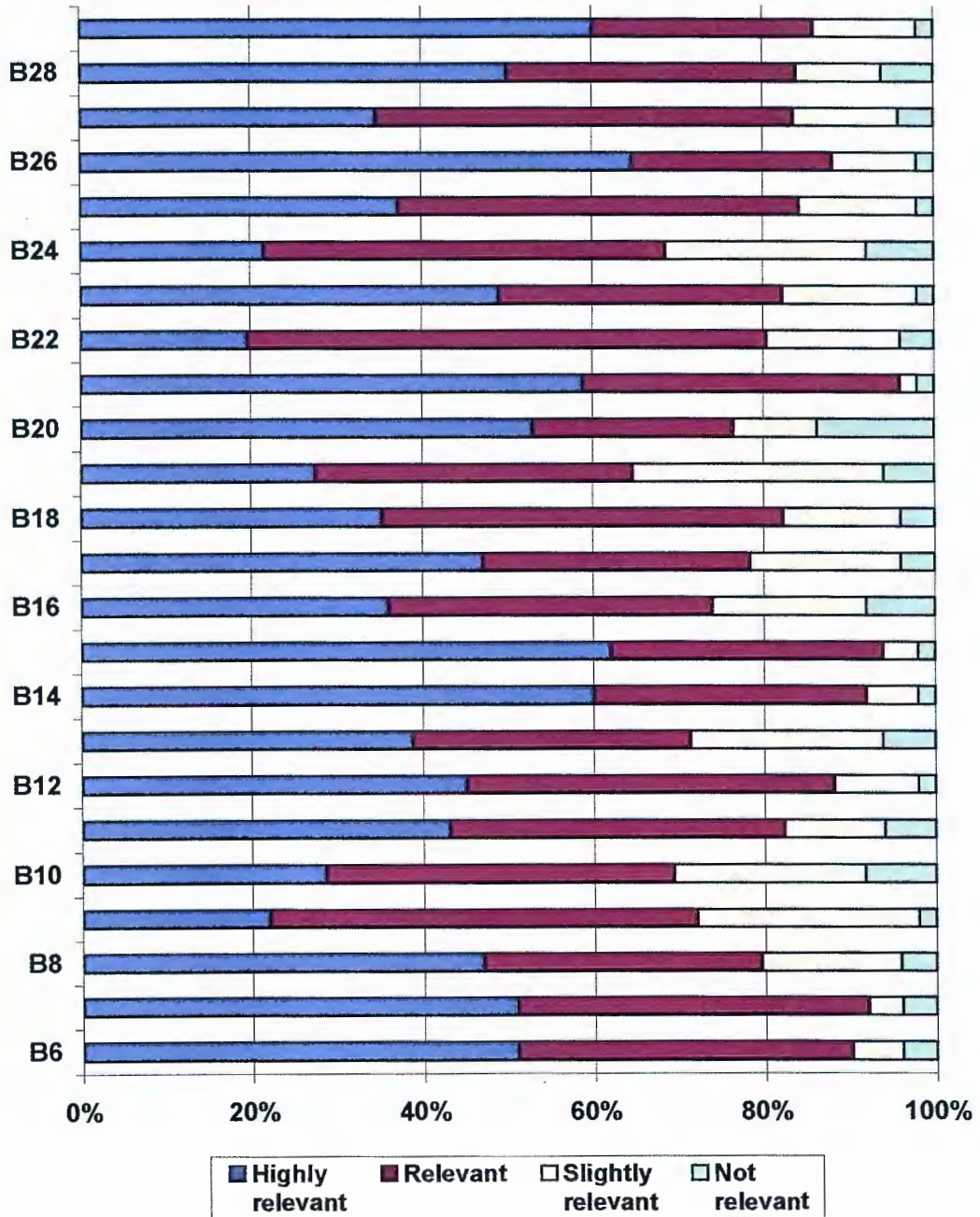
For the section dealing with the Internet-driven marketing environmental changes, construct 1 – B1 to B5 – the overall median computed was 1.80, with a mean of 1.88 and standard deviation of 0.52. The median point was 2 on the majority of items. The median dropped to 3 for B5, indicating that respondents judged Internet's influence on the networked environment to be only slightly relevant to generic undergraduate marketing students. This question also encountered the highest standard deviation, 0.92, and had the highest computed mean of 2.48. The lowest mean of 1.63 occurred for question B1. This infers that marketing practitioners view the Internet-accelerated global marketing environment to be highly relevant to generic undergraduate marketing students. Figure 6.8 graphically illustrates the relevance of Internet-driven marketing environmental changes to generic undergraduate marketing students from a marketing practitioner viewpoint.

