Comparing the Personality Type of Design Students in the UK and Taiwan

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Abstract. This paper explores the use of personality type instruments, such as the Myers-Briggs Type Indicator in a cross-cultural analysis of UK and Taiwanese Design students. Personality typing is now widely used in the western business community for Human Resources, training, counseling and career planning, however very little information exists with regards to the Asian personality type. The results of this study have shown that the most important of the type preferences is the Sensing-iNtuitive (S-N) one, with its proven link to creativity.

Keywords: Cross-Cultural Research, Design Students, Myers-Briggs Type Indicator, Personality Type, Taiwan, Design Team Formation.

1 Introduction

The Myers-Briggs Type Indicator, MBTI® is the most widely known psychological typing instrument in use today. It has been estimated by Pittenger [1] that over 2 million copies were being sold annually in 1992. This has risen to an estimated 3.5 million annual sales worldwide [2]. The MBTI is now available in 19 languages, including Mandarin Chinese.

The MBTI has been around in one shape or another for over 60 years, and no other psychological testing instrument has been subjected to as many tests of reliability and validity [3-4]. However, it is fair to say that it has as many supporters as detractors [5]. The MBTI has been available in a number of different forms, as above, however, the basic four letter type coding has been consistent throughout the development of the instrument, this being one of its key strengths.

The MBTI is now available in a number of alternative formats: the standard type profile, the interpretive report, the interpretive report for organizations, the career report, work styles report and the team report. Over 400 books, guides and other materials are on offer to the researcher, trainer and student.

2 Method

In light of the information already presented, it was decided to conduct an ongoing study of UK and Taiwanese Design students and from this, compare the results.

The study involved data collection (2003-2006) from two centres, one based at Middlesex University in London, UK, and the other at the National Formosa University, Hu-Wei, Taiwan.

Table 1. Comparing the Taiwan results with an earlier study by Hwang & Hwang [6]

		Guardians		Artisans		Idealists		Rationals
TW		-		-		-		-
(1991)	E	36%	S	76.2%	T	61.3%	J	79.9%
N=280	I	64%	N	23.8%	F	38.7%	P	20.1%
TW		23.24%		21.08%		39.46%		16.22%
(2006)	E	35.14%	S	44.32%	T	31%	J	50%
N=185	I	64.86%	N	55.68%	F	68.65%	P	49.73%

2.1 Participants

The participants in London were based within the Product Design and Engineering department and consisted of FT students studying within three undergraduate

Table 2. SRTT Comparison of the UG students with the UK General Population

UK Undergrad Students: Product & Design Engineering
Compared to
UK General Population
N = 48

The Sixteen Complete Types

ISTJ	ISFJ	INFJ	INTJ
N = 10	N = 6	N = 2	N = 3
% = 20.83	% = 12.50	% = 4.17	% = 6.25
I = 1.52	I = 0.98	I = 2.43	I = 4.44

ISTP	ISFP	INFP	INTP
N = 0	N = 3	N = 3	N = 0
% = 0.00	% = 6.25	% = 6.25	% = 0.00
I = 0.00	I = 1.02	I = 1.96	I = 0.00

ESTP	ESFP	ENFP	ENTP
N = 3	N = 3	N = 4	N = 5
% = 6.25	% = 6.25	% = 8.33	% = 10.42
I = 1.08	I = 0.72	I = 1.32	I = 3.78

ESTJ	ESFJ	ENFJ	ENTJ
N = 1	N = 3	N = 1	N = 1
% = 2.08	% = 6.25	% = 2.08	% = 2.08
I = 0.20	I = 0.50	I = 0.76	I = 0.71

Note: ■ = 1 percent, I = self selection index, * = p < .05, ** = p < .01, *** = p < .001
Base N = 1634, Sample and Base are Independent.

Dichotomous Preferences

	N	%	I
E	21	43.75	0.84
I	27	56.25	1.18
S	29	60.42	0.79 **
N	19	39.58	1.68 **
T	23	47.92	1.04
F	25	52.08	0.96
J	27	56.25	0.97
P	21	43.75	1.05

Pairs and Temperaments

	N	%	I
IJ	21	43.75	1.48 *
IP	6	12.50	0.69
EP	15	31.25	1.33
EJ	6	12.50	0.44 *
ST	14	29.17	0.80
SF	15	31.25	0.78
NF	10	20.83	1.49
NT	9	18.75	1.96 *
SJ	20	41.67	0.84
SP	9	18.75	0.69
NP	12	25.00	1.70 *
NJ	7	14.58	1.65
TJ	15	31.25	1.10
TP	8	16.67	0.96
FP	13	27.08	1.11
FJ	12	25.00	0.84
IN	8	16.67	1.90
EN	11	22.92	1.55
IS	19	39.58	1.02
ES	10	20.83	0.56 *
ET	10	20.83	0.95
EF	11	22.92	0.75
IF	14	29.17	1.23
IT	13	27.08	1.13

