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Mini-project 2 report

Why E-Futures? Understanding the motivation of research students in doctoral training centres.

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Introduction

The main purpose of this study is to understand and clarify how 'regular-route' PhD students (in Psychology and Physics) might differ from 'new-route' PhD students (in E-Futures DTC). This research will be carried out with main focuses on the two areas of motivation and personality traits.

Recognizing what motivates individuals, alongside analyzing student's personality traits will help this research identify why these individuals chose the area which they want to do their PhD and what made them decide the medium and route they are in. (traditional and new route). The E-Futures organisers can benefit from this research, they can understand more about the student which is attracted to this programme and how to perhaps motivate students to make full use of opportunities.

Research Methodology

For this study a mixed method of quantitative method "interviews" and qualitative "survey" was used:

Questionnaire

60 students were participating in this research making the size of the participants quite large and ultimately making questionnaires as an ideal method of data gathering. One of the other factors is because of the nature of this research (individual personality traits used) and the sensitivity related to the confidentiality of the data gathered; it would be more appropriate to have additional anonymity that can be ensured through this method and participants can answer the question and feel safe about personal data being kept.

Online questionnaires and surveys if answered truthfully and correctly are valid and reliable means of assessing opinions.

Semi- Structured Interview

Interview can be defined as "an interchange of views between two or more people on a topic of mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situatedness of research data." Kvale (ibid.: 2002)

Ghuri and Grønhaug (2002) assert that interviews are often considered the best data collection methods and they are categorized into structured and unstructured interviews.

Literature review

For the purpose of this mini project the correlations between the factor sensation seeking and the Big Five Personality dimensions will be used to analyse the students selected for this research.

3.1 The Five-Factor Model of Personality

The five-factor model is probably the most widely accepted standard structure of traits. Tupes and Christal (1961) and Norman (1963) are well known for their testing and improving of the five-factor. It is important to understand that research in this area is very new and only in the past two decades have the big five traits become a serious area of study (Goldberg, 1990).

the Five-Factor Model has presented psychology students, lecturers and even professionals one of the most extensively conventional structure of personality in the last two decades. The big five traits as proposed by J.M Digman in 1990 are the following:

1. **Neuroticism**, often labelled by the positive pole of the trait Emotional Stability, is the tendency to show poor emotional adjustment in the form of stress, anxiety, and depression.
2. **Extraversion** represents the tendency to be sociable, dominant, and positive (Watson & Clark, 1997).
3. **Openness to Experience** symbolizes individuals who are creative, flexible, curious, and unconventional (McCrae, 1996).
4. **Agreeableness** characterizes the propensity to be kind, gentle, trusting and trustworthy, and warm.
5. **Conscientiousness**, are thorough individuals (Barrick & Mount, 1991), which are also orderly and deliberate (Costa & McCrae, 1992).

Arnett Inventory of Sensation Seeking (AISS)

Zuckerman (1994, p.27) described sensation seeking as the "seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal and financial risks for the sake of such experiences."

This indicates that people with high level of sensation seeking are drawn towards risk taking activities. Leigh (1999) (in Lejuez et al., 2002)

Arnett's (1994) conception of sensation seeking is defined by the need for novelty and intensity of stimulation and with that he managed to reconceptualized sensation seeking.

The AISS is a self-report scale which contains two main subscales intensity and novelty seeking. The intensity seeking part deals with the desire for intense sensory experiences and the novelty section is for the quest for new, different, spontaneous experiences.

Sensation seeking through the AISS will help identify risk takers on both its scale of novelty and intensity which affect student's decision making when it comes to the choice of their PhD. Using sensation seeking it is made possible to understand why a certain student chose to be in their comfort zone rather than pick a risky topic that has a chance of failure.

Motivations for doing a PhD

Many different incentives and motivations exist which explain why students decide to do PhDs in different ways:

Improving current occupation	Skills-Enhancement	To improve future career prospects
Becoming an academic	Hobby	High levels of funding
Low employment opportunities	Self-development	Personal fulfilment

Result and discussion

Questionnaire

The results in Table 8 are based on the outcome of the SPSS programme used to analyse the questionnaire results, in this section of the report each individual variable will be analysed.