Figure 6.8 Relevance of Internet-driven marketing environmental changes to generic undergraduate marketing students from a marketing practitioner viewpoint



For the section dealing with the principles guiding the use of the Internet as a marketing tool, construct 2 – B6 to B29 – the overall median computed was 1.75, with a mean of 1.80 and standard deviation of 0.54. The median was computed at 2 for 63 percent of the items and at 1 for 33 percent of the items. This infers that respondents believe these content elements to be relevant to generic undergraduate marketing students. The lowest mean, 1.46, and hence the highest indicated relevance occurred on question B15. This question deals with the use of Internet to augment the core market offering with customer-led added value. The highest mean, 2.18, and thus the lowest indicated relevance occurred on question B24. This question relates to the use of the Internet to enhance the management of sales management efforts. Question B16 encountered the greatest level of standard deviation in this section at 0.94. This question deals with utilising the Internet to implement a mass customisation strategy. Question B13, which relates to the use of online communities to enhance marketing efforts also encountered a high level of standard deviation at 0.93. The occurrence of high levels of standard deviations on certain items may be due to the wide range of industry sectors included in the sample. Figure 6.9 graphically illustrates the relevance of the principles guiding the use of the Internet as a marketing tool to generic undergraduate marketing students, from a marketing practitioner perspective.

Figure 6.9 Relevance of the principles guiding the use of the Internet as a marketing tool to generic undergraduate marketing students, from a marketing practitioner viewpoint



In section C, the median was 2 and the computed mean 1.94. This question encountered a high level of standard deviation at 1.05. One possible explanation for the high standard

deviation is that marketing practitioners may be unclear as to the education implications of the implementation approach options provided.

For section D, the highest mean recorded, 3.43, was for D1, indicating the respondents strongly agree that generic undergraduate marketing students should be knowledgeable regarding the descriptive Internet marketing principles. Question D3, which relates to skill based Internet marketing learning outcomes, again had the lowest recorded mean of 3.06 and again encountered the highest level of standard deviation at 0.91 for this section. This possibly reflects the same split opinion as discussed above with the marketing academic sample

As with marketing academics, the majority (86 percent) of the median and mean values for items in the questionnaire are close in value indicating the distribution to be fairly normal. Regarding measures of dispersion, the highest standard deviations occurred in items related to demographical data and in section C – suitable implementation methods. The kurtosis measures of peakedness of the value distributions indicates that all variables differ from zero, meaning that the distributions were either flat (negative) or more ‘punched in’ than normal.

Table 6.8 Descriptive statistics: total marketing practitioner sample

Scale item	Valid N	Mean	Median	Minimum	Maximum	Standard deviation	Skewness	Kurtosis
A3	51	2.33	2.00	1.00	5.00	1.29	0.68	-0.66
A4	49	5.65	6.00	0.00	10.00	2.70	-0.25	-0.73
B1	51	1.63	2.00	1.00	4.00	0.69	1.03	1.39
B2	50	1.74	2.00	1.00	4.00	0.75	1.08	1.59
B3	51	1.69	2.00	1.00	4.00	0.73	0.89	0.60
B4	51	1.86	2.00	1.00	4.00	0.78	0.51	-0.32
B5	48	2.48	3.00	1.00	4.00	0.92	-0.45	-0.81
B6	51	1.63	1.00	1.00	4.00	0.77	1.31	1.75
B7	51	1.61	1.00	1.00	4.00	0.75	1.39	2.29
B8	49	1.78	2.00	1.00	4.00	0.87	0.86	-0.13
B9	50	2.08	2.00	1.00	4.00	0.75	0.17	-0.46
B10	49	2.10	2.00	1.00	4.00	0.92	0.46	-0.55
B11	51	1.80	2.00	1.00	4.00	0.87	0.96	0.37

Table 6.8 Descriptive statistics: total marketing practitioner sample (continued ...)

Scale item	Valid N	Mean	Median	Minimum	Maximum	Standard deviation	Skewness	Kurtosis
B12	51	1.69	2.00	1.00	4.00	0.73	0.89	0.60
B13	49	1.96	2.00	1.00	4.00	0.93	0.56	-0.69
B14	50	1.50	1.00	1.00	4.00	0.71	1.44	2.08
B15	50	1.46	1.00	1.00	4.00	0.68	1.59	2.94
B16	50	1.98	2.00	1.00	4.00	0.94	0.66	-0.41
B17	51	1.78	2.00	1.00	4.00	0.88	0.81	-0.28
B18	51	1.86	2.00	1.00	4.00	0.80	0.74	0.29
B19	51	2.14	2.00	1.00	4.00	0.89	0.24	-0.80
B20	51	1.84	1.00	1.00	4.00	1.08	1.01	-0.34
B21	51	1.47	1.00	1.00	4.00	0.64	1.52	3.30
B22	51	2.04	2.00	1.00	4.00	0.72	0.61	0.84
B23	51	1.71	2.00	1.00	4.00	0.81	0.83	-0.19
B24	51	2.18	2.00	1.00	4.00	0.87	0.42	-0.34
B25	51	1.80	2.00	1.00	4.00	0.75	0.64	0.08
B26	51	1.49	1.00	1.00	4.00	0.76	1.47	1.48
B27	49	1.86	2.00	1.00	4.00	0.79	0.79	0.53
B28	50	1.72	1.50	1.00	4.00	0.88	1.15	0.68
B29	50	1.56	1.00	1.00	4.00	0.79	1.24	0.70
B30	0							
C	51	1.94	2.00	1.00	4.00	1.05	0.56	-1.14
D1	51	3.43	4.00	1.00	4.00	0.85	-1.78	2.88
D2	50	3.28	3.00	1.00	4.00	0.76	-1.11	1.58
D3	50	3.06	3.00	1.00	4.00	0.91	-0.79	-0.04
Constructs	Valid N	Mean	Median	Minimum	Maximum	Standard deviation	Skewness	Kurtosis
Construct 1	51	1.88	1.80	1.00	4.00	0.52	1.41	4.45
Construct 2	51	1.80	1.75	1.00	4.00	0.54	1.68	4.93

