



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

**THE EFFECT OF LEARNING ORGANIZATION ON
INNOVATIVE WORK BEHAVIOUR AMONG TVET
TEACHERS OF VOCATIONAL COLLEGES IN
MALAYSIA WITH THE MEDIATION OF
ORGANIZATIONAL CULTURE**



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

JULIA ANAK CLIFFTON AKOI @ EMPADENG

UNIVERSITI PENDIDIKAN SULTAN IDRIS

2025



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

THE EFFECT OF LEARNING ORGANIZATION ON INNOVATIVE WORK
BEHAVIOUR AMONG TVET TEACHERS OF VOCATIONAL
COLLEGES IN MALAYSIA WITH THE MEDIATION OF
ORGANIZATIONAL CULTURE

JULIA ANAK CLIFFTON AKOI @ EMPADENG

THESIS PRESENTED TO QUALIFY FOR A DOCTOR OF PHILOSOPHY

FACULTY OF MANAGEMENT AND ECONOMICS
UNIVERSITI PENDIDIKAN SULTAN IDRIS

2025



Please tick (✓)

Project Paper

Masters by Research

Master by Mixed Mode

PhD

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>

INSTITUTE OF GRADUATE STUDIES**DECLARATION OF ORIGINAL WORK**

This declaration is made on the **9 SEPTEMBER 2025**

i. Student's Declaration:

I, **JULIA ANAK CLIFFTON AKOI @ EMPADENG (P20172002193) FACULTY OF MANAGEMENT AND ECONOMICS** (PLEASE INDICATE STUDENT'S NAME, MATRIC NO. AND FACULTY) hereby declare that the work entitled **THE EFFECT OF LEARNING ORGANIZATION ON INNOVATIVE WORK BEHAVIOUR AMONG TVET TEACHERS OF VOCATIONAL COLLEGES IN MALAYSIA WITH THE MEDIATION OF ORGANIZATIONAL CULTURE** is my original work. I have not copied from any other students' work or from any other sources except where due reference or acknowledgement is made explicitly in the text, nor has any part been written for me by another person.

Signature of the student

ii. Supervisor's Declaration:

I **PROF. MARINAH AWANG** (SUPERVISOR'S NAME) hereby certifies that the work entitled **THE EFFECT OF LEARNING ORGANIZATION ON INNOVATIVE WORK BEHAVIOUR AMONG TVET TEACHERS OF VOCATIONAL COLLEGES IN MALAYSIA WITH THE MEDIATION OF ORGANIZATIONAL CULTURE** (TITLE) was prepared by the above named student, and was submitted to the Institute of Graduate Studies as a * partial/full fulfillment for the conferment of **DOCTOR OF PHILOSOPHY** (PLEASE INDICATE THE DEGREE), and the aforementioned work, to the best of my knowledge, is the said student's work.

9/9/2025
Date

ASSOC. PROF DR. MARINAH AWANG
Lecturer
Department of Educational Management
Faculty of Management & Economics
Sultan Idris Education University
Signature of the Supervisor



**INSTITUT PENGAJIAN SISWAZAH /
INSTITUTE OF GRADUATE STUDIES**

**BORANG PENGESAHAN PENYERAHAN TESIS/DISERTASI/LAPORAN KERTAS PROJEK
DECLARATION OF THESIS/DISSERTATION/PROJECT PAPER FORM**

Tajuk / Title : THE EFFECT OF LEARNING ORGANIZATION ON INNOVATIVE
WORK BEHAVIOUR AMONG TVET TEACHERS OF VOCATIONAL
COLLEGES IN MALAYSIA WITH THE MEDIATION OF
ORGANIZATIONAL CULTURE

No. Matrik / Matric's No. : P200217193

Saya / I : JULIA ANAK CLIFFTON AKOI @ EMPADENG
(Nama pelajar / Student's Name)

mengaku membenarkan Tesis/Disertasi/Laporan Kertas Projek (Kedoktoran/Sarjana)* ini disimpan di Universiti Pendidikan Sultan Idris (Perpustakaan Tuanku Bainun) dengan syarat-syarat kegunaan seperti berikut:-

acknowledged that Universiti Pendidikan Sultan Idris (Tuanku Bainun Library) reserves the right as follows:-