Jungian Types (E)

	N	%	I
E - TJ	2	4.17	0.31
E - FJ	4	8.33	0.54
ES - P	6	12.50	0.86
EN - P	9	18.75	2.07 *

Jungian Types (I)

	N	%	I
I - TP	0	0.00	0.00
I - FP	6	12.50	1.34
IS - J	16	33.33	1.26
IN - J	5	10.42	3.34

Dominant Types

	N	%	I
Dt. T	2	4.17	0.19
Dt. F	10	20.83	0.84
Dt. S	22	45.83	1.12
Dt. N	14	29.17	2.39 ***

Sample Source: Stephen Prior, Ph.D., Middlesex University, London, 2004-2005.
Base Source: UK General Population, Elizabeth Kendall, Myers-Briggs Type Indicator Manual Supplement, OPP Ltd, 1998.

Table 3. SRTT Comparison of the PG students with the UK General population

UK Postgrad Students: Product & Design Engineering
Compared to
UK General Population
N = 38

The Sixteen Complete Types

ISTJ	ISFJ	INFJ	INTJ
N = 1	N = 2	N = 2	N = 6
% = 2.63	% = 5.26	% = 5.26	% = 15.79
I = 0.19	I = 0.41	I = 3.07	I = 11.22***
■■	■■■■■	■■■■■	■■■■■■■■■■■■■■■
ISTP	**ISFP**	**INFP**	**INTP**
N = 3	N = 0	N = 5	N = 2
% = 7.89	% = 0.00	% = 13.16	% = 5.26
I = 1.23	I = 0.00	I = 4.13	I = 2.15
■■■■■■■		■■■■■■■■■■■■■■■■■■■■	■■■■■
ESTP	**ESFP**	**ENFP**	**ENTP**
N = 4	N = 1	N = 2	N = 5
% = 10.53	% = 2.63	% = 5.26	% = 13.16
I = 1.81	I = 0.30	I = 0.83	I = 4.78
■■■■■■■■■■ ■■		■■■■■	■■■■■■■■■■■■■■■
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N = 2	N = 0	N = 0	N = 3
% = 5.26	% = 0.00	% = 0.00	% = 7.89
I = 0.51	I = 0.00	I = 0.00	I = 2.69
■■■■■			■■■■■■■

Note: ■ = 1 percent, I = self selection index, * = p < .05, ** = p < .01, *** = p < .001
Base N = 1634, Sample and Base are Independent.

Dichotomous Preferences

	N	%	I
E	17	44.74	0.86
I	21	55.26	1.16
S	13	34.21	0.45***
N	25	65.79	2.80***
T	26	68.42	1.49**
F	12	31.58	0.58**
J	16	42.11	0.72*
P	22	57.89	1.39*

Pairs and Temperaments

	N	%	I
IJ	11	28.95	0.98
IP	10	26.32	1.45
EP	12	31.58	1.34
EJ	5	13.16	0.46
ST	10	26.32	0.72
SF	3	7.89	0.20
NF	9	23.68	1.70
NT	16	42.11	4.41***
SJ	5	13.16	0.27
SP	8	21.05	0.78
NP	14	36.84	2.51***
NJ	11	28.95	3.28***
TJ	12	31.58	1.11
TP	14	36.84	2.11**
FP	8	21.05	0.87
FJ	4	10.53	0.35
IN	15	39.47	4.51***
EN	10	26.32	1.78*
IS	6	15.79	0.41**
ES	7	18.42	0.49*
ET	14	36.84	1.68*
EF	3	7.89	0.26
IF	9	23.68	1.00
IT	12	31.58	1.32

Jungian Types (E)

	N	%	I
E - TJ	5	13.16	0.99
E - FJ	0	0.00	0.00
ES - P	5	13.16	0.91
EN - P	7	18.42	2.03*

Jungian Types (I)

