



THE IMPACT OF LOCUS OF CONTROL AND CONFORMITY ON CREATIVITY:
GENDER DIFFERENCE AMONG MALAYSIAN UNDERGRADUATES

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A RESEARCH PROJECT
SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE BACHELOR OF SOCIAL SCIENCE (HONS) PSYCHOLOGY
FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN

JAN. 2021

A Study of the Impact of Locus of Control and Conformity on Creativity: Gender Difference
among Malaysian Undergraduates

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This research project is submitted in partial fulfillment of the requirements for
the Bachelor of Social Science (Hons) Psychology, Faculty of Arts and Social Science,
Universiti Tunku Abdul Rahman. Submitted on January 2021.

LOCUS OF CONTROL AND CONFORMITY ON CREATIVITY

ACKNOWLEDGEMENT

We would like to convey our deepest appreciation and sincerest gratitude to our final year project supervisor, Ms. Sanggari a/p Krishnan for her advice, guidance and support despite her busy schedule. She is always be there for us whenever we faced difficulties in the process of conducting this study. Without her supervision, it would be impossible for us to complete this study.

Besides, a special gratitude to our parents for their warm and sweet encouragement as well as their understanding. We are also feel thankful to those who willingly participated in our study and for their patience in completing the questionnaire. Without their participation in this study, this study would be impossible to carry out.

To every one of you, we thank you very much. This study has been completed by having all of your kind supports, efforts, and contributions.

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APPROVAL FORM

This research paper attached hereto, entitled “The Impact of Locus of Control and Conformity on Creativity: Gender Difference among Malaysian Undergraduates” prepared and submitted by Chin Chun Yui, Phylcia Lim Hui Tung, and Soh Sei Ern in partial fulfillment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

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Abstract

Creativity becomes an important feature in this era of creativity, especially in education and the workplace. Creativity has become one of the main issues of unemployment of undergraduates in Malaysia. The present study was aimed to study the impact of LOC, conformity on creativity among Malaysian undergraduates. This study was also aimed to study the gender difference in LOC, conformity and creativity among Malaysian undergraduates. Cross-sectional research design was used in this study. A total of 393 Malaysian undergraduates aged 18 to 26 years who were studying in public or private universities in Malaysia were recruited through the convenience sampling method. Data was collected by using Qualtrics and distributed online through social media. The Rotter's Internal-External Locus of Control Scale, Mehrabian Conformity Scale, and modified version of Self-Rated Creativity Scale were used as the measurement for this study. Results of correlation analysis showed that there was a significant negative correlation between LOC and creativity and a significant positive correlation between conformity and creativity. Besides, the results of regression analysis indicated that LOC and conformity significantly predicted creativity. However, independent t-test showed no significant gender difference in LOC, conformity, and creativity. Theoretically, the present study provided the references for future researchers to further exploration of the relevant study. In terms of practical implication, the present study may help educators develop related programs to assist undergraduates in equipping creative thinking skills. For future studies, it is recommended that a probability sampling method can be conducted to further enhance the accuracy of the findings.


Keywords: Creativity, locus of control, conformity, gender difference, undergraduates

DECLARATION

We declare that the material contained in this paper is the end result of our own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

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Table of Contents

	Page
Abstract	i
Declaration	ii
List of Table	viii
List of Figure	ix
List of Abbreviation	x
Chapters	
I	
Introduction	1
Background of Study	1
Problem Statement	4
Significance of Study	8
Research Objectives	10
Research Questions	10
Hypothesis	11
Conceptual Definitions	12
Operational Definitions	13
II	
Literature Review	16
Locus of Control and Creativity	16

	Conformity and Creativity	19
	Locus of Control and Conformity predict Creativity	23
	Gender and Locus of Control	24
	Gender and Conformity	26
	Gender and Creativity	28
	Theoretical Framework	29
	Conceptual Framework	32
III	Methodology	35
	Research Design	35
	Sampling Method	35
	Sample Size	36
	Instrumentation	37
	Procedure	38
	Ethical Clearance	39
	Reliability Test	41
	Data Analysis	42
IV	Results	44
	Demographic Details	45

	Test of Normality	46
	Locus of Control and Creativity	47
	Conformity and Creativity	49
	Locus of Control and Conformity Predict Creativity	50
	Gender and Locus of Control	52
	Gender and Conformity	53
	Gender and Creativity	54
v	Discussion & Conclusion	57
	Discussion	57
	Locus of Control and Creativity	57
	Conformity and Creativity	59
	Locus of Control and Conformity predict Creativity	60
	Gender and Locus of Control	62
	Gender and Conformity	65
	Gender and Creativity	66

	Limitation	68
	Recommendation	70
	Implication	71
	Theoretical Implication	71
	Practical Implication	72
	Conclusion	73
References		74
Appendices		102
Appendix A	Questionnaire (Qualtrics)	102
Appendix B	Sample Size	115
Appendix C	Rotter's Internal-External Locus of Control Scale	116
Appendix D	Mehrabian Conformity Scale	120
Appendix E	Self-Rated Creativity Scale	121
Appendix F	P-P Plot	122
Appendix G	Q-Q Plot	123
Appendix H	Histogram	124
Appendix I	Kolmogorov-Smirnov (K-S) Test	125

Appendix J	Summary Model of Regression	126
Appendix K	Independent T-Test	127
Appendix L	Turnitin Originality Report	128
Appendix M	Ethical Approval for Research Project	134

List of Table

Table		Page
3.1	Reliability Test	41
4.1	Participants' Demographic	45
4.2	Descriptive Data for Skewness, Kurtosis, Kolmogorov-Smirnov and Shapiro-Wilk	46
4.3	Pearson's Correlation of Locus of Control and Creativity	47
4.4	Multiple Linear Regression of Locus of Control and Conformity predict Creativity	50
4.5	Independent Sample T-Test of Locus of Control and Gender	52
4.6	Independent Sample T-Test of Conformity and Gender	53
4.7	Independent Sample T-Test of Creativity and Gender	54
4.8	Summary of the Results	55

List of Figure

Figure		Page
2.1	Theoretical Framework of Rotter's Social Learning Theory	29
2.2	Conceptual Framework of the Study	31

List of Abbreviation

LOC	-	Locus of Control
VIF	-	Variance Inflation Factor
UTAR	-	Universiti Tunku Abdul Rahman
SPSS	-	Statistical Package for Social Science

Chapter I

Introduction

Background of Study

In this era of globalisation, the world evolves and changes to become more advanced from time to time. Meanwhile, creativity becomes one of the most critical aspects of this era because people live in the Creative Era. The Creativity Era is the era where innovation, generating new and originality became domain worldwide (Kirstetter et al., 2018). Toynebee (1962) once stated that “a few creative minds can make enormous differences to civilization”. The advancement of technology, manufacturing, and production affect the transformation of the way business. This drives the need and demand for creativity to meet the twenty-first-century criteria where creativity is highly placed on the world agenda (Hughes et al., 2018).

The term “creativity” refers to the capabilities of producing new and their ideas, works, and techniques to creating solutions and producing new things (Richards & Kinney, 1990). Creativity allows individuals to come out with novel and appropriate ideas that are useful and adaptive to the task (Lubart, 1994). It is critical for undergraduates to develop creative abilities to help them confront the challenges in the workplace, society, or even in their future life (Theodotou & Papastathopoulos, 2015). Organizations and industries nowadays are focusing and emphasizing recruiting young talent with creative and innovative thinking that can bring changes to their organization (Hughes et al., 2018). Hence, it is essential for undergraduates to develop creative thinking skills at all levels of education, especially in tertiary education, to obtain their desired job in the future.

Locus of control has been studied extensively in the field of psychology from the past two decades. According to Lefcourt (1976), locus of control defines as the extent to which an individual perceives control over the event's main causes. For instance, individuals with internal locus of control believe that they have control over their life. In contrast, individuals with external locus of control believe that the environment controls their lives, such as fate but not by themselves (Rotter, 1966). Many researchers study locus of control in the field of education, workplace and this concept has been gaining importance in various disciplines in the modern world, especially in education and organization fields as locus of control has shown a positive effect on creativity (Flor et al., 2013). One of the key elements in making up creativity is the willingness to explore (Christensen, 2012). Hence, locus of control is important as it acts as a person's motivational pattern in reinforcing their learning method, leading to creative thinking.

Conformity is defined as social influence or obeys with the group pressure in which people change their behavior or thinking to fit in the group norm (McLeod, 2016). According to Deutsch and Gerrard (1955), people conform because of two reasons such as normative conformity which refer to people change their opinion due to group pressure in order to fit into the group and informational conformity which is people adopt the group idea as guidance because they are lack of knowledge in the particular field. To avoid the feeling of outgroup, individuals will be less likely to reveal the actual opinion or thinking within the group. Over time, they will not think outside the box because they become afraid of making mistakes. It will cause them to lose their confidence and even generate novel ideas, be innovative, and have critical thinking (Ward, 2017). Thus, conformity is often being seen by society as a factor that inhibits people's creative thinking and idea generation.

According to the Department of Statistics Malaysia (2020), the unemployment rate was 3.4% for females and 3.2 % for males in 2019. It might be because there is a gender difference in locus of control, conformity, and creativity that affect the unemployment rate differences. Hence, this study aims to examine gender difference in locus of control, conformity, and creativity. Gender difference in creativity are often considerable in many fields of study. Gender difference in creative achievements are attributed by a combination of environmental factors such as gender difference in accessing learning materials and resources in education, expectations for females and males, and females and males' socialization (Matud et al., 2007). Therefore, this study aims to identify gender difference in creativity among Malaysian undergraduates.

Locus of control is essential in gender because locus of control is an individual's self-evaluations in their life attributed by gender roles (Callaghan & Papageorgiou, 2015). Gender difference in locus of control are ambiguous as both females and males have been shown to have a higher internal locus of control from different separate studies (McPherson & Martin, 2016; Siddiquah, 2019; Chandiramani, 2014). Given the differences of gender in the development context of locus of control, this study seeks to identify gender difference in locus of control among Malaysian undergraduates.

Eagly and Wood (2016) noted that males are often expected to be more agentive and may be more resistant to be influenced than females. This behavioural difference between males and females stem from cultural and social stereotypes about how males and females are supposed to act in their society (Eagly & Wood, 2016). Given the gender difference in social influence development, this study aims to identify the gender difference in conformity among Malaysian undergraduates.

The locus of control has been given considerable attention in the relationship with creativity as the locus of control has shown a positive effect on creativity (Flor et al., 2013). In addition, conformity has been also reported as closely linked with creativity as conformity may affect people less likely to reveal their opinion, which gradually causes them to reduce the ability to generate creative and novel ideas. Given the gender difference in the development context of locus of control, conformity and creativity show disparity. Hence, this study intends to examine the issues of the impact of locus of control and conformity on creativity as well as the gender difference in locus of control, conformity, and creativity among Malaysian undergraduates.

Problem Statement

Unemployment seems to be affecting the individual itself but little did we know it actually brings more negative impact in the long run. The negative impacts that can be caused by unemployment includes the individual income, socioeconomics, psychological problem, social problem, political instability and economic recession (Picardo, 2020; Mehta, n.d.). According to The Department of Statistics Malaysia (2020), the unemployment rate in Malaysia had increased from 3.3% in 2019 to 4.7 % in 2020. The Minister of Education, Dr. Maszlee Malik, stated that 30,765 numbers of fresh graduates are still unemployed after one year of graduating according to the findings from the Ministry of Education Graduate Tracer Study (SKPG) in 2018 (Minister: Almost, 2019). The studies of Krishnan (2016) and Hanapi and Nordin (2014) stated that critical thinking and creative thinking are the weaknesses of Malaysian graduates that lead to difficulties for Malaysia graduates in obtaining their jobs.

The need for creativity is not only limited to obtain jobs, achieve competitive advantages but also important for the progression of the country in developing an innovative and productive

high-income economy country today (Ibrahim et al., 2018). For instance, creativity is crucial especially in the performance of research and development (R&D) which serve as the core of fundamental importance in Malaysia to sustain economic growth (Akoum, 2016) because creative ideas are the key that allow researchers to develop outstanding and breakthrough new ideas. National Transformation 2050 (TN50) has been introduced in 2016 which aims to become one of the top 20 nations in economic development, social advancement as well as creative and innovation (Ministry of International Trade and Industry, 2017). Nasurdin et al. (2014) stated that the level of innovation in Malaysia is still low. Besides that, Malaysia ranks 33rd in the Global Innovation Index (GII) 2020 report, which is still far from reaching the goal of top 20 nations in creative and innovation. Therefore, Malaysians especially Malaysian graduates need to be more creative and innovative in order to continue the transformational process as graduates are important human workforces and the future leader in developing innovative and productive high-income economy countries (Hanapi & Nordin, 2014).

According to the article by Fung and Kong (2021) stated that locus of control is particularly important to determine a student's novel and creative ideas as locus of control plays an important role for undergraduate students not only to sustain the efficacy in increasing their learning performance (Özen et al., 2011) but also in determining how they are going to adapt to university and working fields. According to Hamdi et al. (2015), research revealed that locus of control can affect creativity as it serves as a motivation pattern that causes reinforcement in their creative thoughts. The formation of creative and innovation competence is both attributes of locus of control. Meanwhile, Some researchers proposed contradictory findings which showed that internal LOC is more creative (Lather et al., 2014; Pannells & Claxton, 2008). By contrast, external LOC are more creative in the studies of Glover and Sautter (1976) and Bolen and

Torrence (1978). Hence, it is important to investigate the impact of locus of control on creativity among undergraduates. Based on Preuss & Hennecke (2018), unemployment affects locus of control as locus of control serves an underlying trait that how individuals may perceive control over their jobs and life during the unemployment period.

Besides that, according to the news article by Porter (2013) stated that conformity inhibits our creative thinking. This is because it causes the people to be less creative as they are not creating their innovative idea but following other opinions in making decisions to gain acceptance from others (Tumonis, 2014). Conformity will dissipate a person's openness, creativity, and the feeling to speak out (Mortley, 2019). Adolescence nowadays may often follow others' advice or opinion in making decisions. For example, they will follow their parents and most of the relatives' advice on deciding their future jobs or education pathway. Based on Garikai (2018), family values and parents are the main influences in manipulating adolescents' thinking in future career path decisions. Hence, they will face difficulties in generating ideas and being creative in the particular field because they have no interest and feel bored with the work (Wahl, 2015). A study by Saraç et al. (2014) found that there is a positive relationship between person-organization fit with creative behaviour. However, some studies also stated that there is no significant relationship between conformity and creativity (Hook & Tegano, 2002; Miron et al., 2004).

Although many studies on creativity in the past focus on personal factors such as ethnicity, gender, socioeconomic status, and academic major, research on gender difference in creativity has produced mixed and inconsistent findings (Piaw, 2014). Nonsignificant differences between females and males in creativity were reported in some studies (Harris, 2004; Matud et

al., 2007). However, the study of Chia et al. (2008) found that females score higher creativity compared to males.

In contrast to gender difference, most of the demographic variables such as age, education level, and socioeconomic status are found no difference on locus of control (Sarwar & Ashrafi, 2014; Stocks et al., 2012) because individual differences brought more impact in locus of control rather than demographic factors (Johnson et al., 1998). Researches on gender difference on locus of control also produce inconsistent and mixed findings. In the study of McPherson and Martin (2016), they found that females tend to have a greater internal locus of control whereas males tend to have a more reliant chance which is externally oriented. However, Studies of Chandiramani (2014) reported that males have a greater internal locus of control than females as males are more independent than females.

Previous research examining gender difference in conformity has found that females generally show greater conformity and persuadability than males (Eagly, 1978; Eagly & Carli, 1981). Studies of Eagly and Wood (2016) suggested that females were more inclined to social influence and conforming because of their gender role's emphasis on the expectations of conform and compliance in their culture (Carli, 2001). However, Rosander and Eriksson (2012) reported that males conform more to difficult and logical questions than females.

The unemployment rate of Malaysian graduates has drawn researchers' attention to study the impact of locus of control and conformity on creativity among Malaysian undergraduates. The locus of control serves as a motivational pattern that causes reinforcement in students' creative thinking. In contrast, conformity serves as observational learning in creating creative ideas. Given the statistics of the unemployment rate of Malaysian graduates and mixed findings

of the past studies that are present in the literature, it is hence of interest to the present study to explore the impact of locus of control, conformity on creativity, as well as the gender difference in locus of control, conformity, and creativity among Malaysian undergraduates.

Significance of Study

Although there are many research studies on locus of control, conformity, and creativity, the study that is focusing in Malaysia context and among undergraduates is still limited. The studies of Sindane (2011) have recommended that to examine the relationship between locus of control and creativity in different cultural contexts. Therefore, this study can fill in the literature gap in Malaysia because most of the research is done in western cultural context which is not so suitable to imply in Malaysia context and culture. Based on the recommendation in the studies of Richmond and De La Serna (1980), trends are changing in locus of control and creativity among university students every decade. In the past decades, university students were more externally oriented in creativity in the earlier studies, but locus of control in university students' creativity is ambiguous nowadays. This study focused on undergraduates as the target participants. Moreover, this study will be able to provide information about the gender difference in locus of control, creativity, and conformity. Weinschenk et al. (2018) stated that it is important to determine gender as the motivation that underlies people in conforming to social norms. Hence, this study shall serve as the reference for future researchers to unfold the possibility of experimenting with the impact of locus of control and conformity on creativity among Malaysian undergraduates.

The Ministry of Education and educators must deal with the students' capabilities which influence their educational outcomes. Throughout this study, the researchers can provide more information about creativity, examine the underlying reason for how locus of control and

conformity impact creativity. Moreover, it could also help to raise awareness for the Ministry of Education and undergraduates about the importance of creativity in this era of globalisation such as it is one of the significant factors that lead to unemployment or losing a job. Thus, the Ministry of Education can develop and provide some soft skills training programs for the undergraduate by enhancing their creativity and equip them with innovative thinking and problem-solving skills. As reported in Scott et al. (2004), creativity training, teaching methods, and course content effectively make effective training possible. The programs can assist undergraduates to prepare well before they enter the industrial and working field. Effective skills training can help to increase the graduates' skills and thus increase their employment opportunities (Hanapi & Nordin, 2014).

Lastly, this study could help spread awareness to teachers and all other educators to pay closer attention to the importance of developing creative thinking among the students in Malaysia's education system. The concept of locus of control has applied in educational settings as locus of control serves as an important element in boosting academic achievement (Hill, 2016) and creative ideation in university (Pannells & Claxton, 2008). Understanding a student's locus of control can provide educators insights into how students perceive learning programs and settings today. With this information, the educators can design different modules or syllabus that fit different students and amend their different teaching styles accordingly. According to Hanapi and Nordin (2014), failure to ensure educational programs consistent with employers' requirements or job market is one of the main causes of the unemployment problem among graduates in Malaysia. Tertiary education is considered a key to graduate's career development (Hanapi & Nordin, 2014). Yusof et al. (2013) found that the university's teaching method is still adopting traditional methods that focus on memorizing the content of learning material. This

method may lead to the least effective in fostering the development of creativity among students. Hence, education plays a critical role in producing creative human capital among young graduates (Ma'dan et al., 2019). This study will then act as a reference guide by contributing to the lecturer, tutor, or even all the educators in developing or modifying a series of educational programs and teaching styles (opportunity to speak up) that may help enhance and unleash the potential creativity of the students.

Research Objectives:

1. To identify the relationship between locus of control and conformity on creativity among Malaysian undergraduates.
2. To determine whether locus of control and conformity predict creativity among Malaysian undergraduates.
3. To examine the gender difference in locus of control, conformity and creativity among Malaysian undergraduates.

Research Questions:

1. Is there any significant relationship between locus of control and creativity among Malaysian undergraduates?
2. Is there any significant relationship between conformity and creativity among Malaysian undergraduates?
3. Do locus of control and conformity predict creativity among Malaysian undergraduates?

4. Is there a significant gender difference in locus of control among Malaysian undergraduates?

5. Is there a significant gender difference in conformity among Malaysian undergraduates?

6. Is there a significant gender difference in creativity among Malaysian undergraduates?

Hypothesis:

Hypothesis 1

H0. There is no significant relationship between locus of control and creativity among Malaysian undergraduates.

H1. There is a significant relationship between locus of control and creativity among Malaysian undergraduates.