1. Tesis/Disertasi/Laporan Kertas Projek ini adalah hak milik UPSI.
The thesis is the property of Universiti Pendidikan Sultan Idris.
2. Perpustakaan Tuanku Bainun dibenarkan membuat salinan untuk tujuan rujukan dan penyelidikan.
Tuanku Bainun Library has the right to make copies for the purpose of reference and research.
3. Perpustakaan dibenarkan membuat salinan Tesis/Disertasi ini sebagai bahan pertukaran antara Institusi Pengajian Tinggi.
The Library has the right to make copies of the thesis for academic exchange.
4. Sila tandakan (✓) bagi pilihan kategori di bawah / Please tick (✓) for category below:-

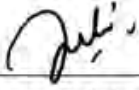
SULIT/CONFIDENTIAL

Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub dalam Akta Rahsia Rasmi 1972. / Contains confidential information under the Official Secret Act 1972

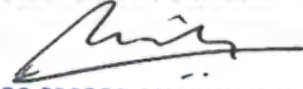
TERHAD/RESTRICTED

Mengandungi maklumat terhad yang telah ditentukan oleh organisasi/badan di mana penyelidikan ini dijalankan. / Contains restricted information as specified by the organization where research was done.

TIDAK TERHAD / OPEN ACCESS



(Tandatangan Pelajar/ Signature)


ASSOC. PROF DR. MARINAH AWANG
Lecturer
Department of Educational Management
Faculty of Management & Economics
Sultan Idris Education University

(Tandatangan Penyelektoran / Signature of Supervisor)
& (Nama & Cop Rasmi / Name & Official Stamp)

Tarikh: 7.8.2025

Catatan: Jika Tesis/Disertasi ini **SULIT @ TERHAD**, sila lampirkan surat daripada pihak berkuasa/organisasi berkenaan dengan menyatakan sekali sebab dan tempoh laporan ini perlu dikelaskan sebagai **SULIT** dan **TERHAD**.

Notes: If the thesis is CONFIDENTIAL or RESTRICTED, please attach with the letter from the organization with period and reasons for confidentiality or restriction.



ACKNOWLEDGEMENT

As I complete this PhD thesis, I am deeply grateful to those who have supported and guided me throughout this journey. First and foremost, I owe immense gratitude to my Main Supervisor, Associate Professor Dr. Marinah binti Awang. Your guidance, encouragement, and insightful feedback have been the foundation of my research. I also extend my thanks to the academic and administrative staff of Universiti Pendidikan Sultan Idris, particularly the Faculty of Management and Economics, for their invaluable support. My heartfelt thanks go to my father, Dr. Clifton Akoi, whose strength, wisdom, and belief in me have been a constant source of inspiration. I dedicate this achievement to you with all my heart. Most profoundly, I acknowledge my beloved late mother, Madam Magdeline Andrew Mara, whose love and belief in my dreams have been a guiding light throughout my life. Though she is no longer here, her memory and values continue to inspire me. This thesis is dedicated to her. To my husband, Mr. Joshua Ribí, your steadfast love, patience, and support have been my rock throughout this journey. Your encouragement and understanding have been invaluable. I also remember my late younger brother, Mr. Lewis Anding, whose strength and belief in me have been a source of inspiration. This thesis is dedicated to him in honour of his impact on my life. To my colleagues and friends, your camaraderie and support have been invaluable. Finally, I express my gratitude to all the TVET teachers from the Vocational Colleges in Malaysia for their participation in this study. Without their sincere involvement, this research would not have been possible.