6.4.3 Reliability and validity analysis of main survey

The Cronbach alpha of the overall scale is computed as 0.94 for the marketing academic sample and 0.94 for the marketing practitioner sample, both well above the recommended level of 0.7 (Section 5.6.1). At the construct level, the Cronbach alpha remained high for construct 2 at 0.94 for the academic sample and 0.94 for the practitioner sample. For construct 1, there was a drop in the Cronbach alpha to 0.66 for the academic sample and 0.71 for the practitioner sample. As explained by Peter (1979), the computed level of reliability is often lower on scales containing only a few items. Given that construct 1 contained only 5 items and given how near the computed alpha is to the recommended

level of 0.7, the reliability of construct 1 is taken as acceptable. What is important here is that the computed Cronbach alpha of the overall scale for both samples is high, as is the standardised alpha computed as 0.94 for the academic sample and 0.94 for the practitioner sample.

Question 30 was included in the scale as an open-ended question, requesting respondents to indicate if any other Internet marketing content element should be included. As no response was received on this question in neither the initial pre-testing of the questionnaire or in the main survey, it is reasonable to conclude that the scale exhibits content validity.

Regarding construct validity, the average inter-item correlation for the overall scale was computed as 0.36 for the academic sample and 0.37 for the practitioner sample. This indicates that the items in the scale are both sufficiently correlated to suggest convergent validity, yet not so highly correlated from measures from which they are meant to differ, that is, there is evidence of discriminant validity (Churchill & Iacobucci, 2002: 412, 413). This implies that the research instrument does measure the construct that it is intended to measure – Internet marketing content elements relevant to generic undergraduate marketing students (refer to Section 5.6.1). For the academic sample, the average inter-item correlation coefficient is computed as 0.29 for construct 1 and 0.39 for construct 2. For the practitioner sample, the average inter-item correlation coefficient is computed as 0.34 for construct 1 and 0.39 for the second construct. This infers that the items within each construct are sufficiently highly correlated to assume convergent validity, while simultaneously not too highly correlated that they fail to capture distinguishable traits. Further, a strong correlation between the two constructs, computed at 0.68, is indicative that both constructs converge on a common construct - Internet marketing content elements relevant to generic undergraduate marketing students. Convergent validity is further suggested by the high Cronbach alpha computed on the overall scale for both samples. Table 6.9 provides a summary of the reliability and validity measures of the overall scale for both samples.

Table 6.9 Summary of the reliability and validity measures of the overall scale

	Marketing academic sample	Marketing practitioner sample
Valid N	40	41
Mean	49.38	51.32
Standard deviation	12.55	14.29
Standardised alpha	0.94	0.94
Cronbach alpha	0.94	0.94
Average inter-item correlation	0.36	0.37

Table 6.10 provides a summary of the reliability and validity measures of construct 1 and 2 for both samples.

Table 6.10 Summary of the reliability and validity measures of construct 1 and 2

	Marketing academic sample	Marketing practitioner sample
Construct 1		
Valid N	46	48
Mean	8.61	9.29
Standard deviation	2.24	2.64
Standardised alpha	0.66	0.71
Cronbach alpha	0.66	0.71
Average inter-item correlation	0.29	0.34
Construct 2		
Valid N	41	43
Mean	40.49	42.35
Standard deviation	11.07	12.31
Standardised alpha	0.94	0.94
Cronbach alpha	0.94	0.94
Average inter-item correlation	0.40	0.39

Table 6.11 below reflects that the deletion of any of the items would have done little if anything at all to improve the reliability and validity of the overall scale.