Hypothesis 2

H0. There is no significant relationship between conformity and creativity among Malaysian undergraduates.

H1. There is a significant relationship between conformity and creativity among Malaysian undergraduates.

Hypothesis 3

H0. Locus of control and conformity do not predict creativity among Malaysian undergraduates.

H1. Locus of control and conformity predict creativity among Malaysian undergraduates.

Hypothesis 4

H0. There is no significant gender difference in locus of control among Malaysian undergraduates.

H1. There is a significant gender difference in locus of control among Malaysian undergraduates.

Hypothesis 5

H0. There is no significant gender difference in conformity among Malaysian undergraduates.

H1. There is a significant gender difference in conformity among Malaysian undergraduates.

Hypothesis 6

H0. There is no significant gender difference in creativity among Malaysian undergraduates.

H1. There is a significant gender difference in creativity among Malaysian undergraduates.

Conceptual and Operational Definition

Conceptual Definition

Locus of Control. By defining the conceptual terms, locus of control is defined as the degree which individuals believe events and outcomes are attributable to external or internal factors (Rotter, 1966). This concept examines whether individuals believe that their behaviours are based on positive or negative events affecting them or whether they believe that their behaviours are based on external factors such as chance, fate and destiny (Rotter, 1966). There are two types of locus of control which namely internal locus of control and external locus of control. Internal locus of control refers to the belief that the behaviour and outcomes of their actions are results of their own abilities. Otherwise, External locus of control is defined as the

individuals' belief that the outcomes of their actions are the result of external factors such as chance, fate or destiny rather than as a result of their own abilities (Rotter, 1966).

Conformity. In conceptual terms, conformity is defined as a type of social influence involving the act of changing one's behaviour or belief in order to match the responses of other and to obtain social approval from others (Cialdini & Goldstein, 2004) as well as to adhering to group norms (Kaplan et al., 2009).

Creativity. For the conceptual definition, creativity is defined as the uniqueness of an individual's capability to view the world in new perspectives to create new solutions in every new encounter and problem (Richards & Kinney, 1990). Originality and effectiveness are major criteria in defining the term "creativity" (Corazza, 2016).

Gender. Gender refers to the behavioural, cultural, psychological, and social aspects of the terms for the condition of being female or male (American Psychological Association, 2012).

Undergraduate. Students who are pursuing their studies for their first degree at college or university (Cambridge Dictionary, n.d.).

Operational Definition

Locus of control. Locus of control is measured by Rotter's Internal-External Locus of Control Scale (Rotter, 1996). It is a 29-items forced choice scale used to assess the perceived control over own behaviour. Higher score indicates external locus of control whereas lower score indicates internal locus of control. Meanwhile, Levenson Multidimensional Locus of Control (Levenson, 1981) also can be used to examine the locus of control. It consists of 24 items and 3 subscale which are internality, powerful other and chance. High score in both powerful others

and chance indicate external locus of control whereby high in internality shows internal locus of control.

Conformity. Conformity is measured by Mehrabian Conformity Scale (Mehrabian & Stefl, 1995). It is a 11 items scale used to measure the characteristics to conform with others. The higher the score, the higher the conformity. Besides, a self-report measure of conformity designed by Scher and Thompson (2007), can be used to measure the tendency to conform in hypothetical situations. It is a 9 items scale where the higher score indicates the higher tendency to conform.

Creativity. The Self-Rated Creativity Scale (Zhou & George, 2001) can be used to measure perceived creativity. It is a 13 items scale where higher score indicates higher creativity. Other than that, Kaufman's Domain-Specific Creativity Scale (Kaufman, 2012) can be used to measure creativity based on 5 domains which are everyday, scholarly, performance, science and art. It is a 50 items scale where the higher the score, the higher in creativity.

Gender. The term gender is utilized the classification of an individual as a female or male (American Psychological Association, 2012).

Undergraduate. The recruited participants involved university students who are studying their first degree in Malaysia.

Summary

Creativity becomes one of the important aspects in this era of creativity. It is important in fields like education and the workplace. In addition, creativity has also become one of the main issues of unemployment of undergraduates in Malaysia. Hence, this research is aimed to study on

the impact of locus of control and conformity on creativity as well as the gender difference on locus of control, conformity and creativity among Malaysian undergraduates.

In this chapter, the researchers have introduced the background of study, problem statement, significance of study, research objectives, research questions, hypotheses, conceptual and operational definitions to explain the concept of this study. Next, theoretical framework and research gaps of this research study will be discussed in Chapter 2 literature review whereas the research's methodology will be discussed in Chapter 3.

Chapter II

Literature Review

Introduction

This chapter discussed the various past studies in the impact of locus of control and conformity on creativity. Next, past studies on the relationship of the gender difference in locus of control, conformity and creativity were also reviewed. At the end of chapter, theoretical framework and conceptual framework were both presented.

Locus of control and Creativity

Locus of control, the framework from Rotter's social learning theory, defined an individual's belief about the contingency between one's action and the actual behaviors and outcomes brought about through social learning mechanisms (Rotter, 1954). Locus of control consists of two domains which are internal locus of control as well as external locus of control. Individuals with external locus of control believe that the behavior and reinforcement are affected by external factors such as luck and fate. In contrast, people with internal locus of control believe that behavior and reinforcement are dependent on their control (Rotter, 1966). Rotter (1966) theorizes that locus of control is a critical element to developing the nature of learning processes in every situation.

Although the definition of creativity varies among researchers, it is important to clarify the broad use of the term "creativity" consisting of two primary criteria which are effectiveness and originality (Corazza, 2016). Creativity is defined as the uniqueness of an individual's capability to produce new and original ideas and techniques that could be used for creating solutions and producing new things (Richards & Kinney, 1990). Such notions of creativity are adopted in this study. Besides, 4P's model of creativity (Rhodes, 1961) are widely employed in

different field of creativity research which consist of the person (the characteristic of creative and innovative person), process (the process of generating creative and innovative ideas), product (creative outputs) as well as press (the environment that promotes creative behavior).

Researchers have explored the relationships between self-reports and other creativity domains such as creative activities and creative achievement have shown significant positive results.

(Reiter-Palmon et al., 2012; Kaufman & Baer, 2004). Hence such notion that self-report creativity is adopted in this study.

Glover and Sautter (1976) have reported that there were differences in the creativity of people with both internal and external locus of control which may indicate that locus of control serves as a critical variable in the identification of creativity. Several studies have found that people with internal locus of control were scored greater in creativity (Lather et al., 2014; Oğuz & Sariçam 2016; Saracaloğlu & Yılmaz, 2011; Glover & Sautter, 1976; Xu et al., 2020). The study of Lather et al. (2014) found that students with internal locus of control were scored higher in flexibility, fluency, and originality measures as students with internal locus of control tend to have the capability in generating creative ideas, embellishing creative ideas with details as well as processing same information and problems in different perspectives which indicated that these characteristics are creative person possessed. Saracaloğlu & Yılmaz (2011) claimed that individuals with internal orientations had a greater tendency to think critically which found that the relationship between internal locus of control and critical thinking measure were shown significant positive results in some studies (Oğuz & Sariçam 2016; Saracaloğlu & Yılmaz, 2011). The study of Glover and Sautter (1976) conducted the Torrance Test of Creative Thinking for locus of control which indicated that people with internal oriented scored higher on the flexibility and originality aspects than people with external oriented. In contrast, people with

external orientations scored higher on elaboration measures. Due to the reason that individuals with internal locus of control tend to enhance their learning method in responding which leads to being more creative (Glover & Sautter, 1976). The recent study of Xu et al. (2020) also reported that Generation Y members with internal locus of control were positively related to creative and innovative thinking as generation Y members have been described as confident and having creative and flexible ideas (Li et al., 2018). This can be explained that trends of locus of control in creativity are changing among university students in every cohort (Richmond & De La Serna, 1980; Twenge et al., 2004).

Some researchers proposed contradictory findings, showing that external locus of control was scored higher on creativity (Pannells & Claxton, 2008; Richmond & De La Serna, 1980). Richmond and De La Serna (1980) also found that students with external locus of control were scored greater on fluency, flexibility, and original thinking measures than students with internal locus of control on the creative test. Past studies also showed no significant differences in locus of control and creativity (Bolen & Torrance, 1978; Moradi et al., 2015). The studies of Moradi et al. (2015) also found no significant differences in locus of control and creativity as the concept of locus of control serves as a motivational pattern to enhance our existing personality in our ideas (Schultz & Schultz, 2008).

Past studies have reported the inconsistent findings of locus of control in creativity. Some showed that internal locus of control helps to enhance their learning method, generate creative ideas, and process the information in different perspectives, leading to a higher level of creativity. However, some showed that external locus of control was scored higher on flexibility, fluency, and originality in the creative test, which indicated that flexibility, fluency, and originality are the characteristics of a creative person. Given the inconsistent and mixed findings

from the past studies, it is hence to this study to identify the impact of locus of control on creativity among Malaysian undergraduates.

Conformity and Creativity

Conformity is considered a social influence or group pressure that includes changing the belief or behaviour of a person just to fit into a group (Cialdini & Goldstein, 2004; McLeod, 2016). Levine (2020) stated that conformity often occurs when people change their beliefs according to the majority's idea or want to gain group acceptance. A study showed a significant negative relationship between conformity and creativity (Abirami, 2012), which means that when creativity is high, conformity will be low and vice versa. Based on the finding by Miron et al. (2004), it indicated that creative people were more likely to not perform well for the task that is required to conform to the rules. This is not because they are rebellious but they have their own unique and different rule or system in developing ideas (Baumgartner, 2013). A study showed the urgency and challenge of limited organizational resources will trigger their "rebellious" nature in finding other ways to achieve the difficulty yet their ideal level (Petrou et al., 2018). Rules might be perceived and act as an obstacle that restricts their idea-making and exertion.

Other than creativity will affect conformity, some studies showed that conformity tends to influence the creativity of a person. Goncalo and Duguid (2012) stated that conformity pressure inhibits the free expression of ideas and is inclined to unify thought and behaviour. Freedom of expression is an important trait that will influence the creative potential and problem-solving in young children (Hook & Tegano, 2002). According to Lobell (2018), "Human beings naturally creative, but as they grow older, they are being nurtured to become less creative." A study by Ainsworth-Land and Jarman (1992) indicated that people's creativity level

drops along with their age. This can be explained as the education system, and lifestyle has led the people to become more dependent on their thinking. Traditional education is not emphasizing on innovation and entrepreneurial thinking (Weicht, 2018; Baruah & Paulus, 2019). According to FMT News (2017), the reporter stated that Malaysian students are more likely to memorize and apply theory for exams. Students, especially Asian students were found to have strong peer influence (Peryman, 2015). For example, they will mostly agree and accept the knowledge taught by the teacher and will not dare to raise any questions. Asch and Guetzkow (1951) reported that people would conform to the majority because they believe the group is more knowledgeable and better than them. In short, most of them choose to conform to be liked and to avoid being misfits to the group (Stangor, 2014).

Nowadays, the youngsters' career decisions will mainly be influenced by the family, parents, social factors, environmental pressure (Garikai, 2018), and they are not intrinsically motivated to choose the job. Besides that, as Zhang et al. (2019) stated, people can easily conform to others when facing an uncertain event. Thus, conformity has been developed as an existential defense mechanism today (Wisman, 2006) as people attempt to reject the reality of stressful events by using conformity (Moynihan et al., 2018; Heine et al., 2006). So, they will often choose the job that society says is more useful, more professional, or have more job opportunities in the future regardless of no passion because they do not dare to bear the risk of choosing what they want. An individual who conforms to others or society usually will not be able to choose the job that does not fit with their needs or values and then lead to low person-organization fit. Saraç et al. (2014) stated that person-organizational fit and creativity behaviour have a positive relationship. Person-organizational fit can refer to a person's belief, value, needs, and personality in alignment with the organization (Sutarjo, 2011) and has a significant

relationship in predicting job satisfaction and performance (Farooqui & Nagendra, 2014). Jin (2015) mentioned that people with high personal-organizational fit tend to show greater creativity in jobs because of their high intrinsic motivation and job satisfaction. Intrinsic motivation is one of the personal factors that influence creativity (Jesus et al., 2013; Costa, 2015). This is because intrinsic motivation will help individuals to enjoy their job, value the personal increment, and voluntarily try new things (Fischer et al., 2019). Banakou (2015) also found that individuals who are satisfied with their job score higher on work creativity. Thus, when individuals tend to conform to others by choosing that they have no interest in, it will then indirectly affect their creativity in their work. In short, individuals are more likely to keep their opinions consistent with the majority due to social pressure (Asch, 1955) and to feel safe and comfortable when adjusting themselves to fit in with others (Cherry, 2020).

In contrast, Kaplan et al. (2009) reported that conformity and creativity have positive relationships that can promote different group processes that can promote innovation and creativity. A study showed that conformity is likely a possible mechanism in boosting the creativity of those who lack creative talent (Goncalo & Duguid, 2012). Copying examples is not always a bad thing that constraints people but can also help others treat their style and boost creativity if used wisely (Ward, 2017). Okada and Ishibashi (2016) found that copying or observation could change a people's mental framework or cognitive ability to create a novel artwork when encountered with unfamiliar artwork. This is because in order for us to think or create something innovative and outside the box, we must first know what is inside the box. Spektor et al. (2012) stated that conformists might not generate breakthrough ideas, but they can substantially increase the team's fundamental innovation.

Last but not least, a study showed that conformity and creativity have no significant relationship. In a study by Magni and Manzoni (2020), conscientiousness has interaction with conformity in predicting creativity. They found that conformity has a positive impact on creativity for individuals that are high in conscientiousness and vice versa. There were also studies showing that proactive and openness have a relationship with creativity (Gu et al., 2013). Those who are more conservative politically, conscientious and neurotic are more likely to be influenced by social pressure to change their idea (Mallinson & Hatemi, 2020). These studies showed that creativity is related to personality traits but not the action of conformity. Then, public responses will also affect more conformity unless an individual knows that the group is supporting and cherishes everyone's idea (Cialdini & Trost, 1998). Social conformity serves to gain social approval, avoid conflict, and protect individuals from negative emotions when the outcome is terrible (Yu & Sun, 2013). Social conformity depends on the social condition (Kim & Hommel, 2015). People tend to react and make decisions differently in private and public settings (Schöbel et al., 2016; Sowden et al., 2018). That means many of them choose to conform just to avoid idea conflict and to maintain group harmony but may disagree privately. In a nutshell, these studies show that conformity and creativity are not necessarily correlated with each other directly but are indirectly in relation and affected by other variables.

Several studies showed that conformity is more likely to induce creativity as people with a high level of conformity tend to inhibit their creative ideas to gain acceptance from others. However, there are also few past studies that showed that conformity can also promote creativity. This can be explained that conformity is a possible mechanism in fostering creativity for those who lack creative talent by observing others' work when encountered with unfamiliar work. Given the inconsistent and mixed findings from the past studies, it is hence of interest to the

present study to identify the impact of conformity on creativity among Malaysian undergraduates.

Locus of Control and Conformity predict Creativity

According to Lather et al. (2014), the findings revealed that students with internal locus of control scored greater creativity level while students with external locus of control scored lower creativity level. It is supported by the research that found that internal locus of control predicts actual creativity performances among employees (Malik et al., 2014). Students with internal locus of control will depend on their actions and take over their own decision. They are more likely to look for alternative paths in problem solving and confidence in themselves. Students with external locus of control are not confident to make their own decisions and are more likely to follow others' usual path. This is less likely to promote creativity for students with external locus of control. Other than that, non-significant and inconsistent results were found between locus of control and creativity respectively (Sindane, 2011, Dumas, 2014). The result is different from others' research because of the differences in task performance and creativity. The activity that required creativity-on-demand may get different results from self-report (Pannells & Claxton, 2008).

The past study indicated conform behaviour negatively predicts creativity (Abirami, 2012). Individuals tend to conform to groups and are less likely to express their creative idea when conformity pressure is high because it will inhibit the expression of ideas (Goncalo & Duguid, 2012). Indeed, the researcher also suggested that conformity pressure can stimulate group creativity only for highly creative groups. Miron et al. (2004) found that individuals with high creativity have a low quality of task when required to accept the existing norm. Other than that, in the study proposed by Magni and Manzoni (2020), conformity was not related to

creativity. Conforming to the norm can likely favour and hamper the dimension of creativity. Different industries require different extents of creativity and their conformity to norms and regulations. Simultaneously, research also found that individuals with high levels of conscientiousness can make the relationship between conformity and creativity positive (Magni & Manzoni, 2020). Individuals with high conscientiousness have effortful control on their cognitive which may develop the positive potential of conformity for creativity.

Past studies have produced inconsistent findings of conformity predicts creativity as the past studies stated that conformity is more likely to inhibit creative ideas. In contrast, there is also study shown that conformity can stimulate group creativity especially for those who lack creative talent. The inconsistent and mixed findings are present in the literature. Therefore, the present study aimed to examine whether locus of control and conformity predict creativity among Malaysian undergraduates.

Gender and Locus of Control

Gender serves as an important variable in the study of locus of control, as Manger and Eikeland (2000) suggested as gender appears to be related to their perception of control over their interpersonal relationships and life events (Sherman et al., 1997). Previous studies in the locus of control for gender have inconsistent findings.

Several studies have shown that males tend to be more internal locus of control (Serin et al., 2010; Siddiquah, 2019; Oğuz & Sarıçam, 2016; Haider Zaidi & Mohsin, 2013). In the study proposed by Serin et al. (2010), their results showed that male students are a greater internal locus of control than female students. It can be explained that males have a higher internal locus of control that can be derived from freedom from their families and they have more rights in making their own choices than females as males are grown more freely. In contrast, females are

grown more conservatively due to the cultural characteristics. Females tend to be less likely to control their own beliefs and decisions due to the gender's socialization experiences in their culture (Dweck & Bush, 1976; Randall & Desrosiers, 1980). Siddiquah (2019) as well as Oğuz and Sarıçam (2016) also stated that female students were significantly higher in the external locus of control than male students in social aspects. This is because female students tend to be more inclined to pleasing others and susceptible to social pressure than male students (Siddiquah, 2019). The finding of Lao et al. (1997) also supported the cultural and social expectations that play a mediating role in female and male locus of control beliefs.

In contrast, several findings are showing that females tend to be more internally oriented (Callaghen & Papageorgiou, 2015; McPherson & Martin, 2016; Ghazvini & Khajehpour, 2011). Callaghen and Papageorgiou (2015) found that female students tend to be more internal locus of control than male students in the categories of agency effectiveness belief, chance beliefs, and network beliefs. McPherson and Martin (2016) also stated that females have a higher internal locus of control than males in alcohol dependence treatment. This can be explained that males tend to show passive belief in their health-related behavior and increase alcohol consumption (Debnam et al., 2012). The study of Ghazvini and Khajehpour (2011) indicated that female students tend to be more internally oriented than male students. They also stated that females take more responsibility for their academic performance whereas males are more concerned with looking good in their school. By supporting this statement, Manger and Eikeland (2000) also stated that female students are only shown higher internal locus of control in academic belief as female students tend to view effort as an important factor for academic success than male students. Several studies also showed no significant differences in locus of control among females and males (Ghasemzadeh & Saadat, 2011; Khir et al., 2015). This can be explained that

socio-economic, culture or age are the factors that influence the discrepancy of locus of control for both females and males (Ghasaemzadeh & Saadat, 2011).

Both males and females have shown internal locus of control in different fields such as gender roles, social influence, health-related behaviors, and academic performance in the past studies. Nevertheless, some studies also reported males tend to be more externally oriented while some showed it in females. It can be explained that males and females have different beliefs about the reinforcement factors towards their life event. Given the inconsistent and mixed findings from the past studies, thus, the present study aimed to examine the gender difference in locus of control among Malaysian undergraduates.

Gender and Conformity

Previous studies have shown that females tend to be more conforming than males because of their cultural roles differences (Eagly, 1978; Eagly & Carli, 1981; Johnson & MacDonnell, 1974). For instance, males are typically taught and expected to be more harsh, independent and authoritarian, whereas females are more gentle, modest, and more focused on quality of life (Neculaesei, 2015). According to Eagly and Wood (2016), the cultural stereotypes on gender social roles have caused the behavioural differences in males and females. Therefore, females are more likely to conform to other people's opinions as they are more concerned about other people's emotions and strive to maintain group harmony (Stangor et al., 2014). It also stated that males are often shown less conforming as they will mostly remain their opinion to look more independent. In this case, females are more conforming because they want to prevent any disagreement that might cause conflict. Other than that, most of the traditional family perceived females to be of lower status than their husbands. Eagly (1983) stated that lower-status people are expected to comply with the demands of the higher-status people. Thus, many of the

females in inferior social positions tend to get used to the traditional way and agree mostly with their husbands (Alizadehfard, 2010).

