

**TECHNICAL
PROPOSAL**

**Menggalakkan Masyarakat
Belia Malaysia Menjadi
Lebih Inovatif Selaras
dengan Matlamat DSTIN
*(Encouraging the Malaysian
Youth Community to Be More
Innovative in Line with
DSTIN's Goals)***

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MARCH 2021

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1. BACKGROUND

This proposal is prepared to study factors that encourage innovativeness among Malaysian youth which upholds the government's effort to develop, nurture and retain talent to spur the country's Science, Technology and Innovation (STI) agenda (Core Agenda 2, TS2). In today's era of uncertainty and intense global competition, the existing approach adopted is no longer sufficient to drive the country to keep moving forward. A dynamic and innovation -based economy depends on the readiness of its community which builds the foundation of STIs capability of creating ideas that will improve the quality of life. To build an STI ecosystem and a vibrant economy, is important for Malaysia to develop and retain STI talents who are able to compete globally. Therefore, it is crucial to enhance the creative and innovative capacities of our youth, which is the future of the country, in ways that are relevant to employability which goes beyond identifying the skills and competences involved.

A systematic review will be carried out to identify the issues and current gaps as well as choosing the appropriate items to be included in the questionnaire. Following that, an online survey will be conducted on Malaysia youth which is defined as anyone between the age 15 to 30 years old followed by a focus group discussion among respondents recruited from the survey. The data analysis will inform important factors that should be included in the action plan or intervention that would improve the overall effectiveness of relevant policies. The target group for all the study phases is youth in Malaysia (depending on e-Belia database access). However, this will be confirmed during the implementation stage of the study based on the ability to access target group's contact details. Due to the COVID-19 pandemic, wherever possible, all activities identified in this proposal will be conducted electronically or through online platforms.

Innovativeness

Individual innovativeness can be defined as developing, adopting or implementing an idea (Yuan & Woodman, 2010) or a risk-taking propensity that exhibits in certain individuals and these individuals are willing to take chances and to try new things and can cope with high levels of uncertainty (Leonard- Barton & Deschamps, 1988). According to Rogers (2010) distinguished five categories of individual innovativeness which are innovators (who like risk and innovation); early adopters (who are easily influenced by leaders and bring innovation to the public); early majority (who consciously avoid risk and like security), late majority (who

change something in their life with difficulties and take innovation unwillingly); and laggards (who do not change anything or even resist changes) (Soffer *et al.*, 2010; Jin, 2013). Psychological parameters that are often used in characterizing innovativeness include Creativity (imagination, connecting ideas, tackling and solving problems, curiosity); Self-efficacy (self-belief, self-assurance, self-awareness, feelings of empowerment, social confidence); Energy (drive, enthusiasm, motivation, hard work, persistence and commitment); Risk-propensity (a combination of risk tolerance and the ability to take calculated risks); and Leadership (vision and the ability to mobilise commitment).

2. OBJECTIVE

The objectives for this study includes the following:

- i. To review and examine relevant literatures particularly related to factors that drive innovative behaviour among youth;
- ii. To make comparison on the existing interventions, regulations and policies adopted by other countries in encouraging innovative behaviour to their youth;
- iii. To analyse current practices and scenario of innovative behaviour among Malaysian Youth and identify gaps, issues and challenges faced;
- vi. To recommend action plan, propose improvements and potential interventions that can be adopted in enhancing innovativeness.

3. SCOPE OF WORK

The scope of the study is limited to recruiting at least 200 volunteers between the ages of 15- 30 (to be confirmed) who will be recruited using social media platforms, e-Belia (IYRES data base) and through snowballing method using enumerators. The recruitment period is expected to run between 30 -75 days and will end when 75 days have passed. Due to the nature of the study being online, the link can be shared to youth throughout the whole country. Each volunteer will be asked to complete a questionnaire and those who give consent for a follow up study will be invited to participate in the focus group discussion.