ABSTRACT

This study aims to analyze the effect of Learning Organization (LO) on Innovative Work Behaviour (IWB) among Technical and Vocational Education and Training (TVET) teachers in vocational colleges across Malaysia, with Organizational Culture (OC) as a mediating variable. A quantitative approach using stratified simple random sampling was employed to analyze data from 331 TVET teachers. The questionnaire instrument was adapted from the Dimensions of Learning Organization Questionnaire, Organizational Culture Inventory, and Innovative Work Behaviour Questionnaire. Descriptive statistics showed high levels of LO ($M = 3.91$, $SD = 0.63$), OC ($M = 3.94$, $SD = 0.67$), and IWB ($M = 3.99$, $SD = 0.72$). Independent sample t-test and ANOVA revealed no significant differences in IWB based on gender [$t(329) = -0.565$, $p = 0.57$] and teaching experience [$F(3,327) = 0.08$, $p = 0.92$]. Pearson correlation analysis indicated significant positive relationships between LO and IWB ($r = 0.58$, $p < 0.05$), OC and IWB ($r = 0.52$, $p < 0.05$), and LO and OC ($r = 0.57$, $p < 0.05$). Multiple regression analysis showed that LO and OC jointly contributed 58% of the variance in IWB ($R^2 = 0.58$, $p < 0.001$). Mediation analysis confirmed that OC partially mediated the relationship between LO and IWB, as the total effect ($\beta = 0.50$, $p < 0.05$) reduced to a direct effect ($\beta = 0.15$, $p < 0.001$) when OC was included. In conclusion, the findings confirmed that LO has a significant positive influence on the IWB of TVET teachers, both directly and indirectly through OC. The implication of this study can guide policymakers, educational leaders, and vocational institutions to strengthen learning-oriented practices and cultivate a supportive organizational culture. Such efforts are essential for sustaining teacher innovativeness, enhancing learning outcomes, and driving Malaysia's TVET transformation towards global competitiveness.





KESAN ORGANISASI PEMBELAJARAN TERHADAP TINGKAH LAKU KERJA INOVATIF DALAM KALANGAN GURU TVET KOLEJ VOKASIONAL DI MALAYSIA DENGAN PENGANTARAAN BUDAYA ORGANISASI

ABSTRAK

Kajian ini bertujuan untuk menganalisis kesan Organisasi Pembelajaran (LO) terhadap Tingkah Laku Inovatif (IWB) dalam kalangan guru Pendidikan dan Latihan Teknikal dan Vokasional (TVET) di kolej vokasional Malaysia, dengan Budaya Organisasi (OC) sebagai pemboleh ubah perantara. Pendekatan kuantitatif dengan menggunakan teknik persampelan rawak mudah berstrata telah digunakan untuk menganalisis data daripada 331 orang guru TVET dari kolej vokasional seluruh Malaysia. Instrumen soal selidik telah diadaptasi daripada Dimensions of Learning Organization Questionnaire, Organizational Culture Inventory dan Innovative Work Behaviour Questionnaire. Statistik deskriptif menunjukkan tahap LO ($M = 3.91$, $SD = 0.63$), OC ($M = 3.94$, $SD = 0.67$) dan IWB ($M = 3.99$, $SD = 0.72$) adalah tinggi. Ujian-t sampel bebas dan ANOVA menunjukkan tiada perbezaan signifikan dalam IWB berdasarkan jantina [$t(329) = -0.565$, $p = 0.57$] dan pengalaman mengajar [$F(3,327) = 0.08$, $p = 0.92$]. Analisis korelasi Pearson menunjukkan hubungan positif signifikan antara LO dan IWB ($r = 0.58$, $p < 0.05$), OC dan IWB ($r = 0.52$, $p < 0.05$), serta LO dan OC ($r = 0.57$, $p < 0.05$). Analisis regresi berganda menunjukkan bahawa LO dan OC secara bersama menyumbang sebanyak 58% varians dalam IWB ($R^2 = 0.58$, $p < 0.001$). Analisis pengantaraan mengesahkan bahawa OC menjadi pengantara separa bagi hubungan antara LO dan IWB, di mana kesan keseluruhan ($\beta = 0.50$, $p < 0.05$) menurun kepada kesan langsung ($\beta = 0.15$, $p < 0.001$) apabila OC dimasukkan. Kesimpulannya, dapatan kajian mengesahkan bahawa LO mempunyai kesan positif yang signifikan terhadap IWB guru TVET, sama ada secara langsung mahupun tidak langsung melalui OC. Implikasi kajian ini dapat membantu pembuat dasar, pemimpin pendidikan dan institusi vokasional untuk memperkukuh amalan berorientasikan pembelajaran serta memupuk budaya organisasi yang saling menyokong. Usaha sedemikian penting bagi mengekalkan inovatif guru, meningkatkan hasil pembelajaran, dan memacu transformasi TVET Malaysia ke arah berdaya saing di peringkat global.