However, some studies show conformity in males is higher than in females. According to Rosander and Eriksson (2012), male has higher conformity level than female in difficult and logical questions. They also claimed that most of the males conform to protect their self-esteem and avoid being isolated. This is because they do not want themselves to lose the sense of worthiness as self-esteem refers to the belief in their value and worth. It also serves as a feature that reflects one's self-image (Kennard, 2019). Besides that, male also tends to impose greater conformity and influence on gender and social norms (Carter et al., 2019). This is due to the high self-esteem that leads them to conform with gender norms such as males needing to be independent and masculine to avoid being called a female or feminine guy. Most of the males will conform to society's expectation of male behaviour to gain acceptance and fit into the majority group (Toelch & Dolan, 2015).

Some studies show little or even no significant differences in conformity level (Weinschenk et al., 2018; Wijenayake et al., 2020). Both males and females will be more likely to conform to the things they have less knowledge than they have adequate knowledge (Eagly & Chavala, 1986). For example, when talking about cosmetics, males are more conforming whereas females will be more conforming when talking about games. This is because people tend to rely on social influence when they lack confidence in their ability toward that particular field (Cross et al., 2016). Some of the studies also shows that it is not gender difference that influence differences in conformity but the personality trait of one. Wijenayake et al. (2020) reported that the person with higher conscientiousness and neuroticism are more likely to score higher in conformity level.

Past studies reported that females conform to others because of the traditional feminine roles in their culture, which means that females are expected to be more concerned, conform, and comply with others. In contrast, past studies also reported that males conform to others to protect their self-esteem and gain social acceptance and fit into the group. Lack of knowledge and skills and personality traits may also cause both males and females to conform to others. Given the inconsistent and mixed findings of the past studies, the present study aimed to identify the gender difference in conformity among Malaysian undergraduates.

Gender and Creativity

According to Pinker (2009), the researcher suggested that there should be no differences between gender in terms of creativity. Past studies showed no significant relationship between gender and creativity (Matud et al., 2007; Baer & Kaufman, 2008; Naderi et al. 2009). Male were found slightly higher than females in generating novelty thinking although the differences were not significant (Stoltzfus et al., 2011). Male and female have differences in the field of creativity for example males perform more creative in painting, science and music composition while females are more creative in writing, dance and music performance (Yousaf & Ghayas, 2015). The environment or population that supports creativity is important to increase the creativity behaviour (Taylor et al., 2020).

Research found male excelled female in different aspects of creativity (Karwowski et al., 2016). It can be explained where males are generally independent and assertive to do unusual and novelty things. Females are expected to be characterised by submissiveness and placed to work in detail (Gralewski & Karwowski, 2016). In addition, researchers speculated that males prefer creative thoughts in everyday domestic or domestic forms. In contrast, females prefer creativity in ornamental or aesthetic forms, which may result in higher male variability of

creativity (Karwowski et al., 2016). This is because males receive greater support in creativity in male as compared to females. Other than that, people tend to attribute creativity to males with higher creative potential and ability than females. This provides a culture or environment that provides support for creativity to male as compared to female (Taylor et al., 2020).

Past studies found that females have higher creative thinking than males among university students (Runco et al., 2009; Ulger & Morsunbul, 2016; Shubina & Kulakli, 2019). Female has a higher inference level, higher level of creative potential with higher level in the evaluation of argument, critical thinking skills (Shubina & Kulakli, 2019). Findings indicated that females show higher creativity and originality than males in higher education (Ulger & Morsunbul, 2016). The result showed that females might have the characteristics that are some traits that highly creative individuals possess such as curiosity, liberal values, emotional differentiation, and aesthetic sensitivity (Ulger & Morsunbul, 2016).

In all the studies reviewed here, both males and females have reported differences in creativity. This can be explained that the disparity in the environment and population may support creativity for both males and females, which leads to the difference in the field of creativity. Given the mixed and inconsistent findings of the past studies that have been presented in the literature, it is hence to the present study aimed to identify the gender difference in creativity among Malaysian undergraduates.

Theoretical Framework

Rotter's social learning theory is developed from Skinner's behaviourism and Freud's psychoanalysis (Rotter, 1954). The concept of locus of control is developed from Rotter's social learning theory which is a theoretical model that predicts the likelihood of an individual will perform a particular behaviour. The main idea of Rotter's social learning theory focuses on

cognitive perspective where individuals' personality is determined by interaction between individual thought processes and the environment. Individual's behaviour is reinforced through cognitive processes such as thought and feelings in relation to the environment (Kelland, 2020). There are four main components for social learning theory which are behaviour potential (BP), expectancy (E), reinforcement value (RV) as well as psychological situation (PS) (Rotter, 1954; Rotter 1966; Rotter 1975). Behaviour potential (BP) is the likelihood of an individual to engage in certain behaviour. Expectancy (E) is the personal perception of probability of certain behaviour that will lead to particular outcome. Reinforcement value (RV) refers to desirability of the behaviour or outcome. When the expectancies of the outcome are equal, individuals will choose to behave based on the greatest reinforcement value to receive the preferred outcome. Lastly, psychological situations are situations where specific cues received by individuals in the environment and it varies for everyone. Probability of occurrence of specific behaviour depends on the past reinforcement and the expectancy of the reinforcement under a certain situation (Hickey, 1976). These components can be combined into a predictive formula for an individual's behaviour. Thus, Potential behaviour serves as a function of expectancy and reinforcement value that, if the certain behaviour is performed, it will lead to the desired outcome successfully.

$$\mathbf{BP = f(E \& RV)}$$

Figure 2.1. *Behaviour Potential (BP), Expectancy (E), and Reinforcement Value (RV) combined into predictive formula for behaviour.*

Individuals with either internal or external locus of control will determine to which they believe that they can affect the events around them (Rotter, 1966). Individuals with either internal or external locus of control perceive reinforcement and behaviour may increase the

creative behaviour (Glover & Sautter, 1976). By supporting this statement, Rogers (1954) claimed that individuals who possess internal locus of control are able to form a variety of creative products.

Bandura's social learning theory, developed by Albert Bandura (1977), is a theory that people tend to learn behaviours from another through observing and imitating others. He proposed that observing, imitating and modelling are effective in acquisition of knowledge with the corresponding behavioural changes. When an individual's internal cognitive process interacts with the environment can enhance the learning process (Bandura, 1965). It provides an opportunity to observe meaningful content to learn by imitating from others. In addition, the potential influence of the models is essential as the models are more likely to attract the individual's attention where individuals are paying attention to whom they associate. In the learning process, motivation is important for the reinforcement of the behavior where individuals will receive positive reinforcement towards those behaviours and interactions to continue the behaviour.

Additionally, Bandura's social learning theory is associated with conformity where people tend to conform to others through social learning. Individuals will tend to learn by observing and imitating the majority's behaviour to conform with others under uncertainty in order to avoid making mistakes. Muthukrishna et al. (2016) revealed that social learning increases with stronger conformist bias when the number of alternative choices is increased. Conformity bias refers to individuals having the tendency to behave like people around them by conforming themselves with others rather than using their own judgements or perspectives. Rotter (1954) theorizes that the conformists are characterized as individuals who have low expectations of success in social evaluation such as status and reputation as they are inclined to

avoiding anticipation of punishment and expected failure. Other than that, conformity is learned through reward or punishment in terms of reinforcement. Individuals will have the tendency to behave like people around them to get social approval due to the conformity pressure from social environments such as peer groups (Endler et al., 1973). In short, individuals are more likely to conform in order to adapt to the group.

Bandura's social learning theory is important to explain creativity through modelling and reinforcement (Groenendijk et al., 2013). Social learning theory focuses on observational learning, modelling and reinforcement. Creativity can be learned and enhanced through this process. Individuals will select, organize and transform the stimuli to shape our own experience. This learning process takes place through the interaction of internal cognitive and social processes. For example, individuals tend to be more observing and understanding their model's behaviour. Observing models of performing creatively may stimulate creative thinking. Thus, it will motivate the individual through observing their model and reinforce their behaviour (Wilke, 2012).

Conceptual Framework

This study aims to focus on how locus of control and conformity correlate with creativity among Malaysian undergraduates. Creativity is served as a dependent variable (DV) whereby locus of control and conformity are independent variables (IV) and important factors that can affect the creativity of undergraduates. Individuals with internal locus of control have higher creativity because they have control over their life (Lather et al., 2014). Conformity causes undergraduates to match their attitude and believe according to the group in order to feel fit in within the group. In short, locus of control and conformity predict creativity among Malaysian undergraduates. Besides, this research also tested on the gender difference with variables.

Gender served as antecedent variables (AV) in this study. All the independent variables and dependent variables are tested with the gender.

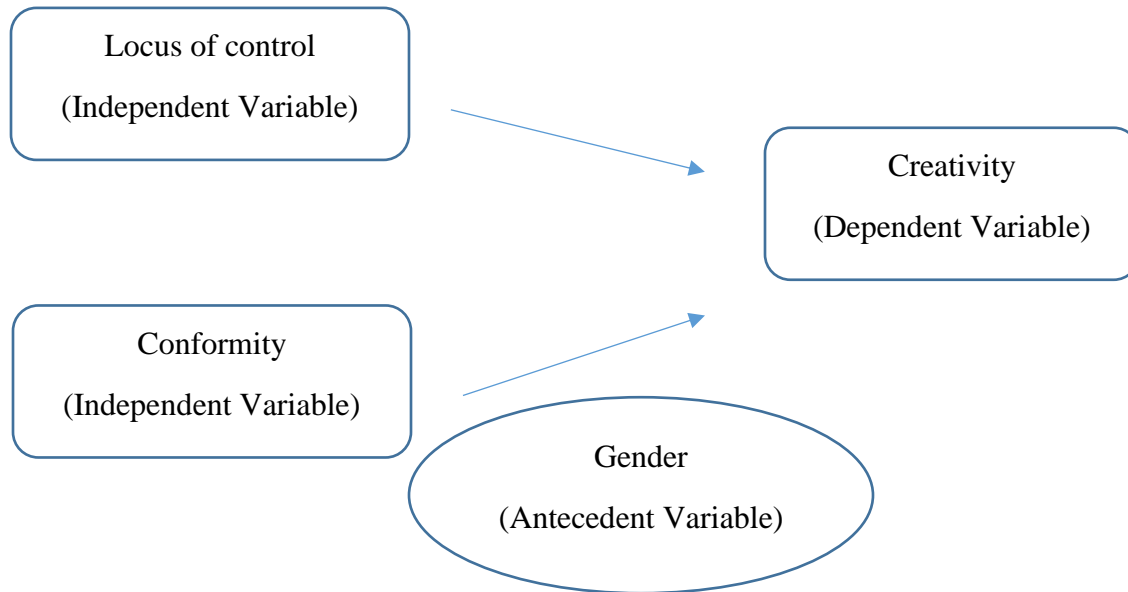


Figure 2.2. *Conceptual framework of “locus of control and conformity predict creativity and gender difference on locus of control, conformity and creativity among undergraduates in Malaysia”.*

Chapter Summary

In this chapter, the researchers have discussed the results from past studies on the relationship between locus of control and creativity, conformity and creativity, and how locus of control and conformity predicts creativity among the Malaysian undergraduates. Then, gender difference in these three variables which are locus of control, conformity and creativity were also being discussed in this chapter. In addition, Rotter’s Social Learning Theory was used to explain the relationship between locus of control and creativity while Bandura’s Social Learning Theory was used to explain the relationship between conformity and creativity. Lastly, conceptual

framework was explained in diagram form as well as word form to indicate a better understanding on the relationship between the variables of this research study.

Chapter III

Methodology

Introduction

This chapter outlined the research design used to frame this study. Sampling method was used to recruit participants and the method for sample size calculation was outlined. It was followed by instrumentations used in this study. The details of the research procedure and ethical consideration were discussed as well. The reliability of the scales were presented. The data analysis after collection of data were presented at the end of this chapter.

Research Design

In this study, quantitative survey research had been used to collect and analyse data in examining the relationship between locus of control and conformity in creativity as well as gender difference in these three variables among undergraduates in Malaysia. Cross-sectional study was used in this study because the researchers were able to make inferences or predictions about a population based on the result of the target sample recruited (Shaughnessy et al., 2015). Besides, this research design was able to measure the correlation between the variables at once and relate to the population at the present moment (Setia, 2016).

Sampling method

Convenience sampling method was used to collect data from the target participants. It was a non-probability sampling method where the target participants were recruited from an available pool of respondents conveniently. The questionnaire was done using Qualtrics and

distributed to the undergraduates through social media such as Facebook, Instagram and WhatsApp. Online sampling method was chosen due to the pandemic period. This was because all the universities were closed at the moment and the recruitment of the participants could only be done through online. Besides, the convenience sampling method was beneficial in terms of cost-effective and time saving (Jager et al., 2017). In addition, convenience sampling method allowed the recruitment of target participants who were easily accessible and willing to contribute to the research (Etikan et al., 2016).

Sample Size

Sample size of this research was calculated using Krejcie and Morgan (1970) table. Target sample for this research was the Malaysian undergraduates who were studying in private or public universities in Malaysia. According to the Ministry of Education Malaysia (MOE, 2019), the total number of students who studied in public universities was 552702 in 2018. By using Krejcie and Morgan table, the minimum sample size for the population over 75000 was 382 with 95% confidence and 55% margin of error. The minimum sample size for this study was decided at 382. In the present study, a total of 509 participants were recruited and consisted of completed and uncompleted surveys. The data consisted of non-undergraduates, non-Malaysian and incomplete surveys were excluded from the actual study because they did not meet the requirement of this study. After removing the incomplete survey and outliers, a total number of 393 data remained in the actual study.

Instrumentation

Locus of control

Rotter's Internal-External Locus of Control scale (Rotter, 1996) was used to assess the perceived control over own behaviour. It consisted of 29 items and measured using forced-choice between alternatives for each item. Participants needed to choose either a or b. Items 2.a, 3.b, 4.b, 5.b, 6.a, 7.a, 9.a, 10.b, 11.b, 12.b, 13.b, 15.b, 16.a, 17.a, 18.a, 20.a, 21. a, 22.b, 23.a, 25.a, 26.b, 28.b, 29.a got one point and the total score was calculated while items 1, 8, 14, 19, 24 and 27 aimed to increase the ambiguity of the scale. The score of the scale was ranging from 0 to 23. The cut-off point for this scale was 11.5 to discriminate from internal locus of control and external locus of control. The score below 11.5 showed internal locus of control whereas the score above 11.5 showed external locus of control. Examples of items included "Many of the unhappy things in people's lives are partly due to bad luck" and "People's misfortunes result from the mistakes they make". The lower score indicated internal locus of control while the higher score indicated the external locus of control. Past study found Cronbach's alpha of this scale ranging from 0.62 to 0.71 (Adeyemi-Bello, 2001; Akca & Yaman, 2010; Ma'arif et al., 2016).

Conformity

Mehrabian Conformity Scale (Mehrabian & Stefl, 1995) was used to measure the characteristics to conform to others. It consisted of 11 items and measured on a 7-points Likert scale, ranging from -3 (very strong disagreement) to +3 (very strong agreement). Items 2, 7, 9 and 11 served as reversed items and the score of the scale was ranging from 11 to 77. The cut-off point of the scale was 44.5. The score below 44.5 indicated lower conformity whereas the score

above 44.5 indicated higher conformity. Examples of items included “I often rely on, and act upon, the advice of others” and “I would like to be the last one to change my opinion in a heated argument on a controversial topic”. The higher the score showed the higher in conformity while the lower score showed the lower in conformity. The internal consistency, Cronbach Alpha for the original measure was 0.77 (Mehrabian & Stefl, 1995).

Creativity

Self-Rated Creativity Scale was developed by Zhou & George in 2001 and later modified by Tan and Ong in 2017. The scale consisted of 13 items and measured on a 5-points Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The score of the items was ranging from 13 to 65. The score below 38.5 showed lower creativity while the score above 38.5 showed higher creativity. Examples of items included “I suggest new ways to achieve goals or objectives” and “I come up with new and practical ideas to improve performance”. The higher the score indicated higher in creativity whereas the lower score indicated lower in creativity. The scale reported high internal consistency ($\alpha = 0.96$) (Zhou & George, 2001; Tan et al., 2017).

Procedure

Before the data collection, permission and approval were obtained from the scientific committee of UTAR and the supervisor to ensure the procedure for data collection was ethical and all information in the questionnaire was correct. This research has used an online survey method to distribute the survey to participants. Participants were recruited through online platforms such as Facebook, WhatsApp and Instagram. The online link and QR code of the questionnaire were posted on the online platform and distributed to the individuals and different groups to recruit undergraduates to participate in the study. Before distributing the survey, the

questionnaire was done using Qualtrics and the anonymous link and QR code were sent to participants to be able to access the questionnaire. The questionnaires were distributed to Malaysian undergraduates who were studying in private or public universities in Malaysia. The duration of data collection took 44 days which started from 20th January 2021 to 4th March 2021.

The questionnaire consisted of informed consent, demographic information and instrumentations. Upon accessing the questionnaire, it started with the informed consent which consisted of the purpose, general instructions for the participants and confirmation of consent to participate in the study. It was followed by demographic information such as age, gender, ethnicity, nationality, undergraduates, and university. Participants then proceeded to Rotter's Internal-External Locus of Control scale, Mehrabian Conformity Scale and Self-Rated Creativity Scale. Each participant would take around 15 to 20 minutes to complete the survey.

After collecting the data, raw data were filtered and some incomplete surveys and outliers were removed to reduce the variability of the data. A total number of 509 participants were recruited and data which were uncompleted, non-undergraduates and non-Malaysian were excluded. To find out the reliability of the scales, 36 participants were involved in the pilot study while 393 participants were involved in the actual study. The data of actual study were analysed using the software SPSS to obtain the statistical result in this study.

Ethical clearance

To ensure this research was conducted in a proper manner, there were some ethical considerations that should be considered. Firstly, permission was obtained from scientific committees of University Tunku Abdul Rahman. The reference number of approval letter was

U/SERC/208/2020 which approval was provided for the researchers to collect data. Next, informed consent was included in the questionnaire. Informed consent was important to show that the participants fully understood about their participation and to ensure that they were willing to participate in the study. Besides that, it also served a purpose in protecting the privacy and confidentiality of the participants. Name was not required in the demographic information part to remain anonymous of the participants. The data could only be accessed by the researchers and supervisor in this study.

Reliability Test

Pilot test was carried out to examine the reliability of the scale. A total of 36 participants were involved in pilot study and 393 participants were included in actual study. Statistical Package for Social Science (program) was used to calculate the reliability for Rotter's Internal-External Locus of Control scale, Mehrabian Conformity Scale and Self-Rated Creativity Scale.

Table 3.1 depicted the test reliability of scale in pilot study, past study and actual study. In the pilot study, Self-Rated Creativity Test reported to have high reliability with Cronbach's alpha coefficient ($\alpha=.904$), followed by Rotter's Internal-External Locus of Control with Cronbach's alpha coefficient ($\alpha=.775$) and Mehrabian Conformity Scale with acceptable Cronbach's alpha coefficient ($\alpha=.680$). In the actual study, the Cronbach's alpha coefficient of both Self-Rated Creativity Scale and Mehrabian Conformity Scale increased respectively ($\alpha=.923$; $\alpha=.761$) while the Cronbach alpha coefficient of Rotter's Internal-External Locus of Control dropped ($\alpha=.629$).