Table 6.11 Change in reliability and validity measures if items are eliminated

Scale item	Marketing academic sample					Marketing practitioner sample				
	Mean if Deleted	Variance if deleted	Standard deviation if deleted	Item-to-total correlation	Alpha if deleted	Mean if deleted	Variance if deleted	Standard deviation if deleted	Item-to-total correlation	Alpha if deleted
B1	47.68	145.42	12.06	0.47	0.94	49.71	189.62	13.77	0.48	0.94
B2	47.75	141.89	11.91	0.72	0.94	49.63	188.52	13.73	0.52	0.94
B3	47.70	149.31	12.22	0.21	0.94	49.73	188.83	13.74	0.55	0.94
B4	47.83	145.24	12.05	0.52	0.94	49.51	191.52	13.84	0.35	0.94
B5	47.40	146.74	12.11	0.34	0.94	48.80	188.84	13.74	0.38	0.94
B6	47.93	143.77	11.99	0.67	0.94	49.76	186.62	13.66	0.60	0.94
B7	47.98	148.77	12.20	0.31	0.94	49.76	184.14	13.57	0.70	0.94
B8	47.73	144.90	12.04	0.49	0.94	49.61	182.77	13.52	0.68	0.94
B9	47.58	145.44	12.06	0.54	0.94	49.20	186.60	13.66	0.60	0.94
B10	47.58	143.14	11.96	0.53	0.94	49.20	185.08	13.60	0.55	0.94
B11	47.75	145.19	12.05	0.50	0.94	49.54	184.15	13.57	0.63	0.94
B12	47.75	143.04	11.96	0.60	0.94	49.71	184.45	13.58	0.72	0.94
B13	47.73	142.85	11.95	0.66	0.94	49.41	184.68	13.59	0.58	0.94
B14	47.98	146.47	12.10	0.48	0.94	49.83	187.61	13.70	0.58	0.94
B15	47.73	144.80	12.03	0.57	0.94	49.85	186.66	13.66	0.67	0.94
B16	47.28	141.75	11.91	0.65	0.94	49.29	184.84	13.60	0.54	0.94
B17	47.55	141.60	11.90	0.65	0.94	49.51	183.27	13.54	0.63	0.94
B18	47.58	141.29	11.89	0.69	0.94	49.51	188.10	13.72	0.50	0.94
B19	47.13	142.56	11.94	0.50	0.94	49.27	184.93	13.60	0.57	0.94
B20	47.70	142.56	11.94	0.53	0.94	49.56	183.90	13.56	0.51	0.94
B21	47.88	141.91	11.91	0.70	0.94	49.85	188.81	13.74	0.58	0.94
B22	47.78	142.12	11.92	0.62	0.94	49.37	186.28	13.65	0.63	0.94
B23	47.63	139.48	11.81	0.78	0.93	49.68	186.02	13.64	0.59	0.94
B24	47.58	143.49	11.98	0.53	0.94	49.17	184.82	13.60	0.60	0.94
B25	47.50	139.85	11.83	0.78	0.93	49.59	184.49	13.58	0.72	0.94
B26	47.73	144.10	12.00	0.54	0.94	49.88	185.38	13.62	0.67	0.94
B27	47.58	139.19	11.80	0.78	0.93	49.49	184.59	13.59	0.63	0.94
B28	47.80	141.86	11.91	0.64	0.94	49.63	188.62	13.73	0.43	0.94
B29	47.78	142.37	11.93	0.58	0.94	49.83	184.97	13.60	0.69	0.94

6.5 HYPOTHESES TESTING

Significance tests are the methodology used to determine whether a specific sample's evidence is consistent with a hypothesis (a conjecture about the population). Significance tests give a critical point, which divides evidence supporting the proposition from that which does not. Given that the standard deviation of the population is unknown for both samples, the standard error is computed for the significance tests.

6.5.1 Statistical significance of the relevance of Internet content elements

To warrant coverage within undergraduate marketing programmes, more than half of each of the sample populations needs to be expected to judge the individual Internet marketing content elements to be relevant to generic undergraduate marketing students. The parameter of interest here is the proportion of respondents within each sample that consider the individual Internet marketing content elements to be relevant-to-highly relevant to generic undergraduate marketing students. The α risk is to be controlled at $p_0 = 0.6$. The following null and alternative hypotheses are formulated:

H₀₁: Less than 60 percent of marketing academics consider the individual Internet marketing content elements to be relevant to generic undergraduate marketing students.

H_{a1}: More than 60 percent of marketing academics consider the individual Internet marketing content elements to be relevant to generic undergraduate marketing students.

H₀₂: Less than 60 percent of marketing practitioners consider the individual Internet marketing content elements to be relevant to generic undergraduate marketing students.

H_{a2}: More than 60 percent of marketing practitioners consider the individual Internet marketing content elements to be relevant to generic undergraduate marketing students.

With p denoting the proportion of respondents that consider the individual Internet marketing content elements to be relevant to generic undergraduate marketing students, these translate into the following one-proportion statistical alternatives:

$H_0: p \leq 0.6$

$H_a: p > 0.6$

The significance level is set at the conventional 5 percent, that is, $\alpha = 0.05$ and the decision rules applied here are as follows:

If P-value $\geq \alpha$, conclude H_0 .

If P-value $< \alpha$, conclude H_a .

Using a one-proportion z-test, table 6.12 reports the observed proportion, z-score and related P-value for the marketing academic sample regarding the relevance of individual Internet marketing content elements to generic undergraduate marketing students.

Table 6.12 Relevance of individual Internet marketing content elements to generic undergraduate marketing students from a marketing academic perspective

Scale item	N	Relevant-to-highly relevant observed proportion	z-score	P-value
B1	46	0.89	4.08	0.000*
B2	46	0.91	4.38	0.000*
B3	47	0.87	3.81	0.000*
B4	47	0.94	4.70	0.000*
B5	47	0.70	1.43	0.076
B6	47	0.94	4.70	0.000*
B7	47	0.94	4.70	0.000*
B8	47	0.91	4.41	0.000*
B9	47	0.87	3.81	0.000*
B10	47	0.79	2.62	0.004*
B11	47	0.89	4.11	0.000*

Table 6.12 Relevance of individual Internet marketing content elements to generic undergraduate marketing students from a marketing academic perspective (continued ...)