CONTENTS

	Page
DECLARATION OF ORIGINAL WORK	ii
DECLARATION OF THESIS SUBMISSION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
ABSTRAK	vi
CONTENTS	vii
LIST OF TABLES	xiv
LIST OF FIGURES	xviii
LIST OF ABBREVIATIONS	xix
LIST OF APPENDICES	xx
CHAPTER 1 INTRODUCTION	
1.1 Introduction	1
1.2 Background of the Study	6
1.3 Problem Statements	23
1.4 Research Objectives	31
1.5 Research Questions	32
1.6 Research Hypotheses	33
1.7 Research Framework	34
1.7.1 Theoretical Framework	34
1.7.2 Conceptual Framework	38
1.8 Significance of the Study	40



1.9	Limitation of the Study	44
1.10	Operational Definition	46
1.10.1	Learning Organization	46
1.10.2	Innovative Work Behaviour	47
1.10.3	Organizational Culture	49
1.10.4	TVET (Technical and Vocational Educational and Training)	50
1.11	Summary	51

CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	53
2.2	Technical and Vocational Education and Training in Malaysia	54
2.3	Innovative Work Behaviour	61
2.4	Learning Organization	75
2.5	Organizational Culture	96
2.6	Theoretical Framework of Constructs	108
2.6.1	Models of Innovative Work Behaviour	108
2.6.2	Models of Learning Organizations	117
2.6.3	Models of Organizational Culture	123
2.7	Hypotheses Development	133
2.7.1	Differences in Innovative Work Behaviour based on Gender and Teaching Experience Levels	133
2.7.2	Relationship Between Key Variables	137
2.7.2.1	Relationship Between Learning Organizations and Innovative Work Behaviour	138
2.7.2.2	Relationship Between Organizational Culture and Innovative Work Behaviour	141



2.7.2.3	Relationship Between Learning Organization and Organizational Culture	143
2.7.3	Direct Effects of Learning Organization and Organizational Culture on Innovative Work Behaviour	146
2.7.4	Mediating Effect of Organizational Culture	153
2.8	Framework for Hypotheses Testing	166
2.9	Gaps and Future Research on the Influence of Learning Organization on Malaysian TVET Teachers' Innovative Work Behaviour with the Mediating Effect of Organizational Culture	167
2.10	Summary	171

CHAPTER 3 METHODOLOGY

3.1	Introduction	173
3.2	Research Design	174
3.3	Population and Sampling	174
3.3.1	Population and Sample Size	175
3.3.2	Sampling Procedures	177
3.4	Instruments and Measurement Scale	186
3.4.1	Demographic Information	188
3.4.2	Learning Organization (LO)	188
3.4.3	Innovative Work Behaviour (IWB)	193
3.4.4	Organizational Culture (OC)	196
3.4.5	Measurement Scale	199
3.5	Instrument Validation with Experts	200
3.5.1	Face Validity and Content Validity	205
3.5.1.1	Face Validity for LO, IWB, and OC	205



3.5.1.2	Content Validity for LO, IWB, and OC	218
3.6	Pilot Study	231
3.6.1	Reliability	231
3.6.2	Constructs Validity	234
3.6.2.1	Factor Analysis for Learning Organization (LO)	234
3.6.2.2	Factor Analysis for Innovative Work Behaviour (IWB)	237
3.6.2.3	Factor Analysis for Organizational Culture (OC)	240
3.7	Data Collection Procedure	242
3.7.1	Preparation of Questionnaires	243
3.7.2	Recruitment of Participants	243
3.7.3	Administration of Questionnaires	244
3.7.4	Data Management	245
3.7.5	Ethical Consideration	245
3.8	Data Analysis Method	246
3.8.1	Descriptive Statistics	247
3.8.2	Assumptions Testing	249
3.8.3	Inferential Statistics	254
3.9	Summary of Chapter	260

CHAPTER 4 RESEARCH FINDINGS

4.1	Introduction	263
4.2	Demographic Characteristics	264
4.3	Descriptive statistics of mean score for Learning Organization, Teacher's Innovative Work Behaviour, and Organizational Culture variables	267