Table 3.1

Variable	Cronbach's Alpha (α)		
	Past study	Pilot study (N=36)	Actual study (N=393)
Rotter's Internal-External Locus of Control Scale	.665	.775	.629
Mehrabian Conformity Scale	.770	.680	.761
Self-Rated Creativity Scale	.960	.904	.923

Data Analysis

Statistical Package for Social Science (SPSS) program was used to analyse the test result that was generated from the collected data. Pilot study and actual study were carried out to find out the reliability of the scale. Descriptive statistics was used to analyse categorical variables such as gender while continuous variables such as locus of control, conformity and creativity in terms of frequency, percentage, mean and so on. Other than that, Pearson Product-Moment Correlation was used to analyse the correlation between locus of control and creativity as well as conformity and creativity. Then, Multiple Linear Regression was used to examine the relationship between criterion variable and predictor variable. Predictors variables were locus of control and conformity whereas criterion variable was creativity. Multiple Linear Regression was able to find the predictive relationship of locus of control and conformity on creativity. Last but not least, Independent Sample T-Test was used to examine the significant gender difference in locus of control, conformity and creativity.

Chapter Summary

Quantitative method and cross-sectional approach were adopted as the research design for this study. Moreover, convenient sampling method was used to collect data from Malaysian undergraduates studying in public and private universities in Malaysia. Sample size of this research was calculated using Krejcie and Morgan table. In addition, Rotter's Internal-External Locus of Control scale, Mehrabian Conformity Scale and Self-Rated Creativity Scale were the instruments used to measure the variables in this research. Moving on, the reliability of the scales was examined in pilot study and actual study. Lastly, Pearson Product Moment Correlation,

Multiple Linear Regression and Independent Sample T-Test were conducted using Statistical Package for Social Science (SPSS) for data analysis.

Chapter IV

Results

Introduction

This chapter showed the result generated using SPSS. The demographic data collected for the present study was tabulated. Normality tests were carried out such as skewness, kurtosis, histograms, P-P plot, and Kolmogorov Smirnov and Shapiro-Wilk test for the assumptions of the parametric test. Pearson Product Moment Correlation was conducted to measure the correlation between the variables. Multiple Linear Regression was conducted to find out the predictive relationship between the predictive and criterion variables and tests such as normality, linearity, homoscedasticity, multicollinearity and independence of errors were conducted. Independence t-test was conducted to analyze the significant differences between the gender and the variables.

Demographic Details

Table 4.1

Participants' demographic

Participants information	Frequency (N)	Percentage (%)
Age		
18	5	1.3
19	13	3.3
20	42	10.7
21	98	24.9
22	183	46.6
23	35	8.9
24	13	3.3
25	3	0.8
26	1	0.3
Gender		
Male	172	43.8
Female	219	55.7
Others	2	0.5
Ethnicity		
Malay	11	2.8
Chinese	352	89.6
Indian	29	7.4
Orang Asli	1	0.3
University		
Private	311	79.1
Public	82	20.9
Total data		
Actual data	393	77.2
Missing data	116	22.8

Table 4.1 shows the demographic information of the participants. A total of 393 participants aged ranging from 18 to 26 years old. The research involved 5 participants of 18 years old (1.3%), 13 from 19 years old (3.3%), 42 from 20 years old (10.7%), 98 from 21 years old (24.9), 183 from 22 years old (46.6%), 35 from 23 years old (8.9%), 13 from 24 years old

(3.3%) , 3 from 25 years old (0.8%) and 1 from 26 years old (0.3%) Moreover, the participants consisted of 172 (43.8%) males, 219 (55.7%) females and 1 (0.5%) others. Furthermore, majority of the participants are Chinese which consisted of 89.6% (n=352), followed by Indian with 7.4% (n=29), Malay with 2.8% (n=11) and 1 Orang Asli (0.3%). In addition, there were 311 (79.1%) undergraduates from private universities while 82 (20.9%) undergraduates from public universities. In study study, a total of 509 data were collected which consisted of 393 (77.2%) actual data used and 116 (22.8%) missing data removed.

Test of Normality

Table 4.2

Descriptive Data for Skewness, Kurtosis, Kolmogorov-Smirnov and Shapiro-Wilk

Measure	Skewness	Kurtosis	Kolmogorov-Smirnov	Shapiro-Wilk
Locus of Control	-.218	-.471	.000	.000
Conformity	.598	-.064	.000	.000
Creativity	.310	.274	.003	.002

Based on Table 4.2, skewness and kurtosis for locus of control, conformity and creativity scales were significantly normal as the value fell between the value of ± 2 . Histograms and Q-Q plots of all three variables were normally distributed. However, Kolmogorov-Smirnov and Shapiro-Wilk of all three variables showed $p < .05$, indicating significant difference from a normal distribution. In short, parametric tests were able to be carried out as there were 4 out of 5 assumptions of normality that showed no violations.

Locus of Control and Creativity

H0: There is no significant relationship between locus of control and creativity among Malaysian undergraduates.

H1: There is a significant relationship between locus of control and creativity among Malaysian undergraduates.

Table 4.3

Pearson's Correlation of locus of control and conformity on creativity

		Locus of Control	Conformity
Creativity	Pearson's Correlation	-.337 **	.425 **
	Sig. (2-tailed)	.000	.000
	N	393	393

Note. Correlation is significant at the 0.05 level (2-tailed)

Pearson's Product Correlation Moment Correlation was performed to analyze the correlation between locus of control and creativity among Malaysian undergraduates. For locus of control, the higher score indicated external locus of control while the lower score indicated internal locus of control. For creativity, the higher score showed higher creativity whereas the lower score showed lower creativity. Table 4.3 demonstrated that there was a significant negative relationship between locus of control and creativity, $r(393) = -.337, p < 0.001$. The result showed that internal locus of control correlated with higher creativity whereby external locus of control correlated with lower creativity. According to Guilford's rule of thumb (1973), it showed a weak relationship between locus of control and creativity. Thus, the null hypothesis was

rejected as there was no significant relationship between locus of control and creativity among Malaysian undergraduates.

Conformity and Creativity

H0: There is no significant relationship between conformity and creativity among Malaysian undergraduates.

H1: There is a significant relationship between conformity and creativity among Malaysian undergraduates.

Pearson's Product Correlation Moment Correlation was performed to analyze the correlation between conformity and creativity among Malaysian undergraduates. The higher score in conformity indicated higher conformity while the lower score in conformity indicated lower conformity. Table 4.3 demonstrated that there was a significant positive relationship between conformity and creativity, $r(393)=.425, p<0.001$. The result showed that the higher the conformity, the higher the creativity whereas the lower the conformity, the lower the creativity. According to Guilford's rule of thumb (1973), it showed a moderate relationship between conformity and creativity. Thus, the null hypothesis was rejected as there was no significant relationship between conformity and creativity among Malaysian undergraduates.

Locus of Control and Conformity Predict Creativity

H0: Locus of control and conformity do not predict creativity among Malaysian undergraduates.

H1: Locus of control and conformity predict creativity among Malaysian undergraduates.

Table 4.4

Multiple Linear Regression of locus of control and conformity predict creativity

Predicted variable	β	t	p	F	R ²	VIF	Durbin-Watson
Fixed		9.906	.000	48.418	.199		2.008
LOC	-.157	-2.961	.003			1.376	
Conformity	.343	6.452	.000			1.376	

Note. Dependent variable= Creativity. Predictors= Locus of control and conformity.

To ensure that there were no violation of assumption, tests for normality, linearity, homoscedasticity, multicollinearity and independence of errors were conducted. Multicollinearity was measured using Variance Inflation Factor (VIF). VIF showed both locus of control and conformity to be significant predictors for creativity as VIF value below the preferred value of 10. Independence of errors was measured using Durbin-Watson. The value was 2.008 was between 1 to 3 and closer to 2 indicated congruent to assumption.

Multiple linear regression was performed to measure the predictive relationship of locus of control and conformity on creativity among Malaysian undergraduates. Table 4.4 showed that the model was statistically significant, $F(2, 390) = 48.418, p < .001$ and accounted for 19.9% of the variance. This indicated the data fell further from the regression line and only 19% of the variance of the creativity was explained by the variance of locus of control and conformity. Results found that both locus of control ($\beta = -.157, t = -2.961, p = .003$) and conformity ($\beta = .343,$

$t = 6.452, p < .001$) significantly predicted creativity. Conformity was a stronger predictor of creativity as compared to locus of control. Besides, according to Cohen's effect size (1988), it showed a medium effect size ($f^2 = .248$). Hence, the null hypothesis was rejected as locus of control and conformity do not significantly predict creativity among Malaysian undergraduates.

Gender and Locus of Control

H0: There is no significant gender difference in locus of control among Malaysian undergraduates.

H1: There is a significant gender difference in locus of control among Malaysian undergraduates.

Table 4.5

Independent Sample T-test of Locus of Control and Gender

	Levene's Test for Equality of Variances				t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error Difference
Equal Variance Assumed	1.910	.168	.224	389	.823	.08907	.39708

Note. Correlation is significant at the 0.05 level (2-tailed)

An independent t-test was performed to measure the significant gender difference in locus of control among Malaysian undergraduates. As interpreted from Table 4.5, there was no significant gender difference in locus of control, $t(391) = .224$, $p = .823$. Mean locus of control score for male ($M = 11.564$, $SD = 3.728$) was slightly higher than female ($M = 11.495$, $SD = 4.026$). In addition, 0 fell within 95% Confidence Interval of difference also indicated no significant gender difference in locus of control. Thus, the null hypothesis was failed to be rejected as there was no significant gender difference on locus of control among Malaysian undergraduates.

Gender and Conformity

H0: There is no significant gender difference in conformity among Malaysian undergraduates

H1: There is a significant gender difference in conformity among Malaysian undergraduates.

Table 4.6

Independent Sample T-test of Conformity and Gender

	Levene's Test for Equality of Variances				t-test for Equality of Means		
	F	Sig.	t	df	Sig (2-tailed)	Mean difference	Std. Error Difference
Equal Variance Assumed	.954	.329	-.433	389	.665	-.38969	.89936

Note. Correlation is significant at the 0.05 level (2-tailed)

An independent t-test was performed to measure the significant gender difference in conformity among Malaysian undergraduates. As interpreted from Table 4.6, there was no significant gender difference in locus of control, $t(391) = -.433, p = .665$. Mean conformity score for male ($M=45.227, SD=8.652$) was slightly lower than female ($M=45.616, SD=8.962$). In addition, 0 fell within 95% Confidence Interval of difference also indicated no significant gender difference in conformity. Thus, the null hypothesis was failed to be rejected as there was no significant gender difference on conformity among Malaysian undergraduates.

Gender and Creativity

H0: There is no significant gender difference in creativity among Malaysian undergraduates.

H1: There is a significant gender difference in creativity among Malaysian undergraduates.

Table 4.7

Independent Sample T-test of Creativity and Gender

	Levene's Test for Equality of Variances				t-test for Equality of Means		
	F	Sig.	t	df	Sig (2-tailed)	Mean difference	Std. Error Difference
Equal Variance Assumed	7.636	.006	-.570	389	.569	-.52357	.91906

Note. Correlation is significant at the 0.05 level (2-tailed)

An independent t-test was performed to measure significant gender difference in creativity among Malaysian undergraduates. As interpreted from Table 4.7, there was no significant gender difference in creativity, $t(391) = -.57$, $p = .569$. Mean creativity score for female ($M = 46.233$, $SD = 8.36$) was slightly higher than male ($M = 45.709$, $SD = 9.798$). In addition, 0 fell within 95% Confidence Interval of difference also indicated no significant gender difference in creativity. Thus, the null hypothesis was failed to be rejected as there was no significant gender difference in creativity among Malaysian undergraduates.

Chapter Summary

Table 4.8

Summary of the results

Hypothesis	Decision
H1. There is a significant relationship between locus of control and creativity among Malaysian undergraduates.	Supported
H2. There is a significant relationship between conformity and creativity among Malaysian undergraduates.	Supported
H3. Locus of control and conformity predict creativity among Malaysian undergraduates.	Supported
H4. There is a significant gender difference in locus of control among Malaysian undergraduates.	Not supported
H5. There is a significant gender difference in conformity among Malaysian undergraduates.	Not supported
H6. There is a significant gender difference in creativity among Malaysian undergraduates.	Not supported

In this chapter, the result found that 4 out of 5 assumptions were met namely skewness, kurtosis, histogram and Q-Q plot were accepted whereby Kolmogorov-Smirnov and Shapiro-Wilk tests were rejected. Next, correlational analysis reported that there was a significant negative relationship between locus of control and creativity whereas there was a significant positive relationship between conformity and creativity. Moving on, testing assumptions for

regression were carried out and all assumptions were met. Multiple Linear Regression indicated that the model was statistically significant and both locus of control and conformity significantly predicted creativity. Lastly, Independent T-Test reported that there were no significant gender difference in locus of control, conformity and creativity.

Chapter V

Discussion

Introduction

This research aims to measure the impact of locus of control and conformity on creativity as well as gender difference in locus of control, conformity, and creativity among Malaysian undergraduates. The correlation analysis results reveal a significant negative relationship between locus of control and creativity, whereby there is a significant positive relationship between conformity and creativity. Besides, regression analysis indicates that both locus of control and conformity are significant predictors of creativity. Next, results from independent t-test report that there are no significant gender difference on these variables.

This chapter discusses the findings of the result by using the past literature as supporting materials. Furthermore, this chapter also states the limitations of the present study and recommendations for future research. Last but not least, this chapter discusses the theoretical implication and practical implication followed by the conclusion.

Locus of Control and Creativity

The present study reveals that the relationship between locus of control and creativity is negatively significant, and the null hypothesis is rejected. The result indicates that the lower the locus of control which also refers to an internal locus of control, the higher the level of creativity. In contrast, the higher the locus of control which is the external locus of control, the lower the level of creativity.

The present findings are consistent with the past studies of Lather et al. (2014), Oğuz and Sariçam (2016), Saracaloğlu and Yılmaz (2011), Glover and Sautter (1976) and Xu et al. (2020). Past studies indicated that individuals with internal locus of control showed a greater tendency to generate creative ideas and process the same information and problems from different perspectives. This is because they tend to be showing more creative characteristics such as risk assumption and searching for new paths (Michaela et al., 2015). The recent study of Xu et al. (2020) indicated that millennials with internal locus of control tend to be more creative. A possible explanation for this might be that undergraduates with internal orientation are more likely to believe that their outcomes result from their efforts. Therefore, they will keep exploring and experimenting with new ideas and solutions instead of following traditional methods, ultimately leading to higher creativity levels. Lather et al. (2014) found that creativity increases from the age of 18 to 23. Since most of the Malaysian undergraduates in the present study are in the age group of 18 to 23 years, a possible explanation is that Malaysian undergraduates with internal locus of control in the age group of 18 to 23 years perceive their choice to attend university as their stepping stone and effort, are more likely to strive for their academic achievement, apply what they have learned toward positive outcomes for their academic achievement and daily life which leads to a higher level of creativity. Their willingness to enhance their learning method from time to time would enable them to be more creative as they are responsible for their success (Glover & Sautter, 1976).

In contrast, people with external locus of control tend to show lesser creativity because they will attribute the outside world's outcome instead of themselves. For example, they are more likely to believe that they have little or even no control over their success or failure results and will blame external factors such as fate, chance, luck, others' fault, and bias (Education Reform,

2013). Thus, they will not voluntarily learn something new or even put effort in their academics as they think they are not able to change the situation by their effort. In addition, they will also be less likely to explore new areas of knowledge that can eventually lead to creative idea generation. Hence, it can be concluded that Malaysian undergraduates with internal locus of control tend to be more creative than those with external locus of control.

Conformity and Creativity

This study shows a significant positive relationship between conformity and creativity, indicating that a higher level of conformity scores a higher level of creativity. The null hypothesis is rejected. The current findings are inconsistent with most of the past findings (Abirami, 2012; Goncalo & Duguid, 2012), in which they found conformity and creativity are negatively correlated, which indicates the lower the level of conformity, the higher the level of creativity and vice versa. These contradictory findings can be explained as creative people will provide their original ideas and thoughts during group meetings. However, at the same time, they will also not insist on their ideas and will conform to the group if the majority of the group members make the same choices and when others' ideas are better. This is because they want to avoid any conflict or being "outgroup" as Asian that practice collectivist culture tends to be more concerned about other's emotions and the group harmony (Cherry, 2020).

Another possible explanation for this is that conformity may promote group processes that foster creative and innovative ideas. Conforming to the team can help those who lack the creative talent to create their style and change others' cognitive ability to boost creativity in creating a novel artwork through copying or observation when encountering unfamiliar artwork (Goncalo & Guguid, 2012; Okada & Ishibashi, 2016; Ward, 2017). This is because, for those

who have no ideas or cannot think of any ideas in a given time, others' creative ideas could be a vital spark that lightens up the person's mind in generating their originality or even modify the existing idea to be better and more creative to deal with the problem.

Besides that, undergraduate students emphasise friends and the sense of belonging within a group. Thus, they are more likely to conform to the groups to be accepted and avoid alienation by others. They know that conformity is unavoidable and is essential for society nowadays in allowing them to adapt to a new culture and get along with a group of friends, especially in Malaysia, where most people practice collectivism (Burns & Brady, 1992). For example, if people stand out differently or always come out with unique ideas in the class, they will most likely be perceived as strange people and out of the group. However, if the person has already gotten along with a group of friends, they will probably be perceived by their friends as a creative thinker whenever they come out with unique ideas. In short, conformity in undergraduate students is correlated with creativity. Creative people are more likely to have good analytical thinking skills which they know conformity is important for their creativity to be seen and treasured.

Locus of Control and Conformity Predict Creativity

The result of this study indicates that locus of control and conformity significantly predict creativity. Both variables serve as predictors of creativity. Internal locus of control and higher conformity are more likely to have higher creativity. Nonetheless, conformity is found to be a better predictor than the locus of control on creativity among Malaysian undergraduates. This can be explained that conformity is more essential for Malaysian undergraduates in terms of creativity as it serves as an essential element for Malaysian undergraduates, especially for those lacking creative talent, to gain social acceptance from their peers and observe their peers' works

and accept ideas from peers to enhancing their creativity when encountered with unfamiliar academic works. Besides, Cherry (2019) mentioned that in order to be creative, we need to be both tradition and iconoclastic. It means we appreciate and embrace the past or the knowledge learned but at the same time keep trying to generate new ideas to improve it. Conformity is common in Malaysian undergraduates as they tend to conform more to others' ideas to ensure the progress of the positive outcome and the group's cohesiveness, yet examples could be very useful for people to come out with better originality if they refer to it wisely. However, locus of control are found to be a secondary element that contributes to creativity compared to conformity. This could be due to people might have a bi-local locus of control which they tend to attribute different perceptions of control towards different events. In short, conformity serves as a better predictor for creativity than locus of control among Malaysian undergraduates.

The present finding is consistent with the study of Malik et al. (2014) which claims that internal locus of control is able to predict creativity. Our finding is consistent with the study that indicated individuals with internal locus of control are more likely to search for alternative or new paths in enhancing their learning method and solving the problems, leading to higher levels of creativity (Lather et al., 2014; Michaela et al., 2015). They attribute achievement towards their effort, so they will work harder to increase their knowledge. Maria Popova once said that "creativity is a combined force where individuals combine all the knowledge accumulated over the years in extraordinary new ways" (Naiman, n.d.). Conversely, individuals with external locus of control are less likely to be creative as they believe that their outcomes are the results of others or by external factors that they are not capable of control over their life and think that everything has been destined. Hence, they are less likely to work hard to increase their knowledge and enhance their creative thinking.

Nevertheless, the present finding is inconsistent with most of the past studies, indicating that conformity negatively predicted creativity (Abirami, 2012; Goncalo & Duguid, 2012). Past researchers argued that conforming to the groups would inhibit the expression of unique creative ideas. However, present findings show that conformity positively predicts creativity among Malaysian undergraduates which is consistent with the study by Kaplan et al. (2009) that explained conformity could boost the group process of idea innovation. This finding has also supported the saying that creativity can be learned. This is because Malaysian undergraduates tend to follow the majority's idea especially when they are not expertise in that particular area. To think outside the box, we must first know what is inside the box. This means that if we want to generate breakthrough ideas, we need to have a strong foundation of knowledge about the subject by observing more example ideas. Thus, undergraduates are more likely to rely on others' ideas first, then only they slowly come out with their own creative and innovative solution to the problem along the process. Besides, they can also learn from others and come out with better ideas. Likewise, Asian culture people also tend to conform to the group more as they used to strive for maintaining group harmony and avoid conflict. In short, conforming to others' ideas will not inhibit the creativity of Malaysian undergraduates, but it would act as a good source for them to generate new and innovative ideas.