Big Five Independent-Samples T-Test

Variables	Traditional Route PhD	New Route PhD	T-test result		
	Mean	Mean	df	Significance(p)	t statistic
Openness	37	35.87	44	.470	0.729
Neuroticism	27.04	26.79	44	.906	0.119
Extroversion	28.95	28.5	44	.731	0.346
Agreeableness	30.3	31.7	44	.113	-1.616
Conscientiousness	35.3	35.6	44	.829	-0.217
Sensation Seeking Sum	44.57	48.83	43	.027	-2.294
Sensation Seeking Novelty Subscale	20.57	23.04	43	.041	-2.110
Sensation Seeking Intensity Subscale	24	25.79	43	.118	-1.595

1)Openness "t (44)= 0.729, p = .470"

2)Neuroticism "t(44)= 0.119, p = .906"

3)Extroversion "t (44)= 0.346, p = .731"

4)Agreeableness "t (44) = -1.616, p = .113"

5)Conscientiousness t "(44) = 0.217, p = .829"

With reference to the figures listed in Table above, it was clear that the new route and traditional route groups did not differ significantly on their scores on all 5 of the personality dimensions ($p > .113$)

T-Test for Sensation Seeking

$t(43) = -2.294, p = .027$

Based on the outcome of the test done, group two of the PhD students (new route) are more risk seeking scoring a mean of 48.83 in comparison to the traditional route PhD students (physics and psychology) which scored 44.57

- 1) Novelty of stimulation
 - $t(43) = -2.11, p = .041$
- 2) Intensity of Stimulation
 - $t(43) = -1.595, p = .118$

Only in the Novelty subscale was there a statistically significant difference in favour of the new route PhD students who scored a Mean of 23.04 in comparison to the traditional route scoring 20.57.

Motivational Factors

One of the other important sections of the questionnaire was a question giving the students a variety of different options in selecting which factor motivates them the most in pursuing a PhD. The summary of the responses are as follow:

		Response Percent	Response Count
Improving current occupation		21.7%	10
Skills Enhancement		70.0%	36
Career Change		19.0%	9
I hobby		4.3%	2
Self-development		78.9%	36
Personal fulfillment		78.3%	36
I high levels of funding		15.2%	7
Family ritual		0.0%	0
To improve future career prospects		84.8%	39
No particular reason		0.0%	0
I don't know		0.0%	0

There was no significant differences found in the motivational factors for doing a PhD can be found between the two groups of PhD students

Result and Analysis Semi-Structured Interview

1. Theme one New Route PhD (E-Futures)

A. Motivations to do new route PhD

All of the three participants had two things in common; they enjoyed studying and learning new things alongside stating the importance of higher education in finding a better job. The second element “getting a better job” (improving future career prospects) was the highest selected option for the motivation factor in the questionnaire sent in the first stage 84%.

Sensation Seeking (Risk taker or not)

The second section of the interview did not have a straight forward response like the one explained above. What can be concluded in this set of data is that, there were disagreements amongst the participants as to whether they see themselves as risk takers or not. There is a possibility that sensation seeking has its effects

more subtly and for that reason alongside the small number of students participating nothing conclusive can be drawn.

2. Theme two traditional route PhD

A. Motivations to do PhD

All of the three students had one thing in common; they had self satisfaction as their main priority for their motivation (personal fulfilment was the second most selected option in the questionnaire).

Sensation Seeking (Risk taker or not)

The most similar object in the responses to this section of the interview was that these group of students preferred being risk averse.

The second stage of this research was performed on the basis of a small group of students and that data taken from such circumstances is not seen as very reliable, hence a concrete conclusion cannot be taken.

Conclusion

The key findings of this research are as follow:

- There is no major difference between the two groups of student in relation to the Five Factor model of personality.
- Based on the outcome of AISS an important result was found, new route PhD students are more towards being risk takers scoring a mean of 48.83 out of 60 in comparison to the traditional route PhD students (physics and psychology) which scored 44.57. This result then became augmented based on the qualitative data gathered through the interview session in which the traditional route PhD students admitting they would prefer to be more risk averse.
- The top four motivational factors in-between the two group of PhD students were in the order of :

Improving future career prospects 84.8%	Personal fulfilment 78.3%
Skills-Enhancement 78.3%	Self-Development 78.3%

- The last conceptualisation that can be made from this research is that, sensation seeking and being a risk taker plays a role in students deciding whether they would want to stay in their comfort zone (ie do a traditional route PhD) or be a part of doctoral training programme with a multi-disciplinary environment, exposing students to areas which are unknown to them. But based on the qualitative data's gathered its clear in some cases traditional route students were either not informed properly about E-Futures or the programme did not exist or was not advertised effectively at their time.