Scale item	N	Relevant-to-highly relevant		z-score	P-value
		observed proportion			
B12	47	0.83		3.22	0.001*
B13	47	0.89		4.11	0.000*
B14	46	0.96		4.99	0.000*
B15	46	0.89		4.08	0.000*
B16	46	0.72		1.64	0.050
B17	47	0.83		3.22	0.001*
B18	47	0.85		3.51	0.000*
B19	47	0.66		0.83	0.202
B20	46	0.85		3.47	0.000*
B21	47	0.91		4.41	0.000*
B22	47	0.83		3.22	0.001*
B23	47	0.89		4.11	0.000*
B24	47	0.77		2.32	0.010*
B25	45	0.80		2.80	0.003*
B26	47	0.89		4.11	0.000*
B27	46	0.80		2.86	0.002*
B28	46	0.85		3.47	0.000*
B29	47	0.81		2.92	0.002*

*Statistically significant at $p < 0.05$

Table 6.12 reflects that the majority (93 percent) of the Internet marketing content elements are considered relevant by marketing academics, with P-values being statistically significant at $p < 0.05$. For these items, the null hypothesis, H_0 , is rejected and alternative hypothesis, H_a , concluded as their P-values lend support to H_a . Item

B5 is non-significant, with a P-value of $p = 0.076 > 0.05$ and, thus, the null hypothesis H_0 cannot be rejected. The same holds true for items B16 and B19, which are non-significant with P-values of $p = 0.05 = 0.05$ and $p = 0.202 > 0.05$, respectively. For these items, there is a failure to reject the null hypothesis, H_0 . Thus, with the exception of B5, B16 and B19, at a 95 percent confidence interval this infers that marketing academics consider the individual Internet marketing content elements to be relevant to generic undergraduate marketing students.

Table 6.13 reports the observed proportion, z-score and related P-value for the marketing practitioner sample regarding the relevance of individual Internet marketing content to generic undergraduate marketing students.

Table 6.13 Relevance of individual Internet marketing content elements to generic undergraduate marketing students from a marketing practitioner perspective

Scale item	N	Relevant-to-highly relevant observed proportion	z-score	P-value
B1	51	0.92	4.50	0.000*
B2	50	0.90	4.20	0.000*
B3	51	0.88	3.95	0.000*
B4	51	0.80	2.85	0.002*
B5	48	0.40	-2.86	0.998
B6	51	0.90	4.23	0.000*
B7	51	0.92	4.50	0.000*
B8	49	0.80	2.74	0.003*
B9	50	0.72	1.68	0.047*
B10	49	0.69	1.31	0.094
B11	51	0.82	3.13	0.001*

Table 6.13 Relevance of individual Internet marketing content elements to generic undergraduate marketing students from a marketing practitioner perspective (continued ...)

Scale item	N	Relevant-to-highly relevant		z-score	P-value
		observed proportion			
B12	51	0.88		3.95	0.000*
B13	49	0.71		1.60	0.055
B14	50	0.92		4.48	0.000*
B15	50	0.94		4.76	0.000*
B16	50	0.74		1.96	0.025*
B17	51	0.78		2.58	0.005*
B18	51	0.82		3.13	0.001*
B19	51	0.65		0.66	0.255
B20	51	0.76		2.30	0.011*
B21	51	0.96		5.05	0.000*
B22	51	0.80		2.85	0.002*
B23	51	0.82		3.13	0.001*
B24	51	0.69		1.21	0.114
B25	51	0.84		3.40	0.000*
B26	51	0.88		3.95	0.000*
B27	49	0.84		3.31	0.000*
B28	50	0.84		3.36	0.000*
B29	50	0.86		3.64	0.000*

*Statistically significant at $p < 0.05$

Table 6.13 reflects that marketing practitioners consider the majority (83 percent) of the Internet marketing content elements to be relevant to generic undergraduate marketing students, with P-values being statistically significant at $p < 0.05$. For these items, the null

hypothesis, H_{o2} , is rejected and the alternative hypothesis, H_{a2} , concluded as their P-values lends support to H_{a2} . As was the case with the marketing academic sample, items B5 and B19 are non-significant, with P-values of $p = 0.998 > 0.05$ and $p = 0.225 > 0.05$ respectively. Further, item B10 is not statistically significant at $p = 0.094 > 0.05$, nor is item B13 at $p = 0.055 > 0.05$, nor item B24 at $p = 0.114 > 0.05$. Thus, for items B5, B10, B13, B19 and B24 there is a failure to reject the null hypothesis H_{o2} . With the exception of B5, B10, B13, B19 and B24, at a 95 percent confidence interval this infers that more than half of marketing practitioners consider the individual Internet marketing content elements to be relevant to generic undergraduate marketing students.