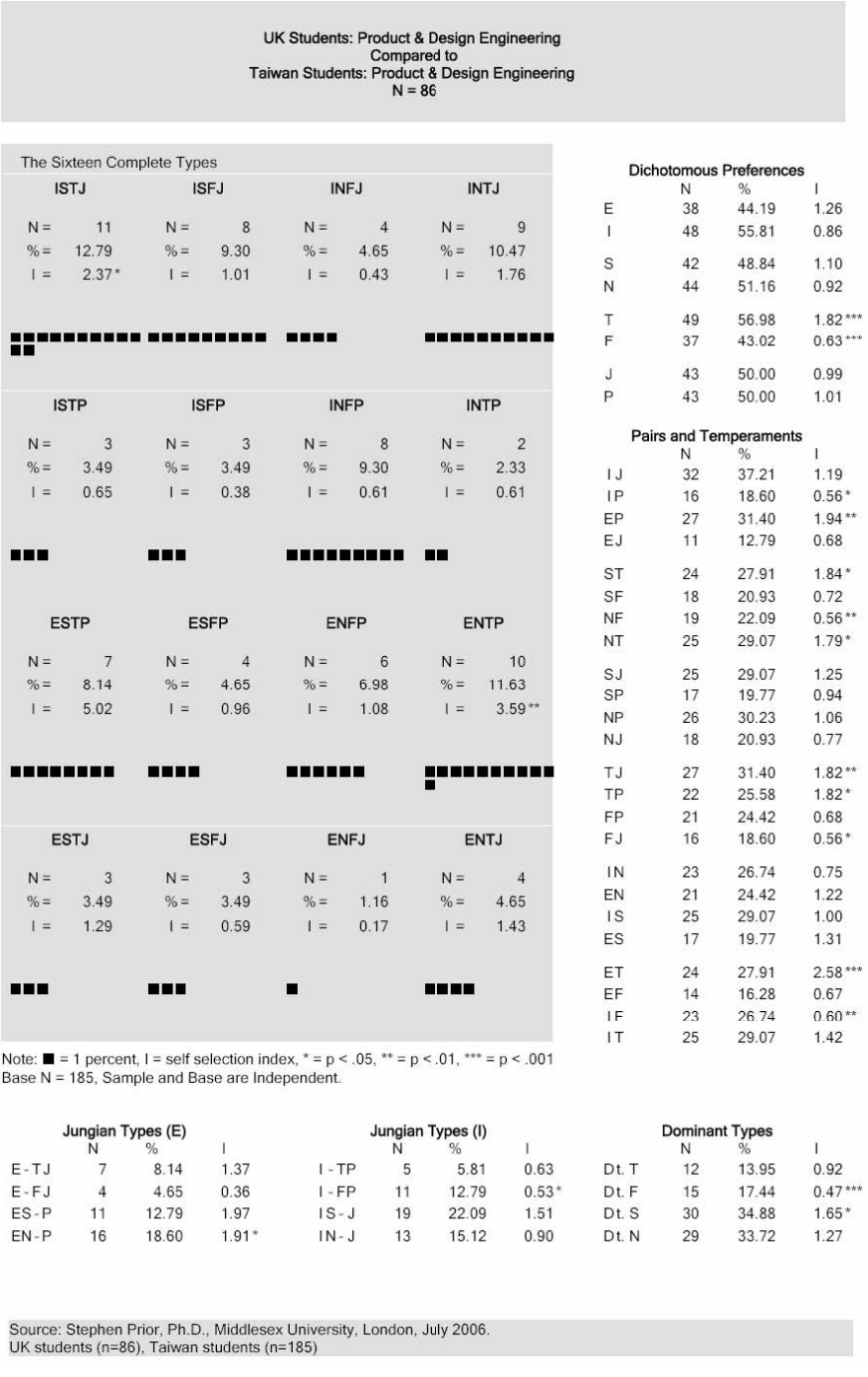
	N	%	I
I - TP	5	13.16	1.48
I - FP	5	13.16	1.41
IS - J	3	7.89	0.30
IN - J	8	21.05	6.75***

Dominant Types

	N	%	I
Dt. T	10	26.32	1.18
Dt. F	5	13.16	0.53
Dt. S	8	21.05	0.51*
Dt. N	15	39.47	3.24***

Sample Source: Stephen Prior, Ph.D., Middlesex University, London, 2004-2005.
Base Source: UK General Population, Elizabeth Kendall, Myers-Briggs Type Indicator Manual Supplement, OPP Ltd, 1998.