Gender and Locus of Control

The present study shows that there is no significant gender difference in locus of control among Malaysian undergraduates, which is measured by the independent t-test. Thus, the null hypothesis fails to be rejected. The present study shows that gender difference did not affect their locus of control.

The findings of this study are inconsistent with the past studies of Serin et al. (2010), Siddiquah (2019), Oğuz and Sarıçam (2016), and Haider Zaidi and Mohsin (2013) which found that males tend to be more internal than females. In contrast, several studies by Callaghen and Papageorgiou (2015), McPherson and Martin (2016), and Ghazvini and Khajehpour (2011) indicated that females tend to be more internal locus of control. Present findings indicate that there are no significant gender difference in locus of control. The possible reason is that gender does not determine locus of control among Malaysian undergraduates as gender roles are insignificant compared to other factors in shaping their perception of control. This is because both males and females are encouraged to believe their outcome or results are based on their abilities regardless of traditional gender norms that deny females' abilities and achievement. However, it could be due to the fact that personal experience will shape their locus of control in their life as everyone has different personal experiences due to different background, socioeconomic, age, family status, education.

Gender is not the factor that influences locus of control whereas age and culture differences are the factors that affect the discrepancy of locus of control (Ghasamzadeh & Saadat, 2011, Siddiquah, 2019). This is because age plays an important role in shaping locus of control. An individual's abilities and competencies to influence their events in everyday lives will be improved when they are growing up (Łubianka et al., 2020). Undergraduates may undergo changes in their locus of control under the influence of the university's educational environment as they are at the age of transitioning to adulthood, which is an important stage for forming identity and shaping their perception of control. In other words, undergraduates not only begin to take responsibility for their academic achievement and actions but will also begin to develop their perception of control in their daily lives or their future.

Moreover, students from different socioeconomic statuses may shape their perception of control. Based on Serin et al. (2010), the research also found that besides age, socioeconomic also contributes to the difference in locus of control where high socioeconomic students tend to show internal locus of control characteristics while medium or low socioeconomic students show external locus of control characteristics. This can be explained that high socio-economics students have more opportunities for education and academic resources which are more likely to focus on their internal factors such as efforts or goals. Thus, they are more likely to have a greater sense of control over their life. In contrast, medium or low socioeconomic students have to deal with the scarcity of academic opportunities and limited resources that may reduce their sense of control over their lives as they believe that their life has been destined, which, in turn, shows a greater tendency to focus on external factors in their outcomes.

Besides that, childhood experience or family education may also play a role in students' psychological functioning and affect their locus of control. Home is perceived as our first school, and thus our first teacher in life is our parents. This is because parents provide primary resources for education in their children since their childhood. Family education in early childhood seems to be an important factor that shapes a person's perception of control (Nowicki et al., 2018). For example, parents who encourage independence in their children and teach them that their behaviours and consequences are closely related will most probably result in their children being more internally oriented. In contrast, parents who always help their children in problem-solving and always blame the external factors in front of the children will affect children to become more externally oriented. Hence, parents' behaviour and teaching might influence children's sense of control towards their life as they are the role model for their children.

Gender and Conformity

According to the present findings, there is no significant gender difference in conformity among Malaysian undergraduates, measured by independent t-test. Thus, the null hypothesis fails to be rejected. The present study indicates that both females and males show the same level of conformity.

The present findings show contradict with most of the other past studies (Eagly, 1978; Eagly & Carli, 1981; Johnson & MacDonnell, 1974; Rosander & Eriksson, 2012) which indicated that either male or female have higher conformity due to gender norms and traditional social positions (Alizadehfard, 2010; Toelch & Dolan, 2015). This can be explained as the trend has significantly changed in terms of gender roles. The modern world has started to accept any roles for both females and males. Females have started entering into male-dominated roles such as leadership, business person, and others, whereas males also have started to concentrate on children, family, and home today (Sekścińska et al., 2016). This may be the possible mechanism that people no longer conform to the traditional feminine and masculine roles. Likewise, they are more likely to “be themselves” and break through the traditional gender roles. Besides that, society nowadays values, cherishes, and encourages people to have their ideas and thoughts. Hence, it can be concluded that males and females tend to show the same level of conformity among Malaysian undergraduates.

Moreover, both males and females are also believed to have the same level of conformity to the group choice. Although they may emphasize different aspects, they tend to show the same level of conformity to the majority. For example, males are more likely to conform to protect their self-esteem and avoid being isolated. In contrast, females are more likely to conform in

order to avoid conflict. Additionally, this study is based on Malaysia context and Malaysia is considered a country that practices a collectivist culture. People in collectivist cultures are found to show higher compliance levels as they emphasize more on harmony and social acceptance, unlike individualistic cultures that strive for freedom and independence (Oh, 2013). In short, cultural differences are everywhere and can influence various aspects of social behaviours. Besides that, people tend to conform to the things they have inadequate knowledge about and will be more easily influenced by the social pressure when lacking confidence (Eagly & Chavala, 1986; Cross et al., 2016). Besides, age might also play an important role in affecting the degree of conformity. In this study, most of the participants are aged from 18-23 years of Malaysian undergraduate. They seem to be more likely to conform because they believe that they are less knowledgeable and lack experience than older individuals. Students may also show higher conformity due to their belief that they are in the learner position and may not appropriate to challenge the information by adults which are often perceived as authority figures (Beran, 2015).

Gender and Creativity

The present study shows no significant gender difference in creativity among Malaysian undergraduates, which was measured by the independent t-test, and the null hypothesis fails to be rejected. This study shows that both females and males show the same level of creativity.

The finding of this study is contrary to previous studies which have suggested males are more creative than females (Karwowski et al., 2016; Taylor et al., 2020) and also several studies by Runco et al. (2009), Ulger and Morsunbul (2016) and Shubina and Kulakli (2019) indicated that females are more creative than males. This is because most of the past cultures and

environments tend to provide more support for creativity to males than females, which has caused the gender difference in creativity level. However, with the rapid development and advancement of technology nowadays, society has started to cultivate and acknowledge creativity in females and treat all people equally by giving them equal chances regardless of gender. This can be explained that the environment or population that flourish provides support for creativity can increase creative behaviours (Taylor et al., 2020). Richardson and Mishra (2018) stated that the learning environment is essential in fostering creativity such as passion-based learning to encourage them to make mistakes in the learning process. Students in a creativity supporting environment are more likely to have higher levels of critical thinking and problem-solving, which are creative individuals' characteristics (Davies et al., 2013).

Furthermore, this inconsistency may also be due to the creativity in this study only focusing the creativity in general but not including different areas of creativity. Thus, it can be explained as males and females are both creative but just in different areas or fields such as males are more creative in everyday domestic forms while females are more creative in aesthetic forms (Karwowski et al., 2016). This is because people tend to put more effort into the things that they are interested in. So they will take more initiative to increase their knowledge in that area and keep exploring to master it and then finally come out with their perspective and new insight into it.

Another possible explanation for this is that age may be the possible mechanism in creativity. The participants of this study range from 18 to 26 years old, and according to Lather et al. (2014), creativity increases evidently at the age of 18 to 23 years. This is because most of these age ranges of people are probably undergraduate, so they have more courage to speak out

their innovative ideas, and youngsters are always more fearless to bear with failure than others (Karademir, 2019). Unlike working adults, they need to bear the risks of making mistakes and being scolded by the superior. Their creativity is hindered because innovative products mainly to meet the customer requirement, and expressing their own emerging thoughts seems irrelevant and usually not welcomed. Also, the university is a place where undergraduate's creative ideas are cherished and treasured. Moreover, universities nowadays also require undergraduates to have a higher order of thinking skills and good problem-solving skills in dealing with academic challenges. However, undergraduates are expected to display different kinds of thinking processes and skills to meet the criteria or requirement of academic performance in the university. Hence, they emphasise innovative and divergent thinking skills, which lead to a higher level of creativity. In short, different in age range will affect the people mindset in creative idea generation.

Limitation

This research is subjected to several limitations. Firstly, some participants report that some of the items are difficult to understand, they require a longer time to complete the questionnaire. They might complete their survey by guessing and not depend on their precision. This might affect the accuracy of the result as they misunderstand the meaning of the items. Besides, participants need to consume much time on the first scale, which may lead to fatigue and thus simply answer for the rest of the scale. Many of the participants withdraw from the survey and leave the survey incomplete due to losing patience. All of these issues might lead to inaccurate results due to not being genuine in answering the survey..

Besides, the instrumentations for this study are self-report questionnaires. By using this method, the participants are expected to complete the survey truthfully and accurately. However, there are risks where the participants complete the survey dishonestly due to social desirability effect. The participants might rather answer according to the social norm by hiding their true feelings in order to be more socially acceptable which lead to over positive or negative bias. In addition, the measurement of Rotter's Internal-External Locus of Control scale provided forced-choice questions that restricts the participant's choices. They report that they wish to choose "the middle answer" but are forced to answer in a way that does not match their views. These factors would lead to bias where the accuracy of their answer may not be fully attended.

Furthermore, present findings might be biased due to the non-probability sampling methods. The convenience sampling method is used because the participants are easily accessible. Additionally, the online survey form is distributed via social media such as Facebook, Instagram, and WhatsApp. While most of respondents are the people surrounding us, bias results might occur due to the snowball effect. In addition, bias occurred where the number of females is slightly higher than males. These result in the imbalance ratio of participants across gender. The imbalance of gender may lead to less reliability of the result between the variables and gender. Thus, the imbalance ratio of the gender may cause the results generated are under representation and inadequate to generalise to the overall population of undergraduates in Malaysia. According to Chotpitayasunondh and Douglas (2016), unequal distribution restricts us from analysing the potential effects correlated with these variables.

Recommendation

As some of the respondents claimed that the questionnaire is too long and some have difficulties understanding the questionnaire, future researchers can consider using a shorter survey. Shorter surveys can reduce time consumption, whereby participants are more comfortable completing the survey. Besides, a paper-pencil survey is suggested when the questionnaire is required much to complete. Researchers' presence can help explain the details of the study and solve any question from the participants face-to-face to reduce error in answering the survey. At the same time, participants are also more likely to complete the survey seriously when there is the researchers' presence. These can increase the accuracy and genuineness in answering the survey. Both paper-pencil and online distribution of the survey simultaneously can increase the efficiency of collecting the data.

Next, it is recommended to use experiments or interview methods to reduce the probability of bias in future study. Interview research can help to better understand certain topics by exploring the participants' perceptions. Interview research which includes open-ended questions could help to collect more detail and in-depth information. Meanwhile, experimental study could better explain creativity by observing the behaviour and outcome of the participants. In addition to these, mixed methods could be used where self-report questionnaires distribute after the interview and experiment study. This can ensure the findings are grounded in participants' experiments. Mixed methods can also strengthen the findings' result by giving both depth and broad understanding of the topic.

Furthermore, the ratio of gender is not proportionate in this study. Future research is recommended to use probability sampling methods such as simple random, stratified, systematic

or cluster samples to enhance the significance of the study. Future research is also recommended to recruit participants with an equal proportion of male and female. Recruiting an equal proportion of males and females is suggested to get an unbiased result while studying gender difference with variables. In short, future researchers are also encouraged to use probability sampling to collect a balanced ratio of gender which can help to generalise the result to the target population.

Lastly, future study can investigate other factors that can contribute to creativity among Malaysian undergraduates. The present study shows that the internal locus of control has a moderate positive relationship with creativity. Researchers can search for other internal factors such as self-efficacy, motivation or personality that might contribute to creativity. Besides, other demographic variables such as age, socio-economy and type of universities might also affect creativity as well. This might provide better insight into the internal and demographic factors that contribute to creativity. By doing so, universities can improve in preparing suitable educational programs that can increase the creativity of the undergraduates.

Implication

Theoretical Implication

The present study's findings are able to fill the gap of limited literature in this field of study, especially in the Malaysia context. This is because most of the past studies are focused on the western cultural context. Therefore, the present study contributes to the Malaysian settings that provide insight to understand that locus of control and conformity can bring impacts in creativity among Malaysian undergraduates.. Besides that, the present study provides a basic foundation for future researchers to examine further impact of other variables such as education,

socioeconomic and environment in locus of control, conformity, and creativity in Malaysia since the findings of this study found that there are no significant differences between gender difference in locus of control, conformity, and creativity among Malaysian undergraduates.

Practical Implication

The result highlights the impact of locus of control and conformity on creativity. These findings may raise awareness for undergraduates about the importance of creativity as it is critical for career development. These findings can also provide insight for the government and educators on how locus of control and conformity affect creativity among Malaysian undergraduates. Therefore, the government and educators can design vocational training and soft skills training for undergraduates by distinguishing student's locus of control and team processes skills which conform to the team to improve their creative thinking and assist them in preparing well before they enter the working field which can ultimately increase their employment opportunity.

Lastly, the present study's findings can provide data and reference for educators in developing or modifying educational programs and learning environments to improve and unleash the potential creativity of the students because the locus of control plays a critical role in boosting creative ideation and academic achievement in university. The present findings indicate internal locus of control and conformity can influence creativity which can further boost and unleash student's creativity by changing student's perception of control towards their academic and teamwork skills. For example, educators can develop unstructured learning environments to strengthen their internal locus of control by using different kinds of techniques to encourage students to believe that they are able to control their academic achievement (Education Reform,

2013). Well-developed educational programs and systems will have greater success not only in helping students equip critical thinking skills, problem-solving skills, and others but also in helping students for career development.

Conclusion

The present study examines the impact of locus of control and conformity on creativity among Malaysian undergraduates. This study also investigates the gender difference in locus of control, conformity, and creativity among Malaysian undergraduates. The present study shows locus of control is significantly negatively correlated with creativity, whereas conformity is significantly positively correlated with creativity. Besides, both locus of control and conformity are found to significantly predict creativity. However, the results show that no gender difference are found in the locus of control, conformity, and creativity. The forced-choice questions limit the participant's choice, and difficulty understanding the question may lead to inaccuracy of the results which is the study's limitations. The imbalance ratio of gender may be unable to generalise the result in determining the gender difference in the variables. The findings of this study serve as a reference not only for future researchers to explore more on this topic or examine other variables on creativity but also for government, educators and even undergraduates in understanding locus of control and conformity affect student's creativity. By doing this, it is believed to enhance the student's creative thinking before they enter the working field and thus reduce their unemployment rate.

References

- Abirami, R. (2012). *A study of creativity of high school students in relation to information processing style, conformity behaviour and self-confidence* [Unpublished doctoral dissertation]. Vinayaka Mission University.
<http://www.vinayakamission.com/userfiles/phd/O746500001.pdf>
- Adeyemi-Bello, T. (2001). Validating Rotter's (1966) locus of control scale with a sample of not-for-profit leaders. *Management Research News*, 24(6/7), 25-34.
<https://doi.org/10.1108/01409170110782865>
- Ainsworth-Land, G. T., & Jarman, B. (1992). *Breakpoint and beyond: Mastering the future-today*. Harper Business.
- Akca, F., & Yaman, B. (2010). The effects of internal-external locus of control variables on burnout levels of teachers. *Procedia - Social and Behavioural Sciences*, 2(2), 3976-3980.
<https://doi.org/10.1016/j.sbspro.2010.03.626>
- Alizadehfard, S. (2010). Effect of gender and social status on conformity: A study of Asch's basic conformity under the influence of the sex and the social position. *Psychological Research* 13(1), 30-50.
- American Psychological Association. (2012). Guidelines for psychological practice with lesbian, gay, and bisexual clients. *American Psychologist*, 67(1), 10-42.
<https://doi.org/10.1037/a0024659>
- Asch, S. E. (1955). Opinions and social pressure. *Scientific American*, 193(5), 31-35.
<https://doi.org/10.1038/scientificamerican1155-31>

- Asch, S. E., & Guetzkow, H. (1951). Effects of group pressure upon the modification and distortion of judgments. *Organizational influence processes*, 295-303.
<https://www.gwern.net/docs/psychology/1952-asch.pdf>
- Baer, J., & Kaufman, J.C. (2008). Gender differences in creativity. *The Journal of Creative Behavior*, 42(2), 75–105. <https://doi.org/10.1002/j.2162-6057.2008.tb01289.x>.
- Banakou, S. (2015). *Job satisfaction and creativity at work among Greek employees: The role of time perspective and financial crisis* [Unpublished master's dissertation]. Linnaeus University. <http://lnu.diva-portal.org/smash/get/diva2:839757/FULLTEXT01.pdf>
- Bandura, A. (1965). Influence of models's reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology*. 1(6), 589-595.
<https://pdfs.semanticscholar.org/7f4b/c8fca3f65f452caee4ce1edc0e806cb37a5f.pdf>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Baruah, J., & Paulus, P. B. (2019). Collaborative creativity and innovation in education. *Creativity Theory and Action in Education*, 3, 155-177. https://doi.org/10.1007/978-3-319-90272-2_9
- Baumgartner, J. P. (2013, January 20). *Characteristics of highly creative people*. The Creativity Post. https://www.creativitypost.com/article/characteristics_of_highly_creative_people

- Beran, T. (2015). Research advances in conformity to peer pressure: A negative side effect of medical education. *Health Professions Education, 1*(1), 19-23.
<https://doi.org/10.1016/j.hpe.2015.11.004>
- Bolen, L. M., & Torrance, E. P. (1978). The influence on creative thinking of locus of control, cooperation, and sex. *Journal of Clinical Psychology, 34*(4), 903–907.
[https://doi.org/10.1002/1097-4679\(197810\)34:4<903::aid-](https://doi.org/10.1002/1097-4679(197810)34:4<903::aid-)
- Burns, D., & Brady, J. (1992). A cross-cultural comparison of the need for uniqueness in Malaysia and the United States. *The Journal of Social Psychology, 132*(4), 487-495.
<https://doi.org/10.1080/00224545.1992.9924728>
- Callaghan, C., & Papageorgiou, E. (2015). Gender differences in locus of control and student performance in the South African context of accounting studies. *Meditari Accountancy Research, 23*(3), 348–368. <https://doi.org/10.1108/medar-02-2014-0018>
- Cambridge Dictionary (n.d.). Undergraduate. In *cambridge dictionary*. Retrieved October 15, 2020, from <https://dictionary.cambridge.org/dictionary/english/undergraduate>
- Carli, L. L. (2001). Gender and social influence. *Journal of Social Issues, 57*(4), 725–741.
<https://doi.org/10.1111/0022-4537.00238>
- Carter, M. F., Franz, T. M., Gruschow, J. L., & VanRyne, A. M. (2019). The gender conformity conundrum: The effects of irrelevant gender norms on public conformity. *The Journal of Social Psychology, 159*(6), 761-765. <https://doi.org/10.1080/00224545.2019.1586636>
- Chandiramani, K. (2014). Locus of control and subjective wellbeing: Examining gender differences. *Indian Journal of Health & Wellbeing, 5*(3), 325-329.

<http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=7ab2703c-3050-4411-b65e-4b985b3f1209%40pdc-v-sessmgr06>

Cherry, K. (2019, October 13). *10 characteristics of creative people*. Verywell Mind.

<https://www.verywellmind.com/characteristics-of-creative-people-2795488>

Cherry, K. (2020, March 26). *How does conformity influence behavior?* Verywell Mind.

<https://www.verywellmind.com/what-is-conformity-2795889>

Chia, Y. M., Koh, H. C. & Pragasam, J. (2008). An international study of career drivers of accounting students in Singapore, Australia and Hong Kong. *Journal of Education and Work*, 21(1), 41-60. <https://doi.org/10.1080/13639080801957014>

Chotpitayasunondh, V., & Douglas, K. M. (2018). The effects of “phubbing” on social interaction. *Journal of Applied Social Psychology*, 48(6), 304–316.

<https://doi.org/10.1111/jasp.12506>

Christensen, T. (2012, June 26). *What influences your creativity*. Creative Something.

<https://creativesomething.net/post/25923994529/what-influences-your-creativity#:~:text=Three%20key%20elements%20make%20up,of%20these%20aspects%20are%20evident>

Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology*, 55(1), 591–621.

<https://doi.org/10.1146/annurev.psych.55.090902.142015>

Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity and compliance. *The Handbook of Social Psychology*, 151-192.

[http://www.mapageweb.umontreal.ca/delasabr/PSY2007/Axe1_PSY2007/Cialdini\(98\)_SocialNorms%20copy.pdf](http://www.mapageweb.umontreal.ca/delasabr/PSY2007/Axe1_PSY2007/Cialdini(98)_SocialNorms%20copy.pdf)

Cohen, J. (1988). *Statistical power analysis for the behavioral science*. Lawrence Erlbaum Association.