While it appears that both samples consider most of the individual Internet marketing content elements to be relevant to generic undergraduate marketing students, the question remains as to whether or not there is sufficient support to conclude that construct 1 and construct 2 are relevant. To answer this question requires the formulation and testing of hypotheses about means.

Given this, the following null and alternative hypotheses are formulated:

- H_{o3}*:** Content elements regarding construct 1 - Internet-driven marketing environmental changes - are not considered relevant to generic undergraduate marketing students from a marketing academic perspective.
- H_{a3}*:** Content elements regarding construct 1 - Internet-driven marketing environmental changes - are considered relevant to generic undergraduate marketing students from a marketing academic perspective.
- H_{o4}*:** Content elements regarding construct 2 - principles guiding the use of the Internet as a marketing tool - are not considered relevant to generic undergraduate marketing students from a marketing academic perspective.

- Ha4:** Content elements regarding construct 2 - principles guiding the use of the Internet as a marketing tool - are considered relevant to generic undergraduate marketing students from a marketing academic perspective.
- Ho5:** Content elements regarding construct 1 - Internet-driven marketing environmental changes - are not considered relevant to generic undergraduate marketing students from a marketing practitioner perspective.
- Ha5:** Content elements regarding construct 1 - Internet-driven marketing environmental changes - are considered relevant to generic undergraduate marketing students from a marketing practitioner perspective.
- Ho6:** Content elements regarding construct 2 - principles guiding the use of the Internet as a marketing tool - are not considered relevant to generic undergraduate marketing students, from a marketing practitioner perspective.
- Ha6:** Content elements regarding construct 2 - principles guiding the use of the Internet as a marketing tool - are considered relevant to generic undergraduate marketing students from a marketing practitioner perspective.

Given the scale values used of 1 = highly relevant; 2 = relevant; 3 = slightly relevant and; 4 = not relevant, these translate into the following one-sided statistical null and alternative hypotheses:

$$H_0: \mu \geq 3$$

$$H_a: \mu < 3$$

The significance level is again set at the conventional 5 percent, that is, $\alpha = 0.05$ and the decision rules applied here are as follows:

If P-value $\geq \alpha$, conclude H_0 .

If P-value $< \alpha$, conclude H_a .

Table 6.14 below sets out the relevance of construct 1 – Internet-driven marketing environmental changes - and construct 2 – principles guiding the use of the Internet as a marketing tool, from a marketing academic and marketing practitioner perspective.

Table 6.14 Relevance of constructs 1 and 2 from a marketing academic and marketing practitioner perspective

	N	Mean	Standard deviation	Standard error	t-test	P-value
Marketing academics						
Construct 1: Internet-driven marketing environmental changes	47	1.73	0.44	0.064	-19.84	0.0000*
Construct 2: Principles guiding the use of the Internet as a marketing tool	47	1.70	0.44	0.064	-20.31	0.0000*
Marketing practitioners						
Construct 1: Internet-driven marketing environmental changes	51	1.88	0.52	0.073	-15.34	0.0000*
Construct 2: Principles guiding the use of the Internet as a marketing tool	51	1.80	0.54	0.076	-15.79	0.0000*
*Statistically significant at $p < 0.05$						

Table 6.14 reflects that construct 1 for marketing academics is statistically significant with $p = 0.0000 < 0.05$. Thus, H_{03} is rejected and H_{a3} concluded. Construct 2 for marketing academics is also statistically significant with $p = 0.0000 < 0.05$. H_{04} is rejected and H_{a4} concluded. For the marketing practitioner sample, construct 1 at a 95 percent confidence limit appears to be statistically significant with $p = 0.0000 < 0.05$. H_{05} is rejected and H_{05} concluded. Construct 2 for marketing practitioners is also statistically significant with $p = 0.0000 < 0.05$. H_{06} is thus rejected and H_{a6} concluded.

6.5.2 Comparison of responses between the marketing academic sample and the marketing practitioner sample

Comparative analysis was undertaken to determine the degree of convergence or divergence between the responses of the two samples. Two forms of tests were utilised, namely the Student's t-test and Cohen's d-statistic. The Student's t-test was used to establish the possible statistical significance between the mean scores of the two samples in relation to the items pertaining to Internet-driven marketing environmental changes, principles guiding the use of the Internet as a marketing tool, implementation method and learning outcomes. The Student's t-test was then used to establish the possible statistical significance between the proportions of the two samples in relation to the items pertaining to Internet-driven marketing environmental changes and principles guiding the use of the Internet as a marketing tool that are considered relevant-to-highly relevant to generic undergraduate marketing students.

Even though the statistical significance test is commonly used to accept or reject hypotheses, it is increasingly common to also establish practical significance (Ofori-Dankwa & Tierman, 2002). This involves using the effect size to establish practical significance (Churchill & Iacobucci, 2002: 665). Cohen's d-statistic can be used to compute the effect size in order to determine if the difference between sample means and proportions are practically significant, where:

$0.20 \leq d < 0.50$ – small effect, practically non-significant,

$0.50 \leq d < 0.80$ – medium effect, moving toward practical significance, and

$0.80 \leq d$ – large effect, practically significant (Ofori-Dankwa & Tierman, 2002).