4. METHODOLOGY

In accordance with the objectives and scope set out above, this study will use several research methods as follows. Wherever required, the methodology outlined below will be improved and fine-tuned during the implementation stage as and when more information is made available throughout case study. Due to the COVID-19 pandemic, wherever possible, all methods identified in this proposal will be conducted electronically or through online platforms.

i. Method of Comparative Studies

- a. This method of comparative doctrinal study will produce “systematic exposition of the rules governing a particular category, analyses the relationship between rules, explaining areas of difficulty and may also predict future developments”.
- b. Comparisons will be used in this study to identify models and best practices used to address Objective 1 and 2.

ii. Mixed Methods

This study will adopt a sequential explanatory mixed method to address Objective 3 which comprises of the quantitative phase followed by a qualitative phase. The two phases in this design are connected in which the participants are samples from both phases. The two phases complement each other while giving priority to the quantitative phase. Data from the qualitative phase can be used to further explain, interpret or offer insights into the findings from their results in the quantitative phase.

Online Questionnaire

The quantitative phase will adopt an online questionnaire (built via Google Form) which will be distributed via social media platforms, e-belia platform and word-of mouth (snowball sampling) to potential respondents that fit the criteria (participants age 15 – 30).

The questionnaire will measure the following:-

1. Five generic skills that contributes to innovative behaviour (Chell & Athayde, 2009)
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Dimension	Items
Creativity	<ol style="list-style-type: none"> 1. I would like my lessons to involve lots of different creative activities. 2. I prefer lessons that involve different activities rather than just sitting at my desk. 3. I feel proud when I've designed something myself and made it. I like doing things that are very practical. 4. I have chosen subjects at school/college that give me the freedom to express my own ideas. 5. The subjects I have chosen at school/college require my imagination.
Leadership	<ol style="list-style-type: none"> 1. I really like being leader of a group. 2. Project work gives me the chance to take a leading role in the group. 3. When working in a group I do my best to persuade the others to take up my ideas. 4. I am often chosen to be the team leader or captain of my team. 5. I like organising other people. 6. My friends follow my suggestions when they can't make up their minds.
Energy	<ol style="list-style-type: none"> 1. It's energising when you are given rewards for good work (e.g. a school day trip) 2. I feel really motivated when I produce something that no one else has. 3. I feel really enthusiastic about my chosen subjects. It's energising and rewarding to help other people. 4. I really push myself to achieve good grades. 5. When I'm doing something, I like to feel it has a purpose or goal. I have lots of energy for work and play. 6.
Self-efficacy	<ol style="list-style-type: none"> 1. I like to pursue my interests outside school/college where I feel more in control. 2. I want my future work to be based around a set of challenges that I would find interesting. 3. Once I start something, I like to finish it. 4. I would join a club/interest group independently of my friends if it was something I really wanted to do. 5. I'm not easily swayed by other people's opinions but do what I think is best. 6. Students should have a say in how a school/college is run. 7. My spending money is important because it gives me a sense of my independence. 8. I've been brought up to think for myself.
Risk Propensity	<ol style="list-style-type: none"> 1. When I make choices, I want to be as sure as possible what the future consequences will be for me. 2. I want my work to provide me with opportunities to show that I can overcome problems. 3. I would not take a risk on an activity that might spoil my chances of getting good grades at school/college. 4. Fearing that I might fail my exams is a powerful motivator at school/college.

2. Short version Innovativeness Scale (Pallister & Foxall, 1998)

Dimension	Items
Individual Innovation	<ol style="list-style-type: none"> 1. I am generally cautious about accepting new ideas 2. I am suspicious of new inventions and new ways of thinking 3. I rarely trust new ideas until I can see whether the vast majority of people around me accept them 4. I am aware that I am usually one of the last people in my group to accept something new 5. I am reluctant about adopting new ways of doing things until I see them working for people around me 6. I find it stimulating to be original in my thinking and behaviour 7. I tend to feel that the old way of living and doing things is the best way 8. I am challenged by ambiguities and unsolved problems 9. I must see other people using new innovations before I will consider