Corazza, G. E. (2016). Potential originality and effectiveness: The dynamic definition of creativity. *Creativity Research Journal*, 28(3), 258–267.
<https://doi.org/10.1080/10400419.2016.1195627>

Costa, S., Páez, D., Sánchez, F., Garaigordobil, M., & Gondim, S. (2015). Personal factors of creativity: A second order meta-analysis. *Journal of Work and Organizational Psychology*, 31(3), 165-173. <https://doi.org/10.1016/j.rpto.2015.06.002>

Cross, C. P., Brown, G. R., Morgan, T. J. H., & Laland, K. N. (2016). Sex differences in confidence influence patterns of conformity. *British Journal of Psychology*, 108(4), 655–667. <https://doi.org/10.1111/bjop.12232>

Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative learning environments in education - A systematic literature review. *Thinking Skills and Creativity*, 8, 80–91. <https://doi.org/10.1016/j.tsc.2012.07.004>

Debnam, K., Holt, C. L., Clark, E. M., Roth, D. L., Foushee, H. R., Crowther, M., MD, M. F., & Southward, P. L. (2012). Spiritual health locus of control and health behaviors in African Americans. *American Journal of Health Behavior*, 36(3), 360-372.
<https://doi.org/10.5993/ajhb.36.3.7>

Department of Statistics Malaysia (2020, October 13). *Key statistics of labour force in Malaysia, August 2020*. Department of Statistics Malaysia Official Portal.

https://www.dosm.gov.my/v1/index.php?r=column/ctHEMEByCat&cat=124&bul_id=QV NxSFB6d2tOT0ZVck5CNUxWK1o4Zz09&menu_id=Tm8zcnRjdVRNWWlpWjRlbmtl aDk1UT09

Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *The Journal of Abnormal and Social Psychology, 51*(3), 629–636. <https://doi.org/10.1037/h0046408>

Dumas, L. L. (2014). *Do offenders' life goals reflect locus of control and personality traits?* [Unpublished undergraduate's dissertation]. University of Northern Iowa. <https://scholarworks.uni.edu/cgi/viewcontent.cgi?article=1080&context=etd>

Dweck, C. S., & Bush, E. S. (1976). Sex differences in learned helplessness: I. Differential debilitation with peer and adult evaluators. *Developmental Psychology, 12*(2), 147–156. <https://doi.org/10.1037/0012-1649.12.2.147>

Eagly, A. H. (1978). Sex differences in influenceability. *Psychological Bulletin, 85*(1), 86–116. <https://doi.org/10.1037/0033-2909.85.1.86>

Eagly, A. H. (1983). Gender and social influence: A social psychological analysis. *American Psychologist, 38*(9), 971–981. <https://doi.org/10.1037/0003-066X.38.9.971>

Eagly, A. H., & Carli, L. L. (1981). Sex of researchers and sex-typed communications as determinants of sex differences in influenceability: A meta-analysis of social influence studies. *Psychological Bulletin, 90*(1), 1–20. <https://doi.org/10.1037/0033-2909.90.1.1>

Eagly, A. H., & Chrvala, C. (1986). Sex differences in conformity: Status and gender role interpretations. *Psychology of Women Quarterly*, *10*(3), 203–220.

<https://doi.org/10.1111/j.1471-6402.1986.tb00747.x>

Eagly, A. H., & Wood, W. (2016). Social role theory of sex differences. *The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies*, 1–3.

<https://doi.org/10.1002/9781118663219.wbegs183>

Education Reform (2013, October 25). Locus of Control. *The Glossary of Education Reform*.

[https://www.edglossary.org/locus-of-](https://www.edglossary.org/locus-of-control/#:~:text=Locus%20of%20control%20is%20a,success%20or%20failure%20in%20school)

[control/#:~:text=Locus%20of%20control%20is%20a,success%20or%20failure%20in%20school](https://www.edglossary.org/locus-of-control/#:~:text=Locus%20of%20control%20is%20a,success%20or%20failure%20in%20school)

Endler, N. S., Minden, H. A., & North, C. (1973). The effect of reinforcement and social approval on conforming behaviour. *European Journal of Social Psychology*, *3*(3), 297-

310. <https://doi.org/10.1002/ejsp.2420030308>

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1-4.

<https://doi.org/10.11648/j.ajtas.20160501.11>

Farooqui, S., & Nagendra, A. (2014). The impact of person organization fit on job satisfaction and performance of the employees. *Procedia Economics and Finance*, *11*, 122-129.

[https://doi.org/10.1016/s2212-5671\(14\)00182-8](https://doi.org/10.1016/s2212-5671(14)00182-8)

Fischer, C., Malycha, C. P., & Schafmann, E. (2019). The influence of intrinsic motivation and synergistic extrinsic motivators on creativity and innovation. *Frontiers in Psychology*,

10. <https://doi.org/10.3389/fpsyg.2019.00137>

- Flor, R. K., Bitá, A., Monir, K. C., & Zohreh, Z. Z. (2013). The effect of teaching critical and creative thinking skills on the locus of control and psychological well-being in adolescents. *Procedia - Social and Behavioral Sciences*, 82, 51–56.
<https://doi.org/10.1016/j.sbspro.2013.06.223>
- Fung, L. Y., & Kong, M. (2021, March 21). *Psychology of e-learning and amid covid-19*. Daily Express. <https://www.dailyexpress.com.my/read/4317/psychology-of-e-learning-amid-covid-19/>
- Garikai, H. (2018, July 3). *Family influence and career choice: What is the impact of family influence on the career decision of adolescents?* Behavioral Development Economics. <https://behavioraldevelopmentblog.wordpress.com/2018/07/03/family-influence-and-career-choice-what-is-the-impact-of-family-influence-on-the-career-decision-of-adolescents/>
- Ghasemzadeh, A., & Saadat, M. (2011). Locus of control in Iranian university student and its relationship with academic achievement. *Procedia - Social and Behavioral Sciences*, 30, 2491–2496. <https://doi.org/10.1016/j.sbspro.2011.10.486>
- Ghazvini, S. D., & Khajepour, M. (2011). Gender differences in factors affecting academic performance of high school students. *Procedia - Social and Behavioral Sciences*, 15, 1040-1045. <https://doi.org/10.1016/j.sbspro.2011.03.236>
- Glover, J. A., & Sautter, F. (1976). An investigation of the relationship of four components of creativity to locus of control. *Social Behavior & Personality: An International Journal*, 4(2), 257-260. <https://doi-org.libezp2.utar.edu.my/10.2224/sbp.1976.4.2.257>

- Goncalo, J. A., & Duguid, M. M. (2012). Follow the crowd in a new direction: When conformity pressure facilitates group creativity (and when it does not). *Organizational Behavior and Human Decision Processes*, *118*(1), 14-23. <https://doi.org/10.1016/j.obhdp.2011.12.004>
- Gralewski, J., & Karwowski, M. (2016). Are teachers' implicit theories of creativity related to the recognition of their students' creativity? *The Journal of Creative Behavior*, *52*(2), 156-167. <https://doi.org/10.1002/jocb.140>
- Groenendijk, T., Janssen, T., Rijlaarsdam, G., & Bergh, H. (2013). Learning to be creative. The effects of observational learning on students' design products and processes. *Research Institute of Child Development and Education*, *28*, 35-47.
<http://doi.org/10.1016/j.learninstruc.2013.05.001>
- Gu, Q., Yu, M., & Guan, Y. (2013). Linking personality traits and job satisfaction to creativity. *International Conference on Advanced Computer Science and Electronics Information*.
<https://doi.org/10.2991/icacsei.2013.118>
- Guilford, J. P. (1973). *Fundamental statistics in psychology and education*. New York, McGraw-Hill.
- Haider Zaidi, I., & Mohsin, M. N. (2013). Locus of control in graduation students. *International Journal of Psychological Research*, *6*(1), 15-20. <https://doi.org/10.21500/20112084.695>
- Hamdi, R., Pourheidari, F., & Moradi, N. (2015). Relation of locus of control and creativity with learning styles. *International Letters of Social and Humanistic Sciences*, *45*, 79-88.
<https://doi.org/10.18052/www.scipress.com/ILSHS.45.79>

- Hanapi, Z. & Nordin, M. S. (2014). Unemployment among Malaysia graduates: Graduates' attributes, lecturers' competency and quality of education. *Procedia-Social and Behavioral Sciences*, *112*, 1056-1063. <https://doi.org/10.1016/j.sbspro.2014.01.1269>.
- Harris, J. A. (2004). Measured intelligence, achievement, openness to experience, and creativity. *Personality and Individual Differences*, *36*(4), 913-929. [https://doi.org/10.1016/s0191-8869\(03\)00161-2](https://doi.org/10.1016/s0191-8869(03)00161-2)
- Harvard professor clarifies report on local grads (2017, January 20). *FMT News*.
<https://www.freemalaysiatoday.com/category/nation/2017/01/20/harvard-professor-clarifies-report-on-local-grads/>
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychology Review*, *10*(2), 88-110. https://doi.org/10.1207/s15327957pspr1002_1
- Hickey, K. S. (1976). Internal-External Locus of Control and Environmental Cohesiveness. *Personality and Social Psychology Bulletin*, *2*(3), 282-285. <https://doi.org/10.1177/014616727600200316>
- Hill, R. (2016). *Locus of control, academic achievement, and discipline referrals* [Unpublished undergraduate's dissertation]. Murray State University.
<https://digitalcommons.murraystate.edu/cgi/viewcontent.cgi?article=1003&context=etd>
- Hook, C. W. V., & Tegano, D. W. (2002). The relationship between creativity and conformity among preschool children. *The Journal of Creative Behavior*, *36*(1), 1-16.
<https://doi.org/10.1002/j.2162-6057.2002.tb01053.x>

- Hughes, D. J., Tian, A., Lee, A., & Newman, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *The Leadership Quarterly*.
<https://doi.org/10.1016/j.leaqua.2018.03.001>
- Ibrahim, N. H., Ismail, T. N. T., & Awis, M. L. (2018). Embracing the need of employee creativity and innovation: A study of selected government linked companies (GLCs). *International Journal of Academic Research in Business and Social Sciences*, 8(9), 880-895. <https://doi.org/10.6007/IJARBSS/v8-i9/4662>
- Jager, J., Putnick, D. L., & Bornstein, M. H. (2017). More than just convenient: The scientific merits of homogeneous convenience samples. *Monographs of the Society for Research in Child Development*, 82(2), 13-30. <https://doi.org/10.1111/mono.12296>
- Jesus, S. N., Rus, C. L., Lens, W., & Imaginário, S. (2013). Intrinsic motivation and creativity related to product: A meta-analysis of the studies published between 1990–2010. *Creativity Research Journal*, 25(1), 80-84.
<https://doi.org/10.1080/10400419.2013.752235>
- Jin, S. (2015). The relationship between person-organization fit and employee creativity: The mediating role of creative capital. *Business and Management Research*, 4(3), 24-31.
<https://doi.org/10.5430/bmr.v4n3p24>
- Johnson, B. D., Stone, G. L., Altmaier, E. M., & Berdahl, L. D. (1998). The relationship of demographic factors, locus of control and self-efficacy to successful nursing home adjustment. *The Gerontologist*, 38(2), 209-216. <https://doi.org/10.1093/geront/38.2.209>

- Johnson, R. W., & MacDonnell, J. (1974). The relationship between conformity and male and female attitudes toward women. *The Journal of Social Psychology, 94*(1), 155–156.
<https://doi.org/10.1080/00224545.1974.9923200>
- Kaplan, S., Brooks-Shesler, L., King, E. B., & Zaccaro, S. (2009). Thinking inside the box: How conformity promotes creativity and innovation. *Creativity in Groups, 12*, 229–265.
[https://doi.org/10.1108/s1534-0856\(2009\)0000012012](https://doi.org/10.1108/s1534-0856(2009)0000012012)
- Karademir, C. A. (2019). Students' social studies-oriented academic risk-taking behaviours and autonomous learning skills. *Cypriot Journal of Educational Sciences, 14* (1), 56-68.
<https://doi.org/10.18844/cjes.v14i1.4038>
- Karwowski, M., Jankowska, D. M., Gralewski, J., Gajda, A., Wisniewska, E., & Lebuda, I. (2016). Greater male variability in creativity: A latent variables approach. *Thinking Skills and Creativity, 22*, 159-166. <http://doi.org/10.1016/j.tsc.2016.10.005>
- Kaufman, J. C., & Baer, J. (2004). Sure, I'm creative—but not in mathematics!: Self-reported creativity in diverse domains. *Empirical Studies of the Arts, 22*(2), 143–155.
<https://doi.org/10.2190/26hq-vhe8-gtln-bjjm>
- Kennard, J. (2019, April 22). *How a man can boost his self-confidence*. Verywell Mind.
<https://www.verywellmind.com/top-tips-to-boost-mens-self-confidence-2329033>
- Khair, A. M., Redzuan, M., Hamsan, H. H., & Shahrinin, M. I. (2015, December 29-30). *Locus of control and academic achievement among orang asli students in Malaysia* [Conference session]. 2nd International Conference on Language, Education, Humanities, and Innovation, Impiania KLCC Hotel, Kuala Lumpur, Malaysia.

https://www.researchgate.net/publication/319346344_Locus_of_Control_and_Academic_Achievement_among_Orang_Aсли_Students_in_Malaysia

Kim, D., & Hommel, B. (2015). An event-based account of conformity. *Psychological Science*, 26(4), 484-489. <https://doi.org/10.1177/0956797614568319>

Kirstetter, E., Eagar, R., Kolk, M., & Roos, D. (2013) *The creativity era— A new paradigm for business*. Prism.

https://www.adlittle.com/sites/default/files/prism/The_Creativity_Era.pdf

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.

<https://doi.org/10.1177/001316447003000308>

Krishnan, K. (2016, June 22). *5 reasons why Malaysian fresh graduates are unemployed*.

Linkedin. <https://www.linkedin.com/pulse/5-reasons-why-malaysian-fresh-graduates-unemployed-kannen-krishnan>

Lao, R. C., Chuang, C.J., & Yang, K.S. (1977). Locus of control and chinese college students. *Journal of Cross-Cultural Psychology*, 8(3), 299-313.

<https://doi.org/10.1177/002202217783004>

Lather, A. S., Jain, S., & Shukla, A. D. (2014). Components of creativity in relation to locus of control: A study of students from Mysore University, India. *International Journal of Indian Psychology*, 2(1). <https://doi.org/10.25215/0201.058>

Lefcourt, H. M. (1976). *Locus of Control: Current trends in theory and research*. Hillsdale, N.J.: Erlbaum. <https://doi.org/10.4324/9781315798813>

- Levenson, H. (1981). Differentiating among internality, powerful others, and chance. *Research with the Locus of Control Construct*, 15-63. <https://hannalevenson.com/locus.pdf>
- Levine, J. M. (2020, January 28). Conformity. *Encyclopædia Britannica*.
<https://www.britannica.com/topic/conformity>
- Li, M. J., Wang, Z. H., Gao, J., & You, X. Q. (2018). Proactive personality and job satisfaction: The mediating effects of self-efficacy and work engagement in teachers. *Current Psychology*, 36(1), 48-55. <https://doi.org/10.1007/s12144-015-9383-1>
- Lobell, K. O. (2018, August 21). *What is creativity? Defining the skill of the future*. Creative Live. <https://www.creativelive.com/blog/what-is-creativity/>
- Lubart, T. I. (1994). Creativity. In R. J. Sternberg (Ed.), *Handbook of perception and cognition (2nd ed.)*. Thinking and problem solving (p. 289–332). Academic Press. <https://doi.org/10.1016/B978-0-08-057299-4.50016-5>
- Łubianka, B., Filipiak, S., & Mariańczyk, K. (2020). Developmental changes in the locus of control in students attending integrated and non-integrated classes during early adolescence in Poland. *Behavioral Sciences*, 10(4), 74.
<https://doi.org/10.3390/bs10040074>
- Ma'arif, M. K., Setyosari, P., Sulton, & Sihkabuden,. (2016). Instrumentation “locus of control” as the basis of student learning motivation development in primary school. *Journal of Research and Method in Education*, 6(6), 32-36. <http://doi.org/10.9790/7388-0606013236>

- Ma'dan, M., Ismail, M. T., & Daud, S. (2019). Importance of human capital development and competitiveness in enhancing competency level among Malaysia university graduates: Literature review. *Journal of Social Sciences and Humanities*, 16(8), 1-15.
<https://ejournal.ukm.my/ebangi/article/viewFile/34832/9763>
- Magni, F., & Manzoni, B. (2020). When thinking inside the box is good: The nuanced relationship between conformity and creativity. *European Management Review*, 1-15.
<https://doi.org/10.1111/emre.12414>
- Malik, M. A. R., Butt, A. A., & Choi, J N. (2014). Rewards and employee creative performance: Moderating effects of creativity self-efficacy, reward importance, and locus of control. *Journal of Organizational Behavioural*, 35, 59-74. <https://doi.org/10.1002/job.1943>
- Mallinson, D. J., & Hatemi, P. K. (2020). Correction: The effects of information and social conformity on opinion change. *PLoS ONE*, 15(3).
<https://doi.org/10.1371/journal.pone.0230728>
- Manger, T., & Eikeland, O. J. (2000). On the relationship between locus of control, level of ability and gender. *Scandinavian Journal of Psychology*, 41(3), 225-229.
<https://doi.org/10.1111/1467-9450.00191>
- Matud, M. P., Rodríguez, C., & Grande, J. (2007). Gender differences in creative thinking. *Personality and Individual Differences*, 43(5), 1137-1147.
<https://doi.org/10.1016/j.paid.2007.03.006>
- McLeod, S. A. (2016, Jan 14). *What is conformity?* Simply psychology.
<https://www.simplypsychology.org/conformity.html>

- McPherson, A., & Martin, C. R. (2016). Are there gender differences in locus of control specific to alcohol dependence? *Journal of Clinical Nursing*, *26*(1-2), 258-265.
<https://doi.org/10.1111/jocn.13391>
- Mehrabian, A., & Steft, C. A. (1995). Basic temperament components of loneliness, shyness and conformity. *Social Behaviour and Personality*, *23*(3), 253-264.
<https://doi..10.2224/sbp.1995.23.3.253>
- Mehta, P. (n.d.). Bad effects of unemployment on economic growth. *Economics Discussion*.
<https://www.economicdiscussion.net/articles/bad-effects-of-unemployment-on-economic-growth/2285>
- Mihaela, P. L., Magdalena, S. M., & Loredana, T. S. (2013). A study on the relation between locus of control and creative attitudes in the structure of didactic competence. *Procedia - Social and Behavioral Sciences*, *84*, 1381-1385. <https://doi.org/10.1016/j.sbspro.2013.06.760>
- Minister: Almost 60pc of graduates remain unemployed a year after graduation (2019, October 15). *Malay Mail*. <https://www.malaymail.com/news/malaysia/2019/10/15/minister-almost-60pc-of-graduates-remain-unemployed-a-year-after-graduation/1800574>
- Ministry of Education Malaysia. (2019). *Quick facts 2019: Malaysia educational statistics*. Putrajaya: Ministry of Education Malaysia. <https://www.moe.gov.my/muat-turun/penerbitan-dan-jurnal/terbitan/buku-informasi/2722-quick-facts-2019/file>
- Ministry of International Trade and Industry (2017). *National Transformation 2050 (TN50)*. https://www.miti.gov.my/miti/resources/Malaysia_2050_-_Smart_Communities.pdf