Table 6.15 below reports on the findings regarding the statistical and practical significance of the differences between the mean scores of the two samples – marketing academics and marketing practitioners – for the overall scale.

Table 6.15 Statistical and practical significance differences of the mean scores between the marketing academic and marketing practitioner samples for overall scale

	Mean academics	Mean practitioners	df	P-variances	t-value	P-value	d-statistic
B1	1.6522	1.6275	95	0.8623	0.1779	0.8592	****
B2	1.6522	1.7400	94	0.2809	-0.6142	0.5406	****
B3	1.7447	1.6863	96	0.9842	0.3928	0.6953	****
B4	1.5745	1.8627	96	0.1188	-2.0262	0.0455	0.372**
B5	2.0000	2.4792	93	0.2583	-2.7312	0.0076	0.520***
B6	1.4894	1.6275	96	0.1343	-0.9692	0.3349	****
B7	1.4043	1.6078	96	0.1695	-1.4629	0.1468	****
B8	1.6596	1.7755	94	0.1366	-0.7162	0.4756	****
B9	1.8298	2.0800	95	0.2581	-1.7638	0.0810	****
B10	1.7872	2.1020	94	0.2619	-1.8081	0.0738	****
B11	1.6809	1.8039	96	0.0618	-0.7814	0.4365	****
B12	1.6809	1.6863	96	0.8479	-0.0360	0.9713	****
B13	1.6383	1.9592	94	0.0272	-1.9233	0.0575	****
B14	1.3913	1.5000	94	0.1681	-0.8212	0.4136	****
B15	1.7174	1.4600	94	0.8325	1.8905	0.0618	****
B16	2.0870	1.9800	94	0.1460	0.6127	0.5416	****
B17	1.7660	1.7843	96	0.2006	-0.1120	0.9110	****
B18	1.8085	1.8627	96	0.6000	-0.3471	0.7293	****
B19	2.2340	2.1373	96	0.8190	0.5435	0.5880	****
B20	1.6739	1.8431	95	0.0333	-0.8704	0.3863	****
B21	1.4468	1.4706	96	0.9163	-0.1815	0.8564	****
B22	1.5957	2.0392	96	0.6368	-2.9451	0.0041	0.575***
B23	1.6809	1.7059	96	0.4654	-0.1609	0.8725	0.401**
B24	1.8298	2.1765	96	0.5302	-2.0671	0.0414	****
B25	1.8444	1.8039	94	0.9198	0.2665	0.7904	****
B26	1.6383	1.4902	96	0.4168	1.0190	0.3107	****
B27	1.8043	1.8571	93	0.7162	-0.3337	0.7394	****
B28	1.5652	1.7200	94	0.2743	-0.9226	0.3586	****
B29	1.6383	1.5600	95	0.9606	0.4883	0.6264	****
C	2.0870	1.9412	95	0.3253	0.6366	0.5259	****
D1	3.5435	3.4314	95	0.0324	0.7318	0.4661	****
D2	3.3478	3.2800	94	0.2568	0.4719	0.6381	****
D3	3.2174	3.0600	94	0.5805	0.8763	0.3831	****

* Statistically significant at $p < 0.05$

** Small effect, practically non-significant

*** Medium effect and moving toward practical significance

**** Cohen's d-statistic not calculated as the variable was not statistically significant

From table 6.15 it is clearly evident that a statistically significant difference between the marketing academic and marketing practitioner attitudes occurs on only four items. For items in construct 1, there is a statistically significant difference between the two samples for item B4, dealing with organisational buyers' use of the Internet to optimise procurement activities, where $p = 0.0455 < 0.05$. There is also a statistically significant difference between the two samples for item B5 that deals with Internet's influence on the networked environment, where $p = 0.0076 < 0.05$.

For items in construct 2, the principles guiding the use of the Internet as a marketing tool, a statistically significant difference occurred in item B22, dealing with Internet's use as an interactive marketing communication tool and with B24, dealing with Internet's use as a tool for enhancing the management of sales force efforts. With item B22, $p = 0.0041 < 0.05$ and with item B24, $p = 0.0414 < 0.05$. It is worthwhile noting here that for all four items where a statistical difference occurred it was due to marketing practitioners attaching a lower level of relevance to those items relative to marketing academics.

Computation of Cohen's d-statistic indicates that of these four items, only two exhibit a medium level of practical significance. Item B5 has a medium effect, moving toward practical significance at $d = 0.520$ and item B22 also has a medium effect, moving toward practical significance at $d = 0.575$. Item B4 only has a small effect at $d = 0.372$, as does item B24 at $d = 0.401$, indicating the difference for both items to be practically non-significant.

For all other items in the scale the differences between the mean scores of the two samples is both statistically and practically non-significant.

Table 6.16 below reports on the findings regarding the statistical and practical significance of the differences between the relevant-to-highly relevant observed proportions of the two samples – marketing academics and marketing practitioners – for the individual Internet marketing content elements.