References

- Aluja, A., Garcia, O., Garcia, L.F. (2003). Relationships among extraversion, openness to experience, and sensation seeking. *Personality and Individual Differences* 35, 671-680
- Arnett, J. (1994). Sensation seeking: A new conceptualization and a new scale. *Personality and Individual Differences*, 16, 289-296
- Bryman, A., & Bell, E. (2003). *Business Research Methods*. Oxford: Oxford University Press.
- Cohen, L., Manion, L., & Morrison, K. (2005). *Research Methods in Education 5th Edition*. Taylor & Francis Group.
- Desrichard, O., Vos, P., Bouvard, M., Dantzer, C., & Paignon, A. (2008). In press "Personality and Individual Differences" The French version of the Arnett Inventory of Sensation Seeking: internal and predictive validity.
- Digman, J.M. (1990). "Personality structure: Emergence of the five-factor model". *Annual Review of Psychology* 41: 417-440
- ENDERS, J. (2005). Border crossings: Research training, knowledge dissemination and the transformation of academic work. *Higher Education, Springer* , 49: 119-133.
- Harvey, R. J., Murry, W. D., & Markham, S. E. (1995, May). A "Big Five" Scoring System for the Myers-Briggs Type Indicator. Retrieved April 02, 2011, from <http://harvey.psyc.vt.edu/Documents/BIGFIVE.pdf>
- Haynes, C. A., Miles, J. N. V., & Clements, K. (2000). A confirmatory factor analysis of two models of sensation seeking. *Personality and Individual Differences*, 29(5), 823-839
- How can I analyse my data?* (n.d.). Retrieved May 02, 2011, from http://www.psy.dmu.ac.uk/michael/qual_analysis.htm
- Huizingh, E. (2007). *Applied Statistics with SPSS*. London: SAGE Publications Ltd.
- Judge, T. A., & Ilies, R. (2002). Relationship of Personality to Performance Motivation: A Meta-Analytic Review. *Journal of Applied Psychology* , Vol. 87, No. 4, 797-807.
- Kehm, B. M. (2006). Doctoral education in Europe and North America: a comparative analysis. *Portland Press Ltd* .
- Kuttschreuter, M., & Meijer, R. (2007). Empirisch onderzoek naar de relatie tussen sensation seeking en de persoonlijkheidsdimensies uit de NEO-PI-R, en de voorkeur voor vakantieactiviteiten.
- Mangematin, V. (2000). PhD job market: professional trajectories and incentives during the PhD. *Research Policy* , 741-756.
- Perlin, M., & Grater, H. (1984). The relationship between birth order and reported interpersonal behavior. *Individual Psychology*, 40(1), 22-28.
- Pervin, L. & John, O. (Eds.) (1999). Handbook of personality: theory and research. New York: Guilford
- Roth, M. & Herzberg, P.Y. (2004). A Validation and Psychometric Examination of the Arnett Inventory of Sensation Seeking (AISS) in German Adolescents. *European Journal of Psychological Assessment*, 20(3), 205-214
- SCALES WE'VE DEVELOPED*. (2009, December 20). Retrieved April 15, 2011, from University of Texas: http://homepage.psy.utexas.edu/homepage/faculty/gosling/scales_we.htm
- Schwab, M. R., & Lundgren, D. C. (1978). Birth order, perceived appraisals by significant others, and self-esteem. *Psychological Report*, 43(2), 443-454.
- Zuckerman M, Kolin E A, Price L & Zoob I. *Development of a sensation-seeking scale*. J. Consult. Psychol. 28:477-82, 1964.
- Zuckerman, M., Kuhlman, D.M., Joireman, J., Teta, P., Kraft, M. (1993). A Comparison of Three Structural Models for Personality: The Big Three, the Big Five, and the Alternative Five. *Journal of Personality and Social Psychology*, 65, 757-768