- Miron, E., Erez, M., & Naveh, E. (2004). Do personal characteristics and cultural values that promote innovation, quality, and efficiency compete or complement each other? *Journal of Organizational Behavior*, 25(2), 175–199. <https://doi.org/10.1002/job.237>
- Moradi, N., Pourheidari, F., & Hamdi, R. (2015). Relation of locus of control and creativity with learning styles. *International Letters of Social and Humanistic Sciences*, 45, 79-88. <https://doi.org/10.18052/www.scipress.com/ILSHS.45.79>
- Mortley, L. (2019, Jun 7). *Is conformity killing your creativity?* Courageous Success. <https://www.courageoussuccess.com/is-conformity-killing-your-creativity/>
- Moynihan, A. B., Igou, E. R., & van Tilburg, W. A. P. (2018). Lost in the crowd: Conformity as escape following disbelief in free will. *European Journal of Social Psychology*, 49(3), 1-18. <https://doi.org/10.1002/ejsp.2499>
- Muthukrishna, M., Morgan, T. J. H., & Henrich, J. (2016). The when and who of social learning and conformist transmission. *Evolution and Human Behavior*, 37(1), 10-20. <https://doi.org/10.1016/j.evolhumbehav.2015.05.004>
- Naderi, H., Abdullah, R., Aizan, H. T., Sharir, Jamaluddin., & Kumar, V. (2009) Creativity, age and gender as predictors of academic achievement among undergraduates students. *Journal of American Science*, 5(5), 101-112. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.5338&rep=rep1&type=pdf>
- Naiman, L. (n.d.). *What is creativity? (And why is it a crucial factor for business success?)* Creativity at Work. <https://www.creativityatwork.com/2014/02/17/what-is-creativity/>

- Nasurdin, A. M., Ling, T. C., & Hou, K. B. (2014). The influence of organizational creative climate on product innovation: A study of Malaysian manufacturing firm. *International Journal of Economics and Management*, 8(1), 40-69.
https://www.researchgate.net/publication/287485737_The_influence_of_organizational_creative_climate_on_product_innovation_A_study_of_Malaysian_manufacturing_firms
- Neculaesei, A. N. (2015). Culture and gender role differences. *Cross-Cultural Management Journal*, 17(1), 31-35.
https://www.researchgate.net/publication/278684499_CULTURE_AND_GENDER_ROLE_DIFFERENCES
- Nowicki, S., Gregory, S., Iies-Caven, Y., Eillis, G., & Golding, J. (2018). Early home-life antecedents of children's locus of control. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.02032>
- Oğuz, K., & Sarıçam, H. (2016). The relationship between critical thinking disposition and locus of control in pre-service teachers. *Journal of Education and Training Studies*, 4(2), 182-192. <https://doi.org.10.11114/jets.v4i2.1196>
- Oh, S. H. (2013). Do collectivists conform more than individualists? Cross-cultural differences in compliance and internalization. *Social Behavior and Personality: An International Journal*, 41(6), 981–994. <https://doi.org/10.2224/sbp.2013.41.6.981>
- Okada, T., & Ishibashi, K. (2016). Imitation, inspiration, and creation: Cognitive process of creative drawing by copying others' artworks. *Cognitive Science*, 41(7), 1-34.
<https://doi.org/10.1111/cogs.12442>

- Özen K. R., Mesci. M., & Övdur. (2011). The effects of locus of control on learning performance: A case of an academic organization. *Journal of Economic and Social Studies*, 1(2), 113-133. <https://doi.org/10.14706/JECOSS11125>.
- Pannells, T., & Claxton, A. (2008). Happiness, creative ideation, and locus of control. *Creativity Research Journal*, 20(1), 67–71. <https://doi.org/10.1080/10400410701842029>
- Peryman, J. L. (2015). Culture, conformity, and risk attitudes. *Behavioural Business Lab*. <https://esacentral.org.au/images/LabanPerymanJ.pdf>
- Petrou, P., Linden, D. V. D., & Salcescu, O. C. (2018). When breaking the rules relates to creativity: The role of creative problem-solving demands and organizational constraints. *The Journal of Creative Behavior*, 1-12. <https://doi.org/10.1002/jocb.354>
- Piaw, C. Y. (2014). Effects of gender and thinking style on student's creative thinking ability. *Procedia - Social and Behavioral Sciences*, 116, 5135–5139. <https://doi.org/10.1016/j.sbspro.2014.01.1087>
- Picardo, E. (2020, September 21). *How the unemployment rate affects everybody*. Investopedia. <https://www.investopedia.com/articles/economics/10/unemployment-rate-get-real.asp#:~:text=Key%20Takeaways,and%20reduces%20an%20economy's%20output>
- Pinker, S. (2009). *The sexual paradox: Men, women and the real gender gap*. New York: Scribner. https://pdfs.semanticscholar.org/bc56/68dd948411985d105a2608dd8b9e54634313.pdf?_ga=2.131686223.1939498163.1606505707-159014784.1604043034

Porter, H. (2013, Dec 14). *Deadly conformity is killing our creativity. Let's mess about more.*

The Guardian. <https://www.theguardian.com/commentisfree/2013/dec/14/conformity-killing-creativity-at-work>

Preuss, M., & Hennecke, J. (2018). Biased by success and failure: How unemployment shapes locus of control. *Labour Economics*. <https://doi.org/10.1016/j.labeco.2018.05.007>

Randall, T. M., & Desrosiers, M. (1980). Measurement of supernatural belief: Sex differences and locus of control. *Journal of Personality Assessment*, *44*(5), 493–498.

https://doi.org/10.1207/s15327752jpa4405_9

Reiter-Palmon, R., Robinson-Morrall, E. J., Kaufman, J. C., & Santo, J. B. (2012). Evaluation of self-perceptions of creativity: Is it a useful criterion? *Creativity Research Journal*, *24*(2), 107–114. <https://doi.org/10.1080/10400419.2012.676980>

Rhodes, M. (1961). An analysis of creativity. *The Phi Delta Kappan*, *42*(7), 305-310.

Richards, R., & Kinney, D. K. (1990). Mood swings and creativity. *Creativity Research Journal*, *3*(3), 202–217. <https://doi.org/10.1080/10400419009534353>

Richardson, C., & Mishra, P. (2018). Learning environments that support student creativity:

Developing the SCALE. *Thinking Skills and Creativity*, *27*, 45-54.

<https://doi.org/10.1016/j.tsc.2017.11.004>

Richmond, B. O., & De La Serna, M. (1980). Creativity and locus of control among Mexican college students. *Psychological Reports*, *46*(3), 979–983.

<https://doi.org/10.2466%2Fpr0.1980.46.3.979>

- Rosander, M., & Eriksson, O. (2012). Conformity on the internet – The role of task difficulty and gender differences. *Computers in Human Behavior*, 28(5), 1587–1595.
<https://doi.org/10.1016/j.chb.2012.03.023>
- Rotter, J. B. (1954). *Social learning and clinical psychology*. Prentice-Hall. <https://doi.org/10.1037/10788-000>
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(1), 1–28.
<https://doi.org/10.1037/h0092976>
- Rotter, J. B. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *Journal of Consulting and Clinical Psychology*, 43(1), 56–67. <https://doi.org/10.1037/h0076301>
- Runco, M. A., Cramond, B., & Pagnani, A. R. (2010). Gender and creativity. *Handbook of Gender Research in Psychology*, 1, 343–357. https://doi.org/10.1007/978-1-4419-1465-1_17
- Saraç, M., Efil, I., & Eryilmaz, M. (2014). A study of the relationship between person-organization fit and employee creativity. *Management Research Review*, 37(5), 479–501.
<https://doi.org/10.1108/mrr-01-2013-0025>
- Saracaloğlu, A. S., & Yilmaz, S. (2011). An investigation of prospective teachers' critical thinking attitudes and locus of control. *Elementary Education Online*, 10(2), 468-478.
<http://ilkogretim-online.org.tr/index.php/io/article/view/1596/1432>

- Sarwar, M., & Ashrafi, G. M. (2014). Students' commitment, engagement and locus of control as predictor of academic achievement at higher education level. *Current Issues in Education, 17*(3), 1-10.
https://www.researchgate.net/publication/286349720_Students'_commitment_engagement_and_locus_of_control_as_predictor_of_academic_achievement_at_higher_education_level
- Scher, N., & Thompson, T. (2007). Self-monitoring and conformity: A comparison of self-report and behaviour measures. *Journal of Undergraduates Research X*.
<https://doi.org/10.24839/1089-4136.JN12.4.186>
- Schöbel, M., Rieskamp, J., & Huber, R. (2016). Social influences in sequential decision making. *PLoS ONE, 11*(1), 1-23. <https://doi.org/10.1371/journal.pone.0146536>
- Schultz, D. P., & Schultz, S. E. (2008). *Theories of Personality* (9th ed.). Cengage Learning.
[http://drsaffarinia.com/wp-content/uploads/2019/05/\[Duane_P._Schultz,_Sydney_Ellen_Schultz\]_Theories_\(BookFi\).pdf](http://drsaffarinia.com/wp-content/uploads/2019/05/[Duane_P._Schultz,_Sydney_Ellen_Schultz]_Theories_(BookFi).pdf)
- Scott, G., Leritz, L. E., & Mumford, M. D. (2004). The effectiveness of creativity training: A quantitative review. *Creativity Research Journal, 16*(4), 361–388.
<https://doi.org/10.1080/10400410409534549>
- Sekścińska, K., Trzcińska, A., & Maison, D. A. (2016). The influence of different social roles activation on women's financial and consumer choices. *Frontiers in Psychology, 7*.
<https://doi.org/10.3389/fpsyg.2016.00365>

- Serin, N. B., Serin, O., & Şahin, F. S. (2010). Factors affecting the locus of control of the university students. *Procedia - Social and Behavioral Sciences*, 2(2), 449–452.
<https://doi.org/10.1016/j.sbspro.2010.03.041>
- Setia, M. S. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology*, 61(3), 261–264. <https://doi.org/10.4103/0019-5154.182410>
- Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2015). *Research methods in psychology*. McGraw-Hill.
- Sherman, A. C., Higgs, G. E., & Williams, R. L. (1997). Gender differences in the locus of control construct. *Psychology & Health*, 12(2), 239–248.
<https://doi.org/10.1080/08870449708407402>
- Shubina, I., & Kulakli, A. (2019). Critical thinking, creativity and gender differences for knowledge generation in education. *Literacy Information and Computer Education Journal*, 10(1), 3086-3093. <https://doi.org/10.20533/licej.2040.2589.2019.0405>
- Siddiquah, A. (2019). Effect of gender, age, grade level, subjects, and family income on the locus of control of secondary school students. *SAGE Open*, 9(1), 1-6.
<https://doi.org/10.1177/2158244018823429>
- Sindane, L. M. (2011). *The relationship between happiness, creativity, personality and locus of control in Ireland for those who are employed and unemployed* [Unpublished undergraduate's dissertation]. Dublin Business School.
https://esource.dbs.ie/bitstream/handle/10788/240/ba_sindane_1_2011.pdf?sequence=1&isAllowed=y

- Sowden, S., Koletsi, S., Lymberopoulos, E., Militaru, E., Catmur, C., & Bird, G. (2018). Quantifying compliance and acceptance through public and private social conformity. *Consciousness and Cognition*, 65, 359-367. <https://doi.org/10.1016/j.concog.2018.08.009>
- Spektor, E. M., Erez, M., & Naveh, E. (2012, March). *To drive creativity, add some conformity*. Harvard Business Review. <https://hbr.org/2012/03/to-drive-creativity-add-some-conformity>
- Stangor, C. (2014). *Research methods for the behavioral science*. Cengage Learning.
- Stangor, C., Jhangiani, R., & Tarry, H. (2014). *Principle of social psychology* (1st international ed.). BCcampus Open Education.
- Stocks, A., April, K. A., & Lynton, N. (2012). Locus of control and subjective well-being – A cross-cultural study. *Problems and Perspectives in Management*, 10(1), 17-25. https://www.researchgate.net/publication/285640551_Locus_of_control_and_subjective_well-being_-_A_cross-cultural_study
- Stoltfus, G., Nibbelink, B. L., Vredenburg, D & Thyrum, E. (2011). Gender, gender role, and creativity. *Social Behaviour and Personality*, 39(3), 425-432. <https://doi.org/10.2224/sbp.2011.39.3.425>
- Sutarjo (2011). Ten ways of managing person-organization fit (P-O Fit) effectively: A literature study. *International Journal of Business and Social Science*, 2(21), 226-233. http://www.ijbssnet.com/journals/Vol_2_No_21_Special_Issue_November_2011/25.pdf

- Tan, C. S., & Ong, A. W. H. (2017). Psychometric qualities and measurement invariance of the modified self-rated creativity scale. *The Journal of Creative Behaviour*, 1-7. <https://doi.org/10.1002/jocb.222>
- Taylor, C., Ivcevic, Z., Moeller, J., & Brackett, M. (2020). Gender and support for creativity at work. *Creativity and Innovation Management*, 29(2), 1-12. <https://doi.org/10.1111/caim.12397>
- Theodotou, E., & Papastathopoulos, A. (2015). Creativity in the era of social networking: A case study at tertiary education in the Greek context. *Advances in Intelligent Systems and Computing*, 407, 141-149. https://doi.org/10.1007/978-3-319-26690-9_13
- Toelch, U., & Dolan, R. J. (2015). Informational and normative influences in conformity from a neurocomputational perspective. *Trends in Cognitive Sciences*, 19(10), 579–589. <https://doi.org/10.1016/j.tics.2015.07.007>
- Toynbee, A. (1962). *Widening Horizons in Creativity*. New York: Wiley. <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/75621/MissouriAlumnus1961DecP8-11.pdf?sequence=1&isAllowed=y>
- Tumonis, W. (2014, November 28). How group conformity hurts creative ideation and how to reduce it. *Tumonis Post*. <https://tumonispost.com/2014/11/28/group-conformity-problem-solving/>
- Twenge, J. M., Zhang, L., & Im, C. (2004). It's beyond my control: A cross-temporal meta-analysis of increasing externality in locus of control, 1960-2002. *Personality and Social Psychology Review*, 8(3), 308–319. https://doi.org/10.1207/s15327957pspr0803_5

- Ulger, K., & Morsunbul, U. (2016). The differences in creative thinking: The comparison of male and female students. *The Online Journal of Counselling and Education*, 5(4), 1-12. https://www.researchgate.net/publication/312290598_The_Differences_in_Creative_Thinking_The_Comparison_of_Male_and_Female_Students#:~:text=According%20to%20results%2C%20it%20was,thinking%20in%20favor%20of%20females.&text=Thus%2C%20it%20was%20concluded%20that,students%20in%20higher%20education%20level.
- Wahl, E. (2015, November 3). *The importance of creativity in the workplace*. All Business. <https://www.allbusiness.com/the-importance-of-creativity-in-the-workplace-24566-1.html>
- Ward, T. (2017, March 22). *Can conformity be creative?* Psychology Today. <https://www.psychologytoday.com/us/blog/creativity-you/201703/can-conformity-be-creative>
- Weicht, R. (2018, April 4). *Education systems can stifle creative thought. Here's how to do things differently*. World Economic Forum. <https://www.weforum.org/agenda/2018/04/education-systems-can-stifle-creative-thought-here-s-how-to-do-things-differently/>
- Weinschenk, A. C., Panagopoulos, C., Drabot, K., & van der Linden, S. (2018). Gender and social conformity: Do men and women respond differently to social pressure to vote? *Social Influence*, 13(2), 53–64. <https://doi.org/10.1080/15534510.2018.1432500>
- Wijenayake, S., Berkel, V. N., Kostakos, V., & Goncalves, J. (2020). Impact of contextual and personal determinants on online social conformity. *Computers in Human Behavior*, 108, 1-11. <https://doi.org/10.1016/j.chb.2020.106302>

- Wilke, J. (2012). *Observing is becoming: Social learning theory, creativity, and 21st century art education* [Unpublished master's dissertation]. University of Florida.
<https://ufdc.ufl.edu/AA00013395/00001>
- Wisman, A. (2006). Digging in terror management theory: To use or lose the symbolic self? *Psychological Inquiry*, 17(4), 319–327. <https://doi.org/10.1080/10478400701369468>
- Xu, L. Y., Du, J. G., Lei, X. Y., & Hipel, K. W. (2020). Effect of locus of control on innovative behavior among new generation employees: A moderated mediation model. *Social Behavior and Personality: An International Journal*, 48(10), 1-12.
<https://doi.org/10.2224/sbp.9379>
- Yousaf, A., & Ghayas, S. (2015). Impact of perceived social support and gender on creativity level of university undergraduates. *International Journal of Research Studies in Psychology*, 4(2), 3-16. <https://doi.org/10.5861/ijrsp.2015.923>
- Yu, R., & Sun, S. (2013). To conform or not to conform: Spontaneous conformity diminishes the sensitivity to monetary outcomes. *PLoS ONE*, 8(5).
<https://doi.org/10.1371/journal.pone.0064530>
- Yusof, N., Lazim, N. M., & Jamaluddin, Z. (2013). Persepsi pelajar prasiswazah terhadap program pembangunan kebolehpasaran siswazah: Kes Universiti Sains Malaysia [USM]. *International Journal of Environment, Society and Space*, 1(1), 43-61.
https://www.researchgate.net/publication/276270461_Nooriah_Yusof_Norain_Mat_Lazim_Zakiyah_Jamaluddin_2013_Persepsi_Pelajar_Prasiswazah_terhadap_Program_Pembangunan_Kebolehpasaran_Siswazah_Kes_Universiti_Sains_Malaysia_Jurnal_Antarabangsa_Alam_Sekitar_

Zhang, H., Ren, J. Y., Liu, C. Y., & Luo, J. (2019). Conformity effect of the evaluation of creative products. *Acta Psychologica Sinica*, *51*(6), 688-698.

<https://doi.org/10.3724/SP.J.1041.2019.00688>

Zhou, J., & George, J. M. (2001). When openness to experience and conscientiousness are related to creative behaviour: An interactional approach. *Journal of Applied Psychology*,

86(3), 513–524. <https://doi.org/10.1037/0021-9010.86.3.513>

Appendix A

Questionnaire (Qualtrics)



Participant Information Sheet

Topic of the Research

"The impact of locus of control and conformity in creativity among undergraduates in Malaysia"

Purpose of the Research

This study is done to fulfil the requirements of subject UAPZ 3013 Final Year Project 1 and UAPZ 3023 Final Year Project 2. In order to collect the required information, your participation in this research study is highly appreciated.

Procedures

This questionnaire consists of 53 questions and the estimated time to complete it will be approximately 15 minutes. The questionnaire was designated to find out the impact of locus of control and conformity in predicting creativity.

Voluntary Participation

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any point of the time, there will be no negative consequences.

Confidentiality

All the information will be solely used for academic purposes and your individual responses in this study will be kept **private and confidential**. The data of the research will neither be revealed to the third party nor used for any other purposes other than the study.

Contact Information

If you have any questions concerning the research, kindly contact us, Phylicia Lim Hui Tung, Soh Sei Ern and Chin Chun Yui, at phyco0525@utar.my, ern1008@utar.my and fcoscar.lui99@utar.my respectively. You may contact our supervisor, Ms Sanggari at sanggari@utar.edu.my.

Purpose of the Research

This study is done to fulfil the requirements of subject UAPZ 3013 Final Year Project 1 and UAPZ 3023 Final Year Project 2. In order to collect the required information, your participation in this research study is highly appreciated.

Procedures

This questionnaire consists of 53 questions and the estimated time to complete it will be approximately 15 minutes. The questionnaire was designated to find out the impact of locus of control and conformity in predicting creativity.

Voluntary Participation

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any point of the time, there will be no negative consequences.

Confidentiality

All the information will be solely used for academic purposes and your individual responses in this study will be kept **private and confidential**. The data of the research will neither be revealed to the third party nor used for any other purposes other than the study.

Contact Information

If you have any questions concerning the research, kindly contact us, Phylicia Lim Hui Tung, Soh Sei Ern and Chin Chun Yui, at phyco0525@utar.my, ern1008@utar.my and fcoscar.lui99@utar.my respectively. You may contact our supervisor, Ms Sanggari at sanggari@utar.edu.my.

Herewith, I confirm that I have read and understood the information given. I voluntarily agree to take part in this survey.

Yes, I agree to participate in this study voluntarily.

No, I disagree to participate in this study voluntarily.



Age

Gender

Male

Female

Others

Ethnicity

Malay

Chinese

Indian

Others (Please Specify)

Nationality

Malaysian

Non-Malaysian

Are you an undergraduate?

Yes

No

Name of University



For each question select the statement that you agree with the most.

1.

- a. Children get into trouble because their parents punish them too much.
- b. The trouble with most children nowadays is that their parents are too easy with them.

2.

- a. Many of the unhappy things in people's lives are partly due to bad luck.
- b. People's misfortunes result from the mistakes they make.

3.

- a. One of the major reasons why we have wars is because people don't take enough interest in politics.
- b. There will always be wars, no matter how hard people try to prevent them.