Table 4. SRTT Comparison of the UK and Taiwanese student populations



UK Students: Product & Design Engineering
Compared to
Taiwan Students: Product & Design Engineering
N = 86

The Sixteen Complete Types

ISTJ	ISFJ	INFJ	INTJ
N = 11	N = 8	N = 4	N = 9
% = 12.79	% = 9.30	% = 4.65	% = 10.47
I = 2.37*	I = 1.01	I = 0.43	I = 1.76

ISTP	ISFP	INFP	INTP
N = 3	N = 3	N = 8	N = 2
% = 3.49	% = 3.49	% = 9.30	% = 2.33
I = 0.65	I = 0.38	I = 0.61	I = 0.61

ESTP	ESFP	ENFP	ENTP
N = 7	N = 4	N = 6	N = 10
% = 8.14	% = 4.65	% = 6.98	% = 11.63
I = 5.02	I = 0.96	I = 1.08	I = 3.59**

ESTJ	ESFJ	ENFJ	ENTJ
N = 3	N = 3	N = 1	N = 4
% = 3.49	% = 3.49	% = 1.16	% = 4.65
I = 1.29	I = 0.59	I = 0.17	I = 1.43

Note: ■ = 1 percent, I = self selection index, * = p < .05, ** = p < .01, *** = p < .001
Base N = 185, Sample and Base are Independent.

Dichotomous Preferences

	N	%	I
E	38	44.19	1.26
I	48	55.81	0.86
S	42	48.84	1.10
N	44	51.16	0.92
T	49	56.98	1.82***
F	37	43.02	0.63***
J	43	50.00	0.99
P	43	50.00	1.01

Pairs and Temperaments

	N	%	I
IJ	32	37.21	1.19
IP	16	18.60	0.56*
EP	27	31.40	1.94**
EJ	11	12.79	0.68
ST	24	27.91	1.84*
SF	18	20.93	0.72
NF	19	22.09	0.56**
NT	25	29.07	1.79*
SJ	25	29.07	1.25
SP	17	19.77	0.94
NP	26	30.23	1.06
NJ	18	20.93	0.77
TJ	27	31.40	1.82**
TP	22	25.58	1.82*
FP	21	24.42	0.68
FJ	16	18.60	0.56*
IN	23	26.74	0.75
EN	21	24.42	1.22
IS	25	29.07	1.00
ES	17	19.77	1.31
ET	24	27.91	2.58***
EF	14	16.28	0.67
IF	23	26.74	0.60**
IT	25	29.07	1.42

Jungian Types (E)

	N	%	I
E-TJ	7	8.14	1.37
E-FJ	4	4.65	0.36
ES-P	11	12.79	1.97
EN-P	16	18.60	1.91*

Jungian Types (I)

	N	%	I
I-TP	5	5.81	0.63
I-FP	11	12.79	0.53*
IS-J	19	22.09	1.51
IN-J	13	15.12	0.90

Dominant Types

	N	%	I
Dt. T	12	13.95	0.92
Dt. F	15	17.44	0.47***
Dt. S	30	34.88	1.65*
Dt. N	29	33.72	1.27

Source: Stephen Prior, Ph.D., Middlesex University, London, July 2006.
UK students (n=86), Taiwan students (n=185)

programmes (BA Product Design, BSc Engineering Product Design and BA Design and Technology) and two postgraduate programmes (MSc Design Engineering and MDes Product Design, Innovation and Management). The participants in Taiwan were based within the Multimedia department and consisted of FT students studying within two programmes (BA Multimedia Design, PGCE Multimedia Design). The Middlesex sample (UG n=48, m=81%, f=19%) (PG n=38, m=84%, f=16%) consisted of students from Years 3 and 4, whose ages ranged from 21-36 yrs, with a mean age of 23 yrs. The Taiwanese sample (n=185) (m=54%, f=46%) consisted of students from Years 1 and 2, whose ages ranged from 18-40 yrs, with a mean age of 24 yrs.

3 Discussion of the Results

When comparing the UK undergraduate students to the UK general population (Table 2), it can be seen that there is an over-representation of INTJ (I=4.44), ENTP (I=3.78), INFJ (I=2.43) and INFP (I=1.96). This supports the conclusions of earlier studies that design students are more Introverted and Intuitive. Analysis of the type table for the UK postgraduate students with the UK general population (Table 3) shows that there is a high over-representation of INTJ (I=11.22), ENTP (I=4.78), INFP (I=4.13) and INFJ (I=3.07). This also supports the conclusions of earlier studies that postgraduate design students are more Introverted, Intuitive, Thinking and Perceiving. Since there was no Taiwanese base population to compare the Taiwanese students with, it was decided to compare this data with the earlier study from Hwang & Hwang [6]. From the data in Table 1, it can be seen that the E-I preference is almost exactly the same, however, the S-N, T-F and J-P preferences are substantially different. In terms of the Keirsey temperaments, the (%) of Guardians is half that of the UK population, there is almost three times the (%) of Idealists and almost twice as many Rationals.

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