Table 6.16 Statistical and practical significance differences between the relevant-to-highly relevant observed proportions of the marketing academic and marketing practitioner samples for Internet marketing content elements

	Pooled proportion	Pooled standard error	z-score	P-value	d-statistic
B1	0.8980	0.0612	0.4945	0.6895	**
B2	0.8878	0.0638	0.2044	0.5810	**
B3	0.8776	0.0663	0.1511	0.5600	**
B4	0.8673	0.0686	1.9282	0.9731	**
B5	0.5306	0.1009	3.0353	0.9988	**
B6	0.9184	0.0554	0.6179	0.7317	**
B7	0.9286	0.0521	0.2804	0.6104	**
B8	0.8367	0.0747	1.5920	0.9443	**
B9	0.7857	0.0830	1.8361	0.9668	**
B10	0.7245	0.0903	1.0334	0.8493	**
B11	0.8571	0.0708	0.9906	0.8391	**
B12	0.8571	0.0708	0.7429	0.7712	**
B13	0.7857	0.0830	2.1615	0.9847	**
B14	0.9184	0.0554	0.6597	0.7453	**
B15	0.8980	0.0612	0.7956	0.7869	**
B16	0.7143	0.0913	0.2475	0.5977	**
B17	0.8061	0.0799	0.5689	0.7153	**
B18	0.8367	0.0747	0.3684	0.6437	**
B19	0.6531	0.0962	0.1300	0.5517	**
B20	0.7959	0.0815	1.0200	0.8461	**
B21	0.9388	0.0485	0.9467	0.8281	**
B22	0.8163	0.0783	0.3304	0.6294	**
B23	0.8571	0.0708	0.9906	0.8391	**
B24	0.7245	0.0903	0.8821	0.8111	**
B25	0.8061	0.0799	0.5396	0.7053	**
B26	0.8878	0.0638	0.1765	0.5700	**
B27	0.7959	0.0815	0.3974	0.6545	**
B28	0.8265	0.0766	0.1022	0.5407	**
B29	0.8265	0.0766	0.6725	0.7494	**

* Statistically significant at $p < 0.05$

**Cohen's d-statistic not calculated as the variable was not statistically significant

Table 6.16 reflects that for all the items pertaining to Internet marketing content elements, the differences between the observed relevant-to-highly relevant proportions of the two samples are both statistically and practically non-significant.

In order to determine whether there is a statistically significant divergence between the two samples regarding the two constructs dealing with Internet marketing content elements, the following hypotheses are formulated:

Ho7: There is a no significant difference between the attitudes of marketing academics and the attitudes of marketing practitioners regarding the relevance of Internet-driven marketing environmental changes to generic undergraduate marketing students.

Ha7: There is a significant difference between the attitudes of marketing academics and the attitudes of marketing practitioners regarding the relevance of Internet-driven marketing environmental changes to generic undergraduate marketing students.

Ho8: There is no significant difference between the attitudes of marketing academics and the attitudes of marketing practitioners regarding the relevance of the principles guiding the use of the Internet as a marketing tool to generic undergraduate marketing students.

Ha8: There is a significant difference between the attitudes of marketing academics and the attitudes of marketing practitioners regarding the relevance of the principles guiding the use of the Internet as a marketing tool to generic undergraduate marketing students.

These translate into the following two-sided statistical null and alternative hypotheses:

$$H_0: \mu_2 - \mu_1 = 0$$

$$H_a: \mu_2 - \mu_1 \neq 0$$

The significance level is set at the conventional 5 percent, that is, $\alpha = 0.05$ and the decision rules applied here are as follows:

If P-value $\geq \alpha$, conclude Ho.

If P-value $< \alpha$, conclude Ha.

Table 6.17 below reports on the findings regarding the statistical and practical significance of the two samples – marketing academics and marketing practitioners.

Table 6.17 Statistical and practical significance differences of the mean scores between the marketing academic and marketing practitioner samples for constructs 1 and 2

Construct	Academic sample mean	Practitioner sample mean	df	Pooled standard error	t-value	P - value	d-statistic
Construct 1	1.73	1.88	96	0.0971	-1.545	0.0605	**
Construct 2	1.70	1.80	96	0.0992	-1.008	0.1562	**
* Statistically significant at $p < 0.05$							
**Cohen's d-statistic not calculated as the variable was not statistically significant							

For construct 1, the difference between the means of the two samples is statistically non-significant. At $p = 0.0605 > 0.05$, Ho5 cannot be rejected. For construct 2, the difference between the means of the two samples is again statistically non-significant. At $p = 0.1562 > 0.05$, Ho6 cannot be rejected. This means that respondents in the marketing academic and marketing practitioner sample did not vary much in their attitudes toward construct 1 and construct 2. This infers that there is a low level of divergence in attitudes between the two samples regarding both constructs.

6.6 SYNOPSIS

The objective of this chapter was to report on and interpret the empirical findings of the study. This included providing an overview of the results of the pilot tests in section 6.2 and a description of the preliminary data analysis process in section 6.3. Section 6.4

presented the descriptive analysis of the data sets, together with a discussion on the reliability and validity of the main survey. Section 6.5 reported on the significance tests.

The following chapter presents the recommendations and concluding remarks of this study.