4.

- a. In the long run people get the respect they deserve in this world.
- b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5.

- a. The idea that teachers are unfair to students is nonsense.
- b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6.

- a. Without the right breaks one cannot be an effective leader.
- b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7.

- a. No matter how hard you try some people just don't like you.
- b. People who can't get others to like them don't understand how to get along with others.

8

- a. Heredity plays the major role in determining one's personality.
- b. It is one's experiences in life which determine what they're like.

9

- a. I have often found that what is going to happen will happen.
- b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10

- a. In the case of the well-prepared student there is rarely if ever such a thing as an unfair test.
- b. Many times exam questions tend to be so unrelated to course work that studying in really useless.

11

- a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
- b. Getting a good job depends mainly on being in the right place at the right time.

12

- a. The average citizen can have an influence in government decisions.
- b. This world is run by the few people in power, and there is not much the little guy can do about it.

13

- a. When I make plans, I am almost certain that I can make them work.
- b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14

- a. There are certain people who are just no good.
- b. There is some good in everybody.

15

- a. In my case getting what I want has little or nothing to do with luck.
- b. Many times we might just as well decide what to do by flipping a coin.

16

- a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
- b. Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.

17

- a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
- b. By taking an active part in political and social affairs the people can control world events.

18

- a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
- b. There really is no such thing as "luck."

19

- a. One should always be willing to admit mistakes.
- b. It is usually best to cover up one's mistakes.

20

- a. It is hard to know whether or not a person really likes you.
- b. How many friends you have depends upon how nice a person you are.

21

- a. In the long run the bad things that happen to us are balanced by the good ones.
- b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22

- a. With enough effort we can wipe out political corruption.
- b. It is difficult for people to have much control over the things politicians do in office.

23

- a. Sometimes I can't understand how teachers arrive at the grades they give.
- b. There is a direct connection between how hard I study and the grades I get.

24

a. A good leader expects people to decide for themselves what they should do.

b. A good leader makes it clear to everybody what their jobs are.

25

a. Many times I feel that I have little influence over the things that happen to me.

b. It is impossible for me to believe that chance or luck plays an important role in my life.

26

a. People are lonely because they don't try to be friendly.

b. There's not much use in trying too hard to please people, if they like you, they like you.

27

a. There is too much emphasis on athletics in high school.

b. Team sports are an excellent way to build character.

28

a. What happens to me is my own doing.

b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29

a. Most of the time I can't understand why politicians behave the way they do.

b. In the long run the people are responsible for bad government on a national as well as on a local level.





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Please use the following scale to indicate the degree of your agreement or disagreement with each of the statements below. Record your numerical answer to each statement in the space provided preceding the statement. Try to describe yourself accurately and generally (that is, the way you are actually in most situations – not the way you would hope to be).

I often rely on, and act upon, the advice of others.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree nor Disagree
- Slightly Disagree
- Disagree
- Strongly disagree

I would like to be the last one to change my opinion in a heated argument on a controversial topic.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree

Generally, I'd rather give in and go along for the sake of peace than struggle to have my way.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree

I tend to follow family tradition in making political decisions.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree

Basically, my friends are the ones who decide what we do together.

- Strongly Agree
 - Agree
 - Slightly Agree
 - Neither Agree or Disagree
 - Slightly Disagree
 - Disagree
 - Strongly Disagree
-

A charismatic and eloquent speaker can easily influence and change my ideas.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree

I am more independent than conforming in my ways.

- Strongly Agree
 - Agree
 - Slightly Agree
 - Neither Agree or Disagree
 - Slightly Disagree
 - Disagree
 - Strongly Disagree
-

If someone is very persuasive, I tend to change my opinion and go along with them.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree

I don't give in to others easily.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree

I tend to rely on others when I have to make an important decision quickly.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree

I prefer to make my own way in life rather than find a group I can follow.

- Strongly Agree
- Agree
- Slightly Agree
- Neither Agree or Disagree
- Slightly Disagree
- Disagree
- Strongly Disagree



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(M123A)

Here are a number of statements that may or may not apply to you.

Please select a number from 1 (disagree strongly) to 5 (agree strongly) for each statement to indicate the extent to which you agree or disagree with that statement.

I suggest new ways to achieve goals or objectives.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I come up with new and practical ideas to improve performance.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I search out new technologies, processes, techniques, and/or product ideas.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I suggest new ways to increase quality of work.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I am a good source of creative ideas.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I am not afraid to take risks.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I promote and champion ideas to others.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I exhibit creativity on the work when given the opportunity to.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I develop adequate plans and schedules for the implementation of new ideas.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I often have new and innovative ideas.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I come up with creative solutions to problems.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I often have a fresh approach to problems.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I suggest new ways of performing work tasks.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Appendix B

Sample Size

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Appendix C**Rotter's Internal-External Locus of Control Scale**

For each question select the statement that you agree with the most

1. a. Children get into trouble because their parents punish them too much.
b. The trouble with most children nowadays is that their parents are too easy with them.
2. a. Many of the unhappy things in people's lives are partly due to bad luck.
b. People's misfortunes result from the mistakes they make.
3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
b. There will always be wars, no matter how hard people try to prevent them.
4. a. In the long run people get the respect they deserve in this world
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. a. The idea that teachers are unfair to students is nonsense.
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. a. Without the right breaks one cannot be an effective leader.
b. Capable people who fail to become leaders have not taken advantage of their opportunities.
7. a. No matter how hard you try some people just don't like you.
b. People who can't get others to like them don't understand how to get along with others.
8. a. Heredity plays the major role in determining one's personality
b. It is one's experiences in life which determine what they're like.
9. a. I have often found that what is going to happen will happen.

b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.

b. Many times exam questions tend to be so unrelated to course work that studying in really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.

b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.

b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.

b. It is not always wise to plan too far ahead because many things turn out to- be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.

b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do with luck.

b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.

b. Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.

b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.

b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.

b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.

b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.

b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.

b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.

b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.

b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.

b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.

b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.

b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.

b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.

b. In the long run the people are responsible for bad government on a national as well as on a local level.

Score one point for each of the following:

2. a, 3.b, 4.b, 5.b, 6.a, 7.a, 9.a, 10.b, 11.b, 12.b, 13.b, 15.b, 16.a, 17.a, 18.a, 20.a,

21. a, 22.b, 23.a, 25.a, 26.b, 28.b, 29.a.

A high score = External Locus of Control

A low score = Internal Locus of Control

Appendix D

Mehrabian Conformity Scale

Please use the following scale to indicate the degree of your agreement or disagreement with each of the statements below. Record your numerical answer to each statement in the space provided preceding the statement. Try to describe yourself accurately and generally (that is, the way you are actually in most situations – not the way you would hope to be).

1. I often rely on, act upon, the advice of others.
2. I would like to be the last one to change my opinion in a heated argument on a controversial topic.
3. Generally, I'd rather give in and go along sake of peace than struggle to have my way.
4. I tend to follow family tradition in making political decisions.
5. Basically, my friends are the one who decide what to do together.
6. A charismatic and eloquent speaker can easily influence and change my ideas.
7. I am more independent than conforming in my ways.
8. If someone is very persuasive, I tend to change my opinion and go along with them.
9. I don't give in to others easily.
10. I tend to rely on others when I have to make an important decision quickly.
11. I prefer to make my own way in life rather than find a group I can follow.

Note: Item scoring directions are given within parentheses following each item. All item-total correlations exceeded 40 in absolute value and had a mean absolute value of .54.

Appendix E

Self-Rated Creativity Scale (SRCS)

INSTRUCTION: Here are a number of statements that may or may not apply to you. Please select a number from 1 (disagree strongly) to 5 (agree strongly) for each statement to indicate the extent to which you agree or disagree with that statement.

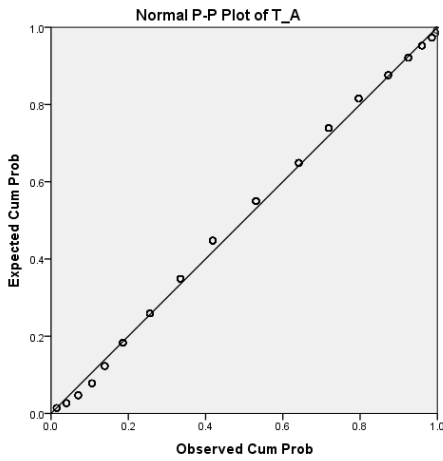
1	Disagree strongly
2	Disagree a little
3	Neither agree nor disagree
4	Agree a little
5	Agree strongly

1. I suggest new ways to achieve goals or objectives.	1	2	3	4	5
2. I come up with new and practical ideas to improve performance.	1	2	3	4	5
3. I search out new technologies, processes, techniques, and/or product ideas.	1	2	3	4	5
4. I suggest new ways to increase quality of work.	1	2	3	4	5
5. I am a good source of creative ideas.	1	2	3	4	5
6. I am not afraid to take risks.	1	2	3	4	5
7. I promote and champion ideas to others.	1	2	3	4	5
8. I exhibit creativity on the work when given the opportunity to.	1	2	3	4	5
9. I develop adequate plans and schedules for the implementation of new ideas.	1	2	3	4	5
10. I often have new and innovative ideas	1	2	3	4	5
11. I come up with creative solutions to problems.	1	2	3	4	5
12. I often have a fresh approach to problems.	1	2	3	4	5
13. I suggest new ways of performing work tasks.	1	2	3	4	5

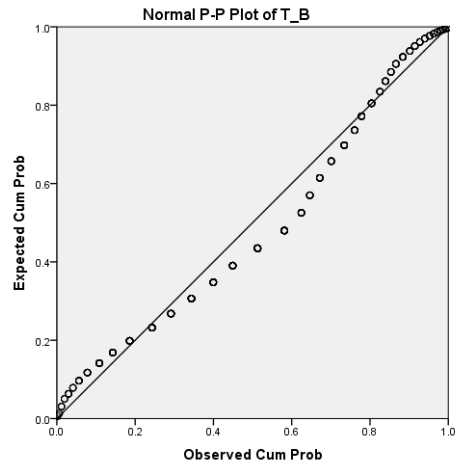
The mean score is calculated by averaging the items score, the high mean score indicates high level of creativity.

Appendix F
P-P Plot

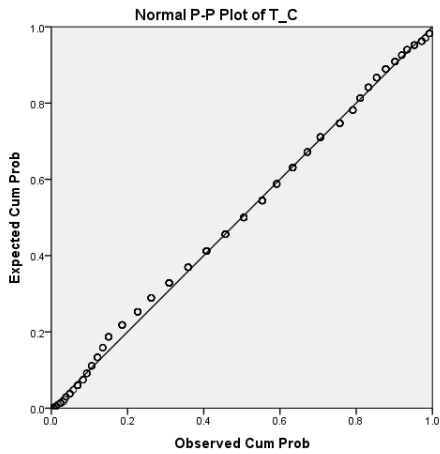
Locus of control



Conformity

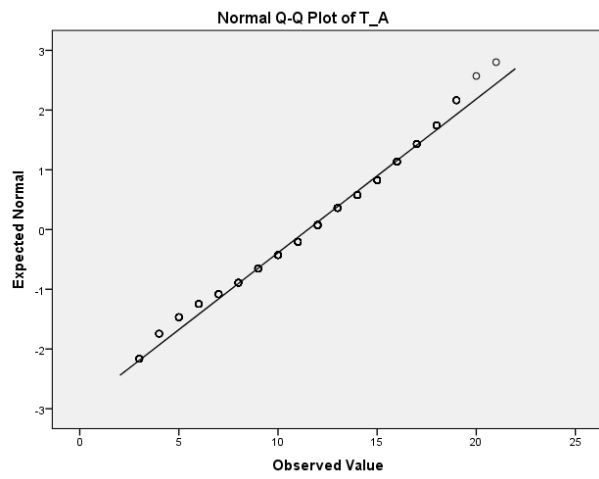


Creativity

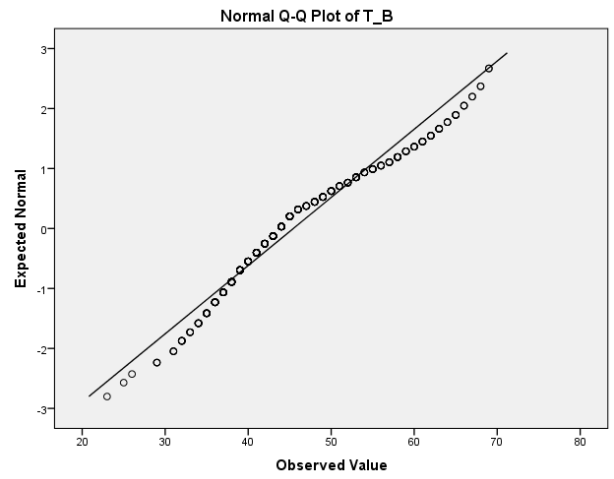


Appendix G Q-Q Plot

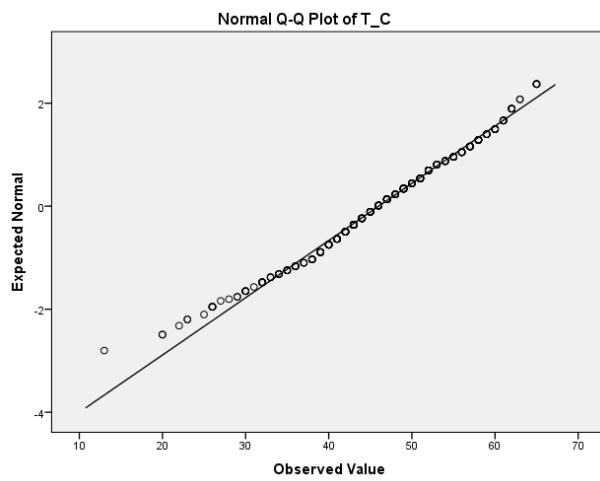
Locus of control



Conformity



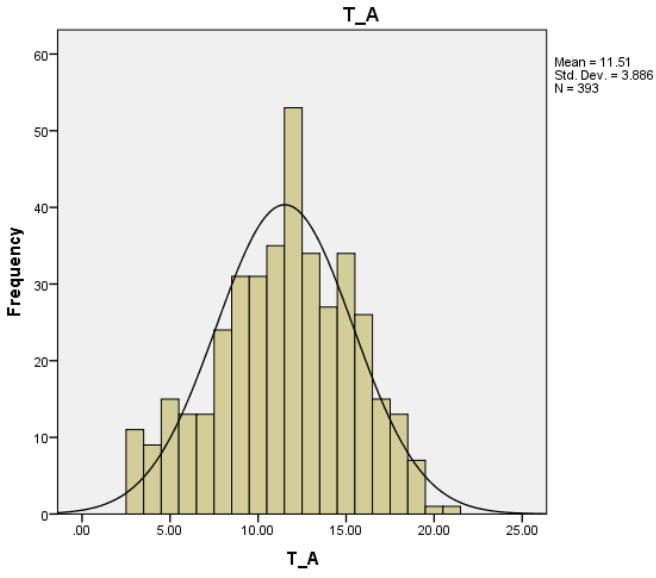
Creativity



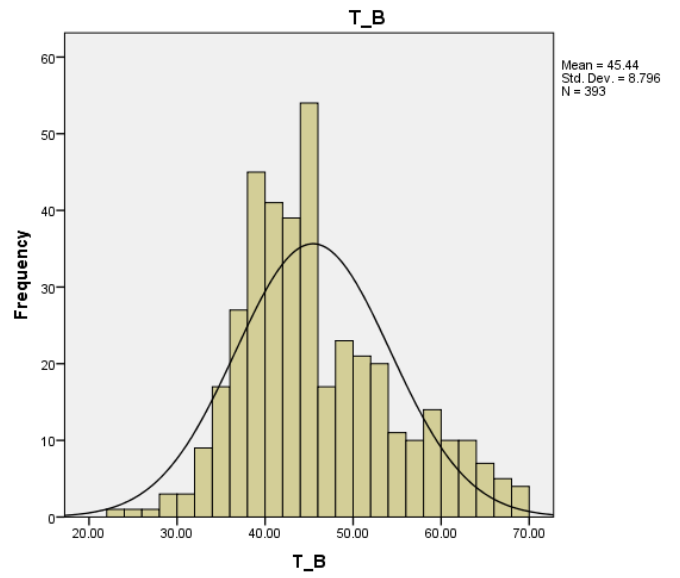
Appendix H

Histogram

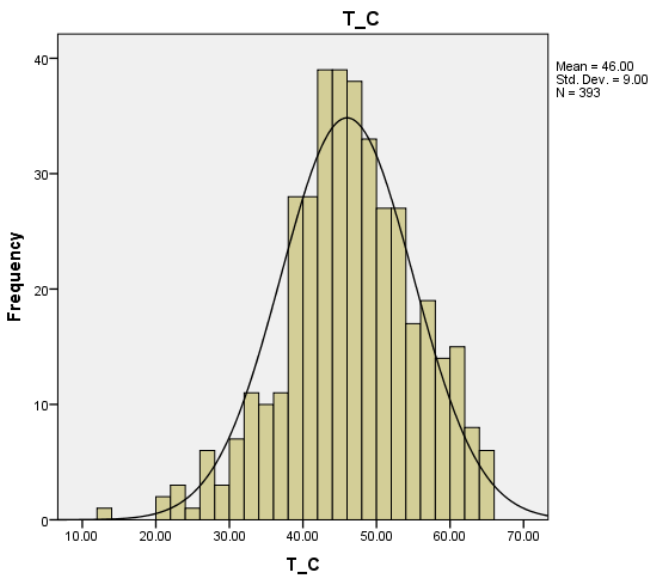
Locus of control



Conformity



Creativity



Appendix I

Kolmogorov-Smirnov (K-S) Test

Locus of control

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
T_A	.087	393	.000	.981	393	.000

a. Lilliefors Significance Correction

Conformity

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
T_B	.133	393	.000	.962	393	.000

a. Lilliefors Significance Correction

Creativity

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
T_C	.058	393	.003	.988	393	.002

a. Lilliefors Significance Correction

Appendix J

Summary Model of Regression

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.446 ^a	.199	.195	8.07633	2.008

a. Predictors: (Constant), Conformity, LOC

b. Dependent Variable: Creativity

Regression Model

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6316.403	2	3158.201	48.418	.000 ^b
	Residual	25438.595	390	65.227		
	Total	31754.997	392			

a. Dependent Variable: Creativity

b. Predictors: (Constant), Conformity, LOC

Regression Coefficient

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
		1	(Constant)	34.245						
	LOC	-.365	.123	-.157	-2.961	.003	-.607	-.123	.727	1.376
	Conformity	.351	.054	.343	6.452	.000	.244	.458	.727	1.376

a. Dependent Variable: Creativity

Appendix K

Independent T-Test

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
LOC	Male	172	11.5640	3.72780	.28424
	Female	219	11.4749	4.02550	.27202
Conformity	Male	172	45.2267	8.65254	.65975
	Female	219	45.6164	8.96215	.60561
Creativity	Male	172	45.7093	9.79840	.74712
	Female	219	46.2329	8.36033	.56494

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LOC	Equal variances assumed	1.910	.168	.224	389	.823	.08907	.39708	-.69163	.86976
	Equal variances not assumed			.226	378.572	.821	.08907	.39343	-.68451	.86265
Conformity	Equal variances assumed	.954	.329	-.433	389	.665	-.38969	.89936	-2.15791	1.37852
	Equal variances not assumed			-.435	372.903	.664	-.38969	.89556	-2.15068	1.37129
Creativity	Equal variances assumed	7.636	.006	-.570	389	.569	-.52357	.91906	-2.33053	1.28338
	Equal variances not assumed			-.559	336.227	.577	-.52357	.93667	-2.36604	1.31889

Appendix L

Turnitin Originality Report

ORIGINALITY REPORT			
14%	13%	8%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
1	mjltm.org Internet Source		1%
2	archive.org Internet Source		1%
3	Zahariah Mohd Zain, Irfah Najihah Basir Malan, Marziah Mokhtar, Azlin Shafinaz Mohamad Arshad et al. "The Antecedents of Financial Wellness among Young Employees: Empirical Evidence in Kuala Lumpur", ADVANCES IN BUSINESS RESEARCH INTERNATIONAL JOURNAL, 2019 Publication		1%
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Thank you.

Yours sincerely,



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