	<p>them</p> <p>10. I often find myself sceptical of new ideas</p>
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3. Drivers and barriers towards an innovative pathway
 - Will be developed
4. Future intention of being innovative
 - Will be developed

Focus Group Discussion

The focus group discussion (FGD) will follow Phase 2 to explore what are the perceptions, experiences and current state of innovativeness among the study informants. Informants will be recruited from those who have agreed to be contacted for a follow up study in Phase 1. will set to Informants would also have the advantage to ask questions or clarify words that they are not familiar with and these dynamics would have a reciprocal benefit between the researcher and the informants. Another reason for conducting FGDs is that by depending on the survey questions alone, the researcher may overlook certain factors (especially cultural/ context based) that might not have been measured by the survey. It is the intention that, by having two different approaches, a more accurate account from respondents can be collected while achieving a more robust study.

List of stakeholders:

- a. Policy makers and Government Agencies:
 - Ministry of Science, Technology and Innovation (MOSTI);
 - Ministry Youth and Sports (KBS);
 - Ministry of Education (MOE);
 - Ministry of Higher Education (MOHE);
 - Other relevant Ministries/ Department
- b. Non-governmental parties are as follows:
 - Talent Management;
 - Training providers
 - Malaysian youth; and
 - Other related parties

5. EXPECTED OUTCOMES

Study findings will be used as inputs in applicable future interventions or policy formulation. The findings can also be used as reference for future work directly related to encouraging creativity and innovation:

- (i) Systematic Review of existing literatures on Encouraging Innovativeness on Youth.
- (ii) Validated questionnaire (Malay version) on factors contributing to innovativeness among youth.
- (iii) Youth Innovativeness Model based on findings from the survey.
- (iv) To produce one report based on the study findings

Risks identified for this study include:

- (v) Target group not cooperating or poor cooperation from the target group for various reasons e.g., no Internet access or unfamiliar with online questionnaires.
- (vi) Ineffective communication/discussion when done through online platforms.
- (vii) The composition of respondents could be dominated by certain type of respondents only.

Due to time and cost constraints, as well as constraints imposed by the COVID-19 pandemic, this study can only cater for a limited number of respondents (to be confirmed during the implementation stage). While findings and lessons from this study may offer useful insights on the encouragement of innovation to Malaysian youth in general, care should be taken so as not to generalize findings from this study to other target groups.

6. REPORTS & TIMELINE

6.1 Duration of project: 3 months

6.2 The consultant shall submit the following reports according to the timeline stipulated as follows:-

ACTIVITY	Month 1				Month 2				Month 2				Month 4			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Discussion/ Presentation																
Final Report Amendments																
FINAL REPORT SUBMISSION																

9. COST ESTIMATE

The total estimated project cost is RM40,000.00 as shown in the Table 9.1 below. The quoted cost includes transcribing cost, data collection and analysis costs, final report, charges imposed by UKM Pakarunding, UKM PTJ and relevant taxes (SST).

Table 9.1 Cost Estimate

Bil.	Item	Total (RM)
Consultant Fees		
	<i>Kakitangan Ikhtisas Tempatan</i>	37,726.95
TOTAL		37,726.95

Bil	Name	Responsibility/ Role	Experience	Status Kakitangan	Monthly Basic Salary (RM)	Time Input (Months)	Exponential Factor	Total Fees (RM)
A. CONSULTANT FEES FOR KAKITANGAN IKHTISAS (TIME INPUT)								
1	Dr. Daniella Mokhtar	Lead Researcher	6	Permanent	4,400	2.7	2.2	26,136.00
2	Farol Hadi Mustafa Kamal	Research Assistant	11	Permanent	2,905	1.9	2.1	11,590.95
TOTAL (B)						4.6		37,726.95
GRAND TOTAL OF CONSULTANT FEES: (A) + (B)								37,726.95

10. REFERENCES

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