4.4	Difference in Innovative Work Behaviour across Gender and Teaching Experience	269
4.4.1	Independent t-Test of Innovative Work Behaviour Based on Gender	269
4.4.2	ANOVA Test of Innovative Work Behaviour Based on Teaching Experience Levels	270
4.5	The relationship between Learning Organization, Organizational Culture, and Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia	272
4.5.1	The relationship between Learning Organization and Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia	273
4.5.2	The relationship between Organizational Culture and Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia	274
4.5.3	The relationship between Learning Organization and Organizational Culture among TVET teachers of Vocational Colleges in Malaysia	275
4.6	The effect of Learning Organization and Organizational Culture on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia	276
4.7	Regression Analysis for Organizational Culture as Mediator	280
4.7.1	Path c (Total effect): Simple Linear Regression of Learning Organization Predicting Innovative Work Behaviour	282
4.7.2	Path a: Simple Linear Regression of Learning Organization Predicting Organizational Culture	283
4.7.3	Path b and Path c': LO and OC → IWB	285
4.8	Conclusion	289

CHAPTER 5 DISCUSSION

5.1	Introduction	291
5.1.1	Summary of Findings	292
5.1.2	Significance of the Study	293
5.1.3	Structure of the Chapter	296
5.2	Interpretation of Findings	297
5.2.1	Level of Learning Organization, Innovative Work Behaviour, and Organizational Culture	297
5.2.2	Hypothesis Testing	298
5.2.2.1	Significant relationship between LO and IWB	298
5.2.2.2	Significant relationship between OC and IWB	299
5.2.2.3	Significant relationship between LO and OC	300
5.2.2.4	The influences of LO and OC on IWB	301
5.2.2.5	The mediating effect of OC	302
5.2.2.6	Unaccepted Hypotheses	304
5.3	Comparison with Existing Literature	306
5.3.1	Learning Organization and Innovative Work Behaviour	306
5.3.2	Organizational Culture and Innovative Work Behaviour	307
5.3.3	Learning Organization and Organizational Culture	308
5.3.4	Mediating role of Organizational Culture	309
5.4	Implications	310



5.4.1	Practical Implications for TVET Educators, Vocational College Administrators, and Policy Makers	310
5.4.2	Theoretical Implications	312
5.5	Limitations and Future Research	313
5.5.1	Limitations	313
5.5.2	Future Research Directions	314
5.6	Summary	330
	REFERENCES	339
	APPENDIX	347



LIST OF TABLES

Table No.		Page
1.1	Research hypotheses.	33
3.1	Sample Size Calculation based on Krejcie and Morgan (1970).	176
3.2	Research Population and Sampling across 84 Vocational Colleges from various State in Malaysia.	179
3.3	Research Sampling for Vocational Colleges in Perlis and Pulau Pinang using Random Digits from Random Number Tables.	181
3.4	Research Sampling Selection of Teachers from Various States and Vocational Colleges in Malaysia.	182
3.5	Dimensions and Items for DLOQ, IWBQ, and OCI.	186
3.6	Research Instrument for adapted LO, IWB, and OC questionnaires.	187
3.7	Items of Learning Organization (LO).	190
3.8	Items of Innovative Work Behaviour (IWB).	194
3.9	Items of Organizational Culture (OC).	197
3.10	Items Measurement Scale for LO, IWB, and OC.	199
3.11	Face Validity Rating Scale and Range Interpretation.	201
3.12	I-FVI Score Range Interpretation.	202
3.13	A 4-point scale for content validity.	204
3.14	Content Validity Index (CVI) interpretatio.	204
3.15	Face Validity Assessment for Learning Organization (LO) Items.	207
3.16	Face Validity Assessment for Innovative Work Behaviour (IWB) Items.	212

3.17	Face Validity Assessment for Organizational Culture (OC) Items.	216
3.18	Content Validity Assessment for Learning Organization (LO) Items.	220
3.19	Content Validity Assessment for Innovative Work Behaviour (IWB) Items.	225
3.20	Content Validity Assessment for Organizational Culture (OC) Items.	228
3.21	The Cronbach Alfa indicator for Reliability Test.	232
3.22	Cronbach's Alpha Results for Reliability Testing of LO, IWB, and OC Constructs.	233
3.23	Exploratory Factor Analysis: Factor Loadings, Eigenvalues, and Variance Explained for LO.	236
3.24	Exploratory Factor Analysis: Factor Loadings, Eigenvalues, and Variance Explained for IWB.	239
3.25	Exploratory Factor Analysis: Factor Loadings, Eigenvalues, and Variance Explained for OC.	241
3.26	Summary of Data Cleaning Procedures.	247
3.27	Mean Score Interpretation.	248
3.28	Normality Test Results for Key Variables.	250
3.29	Multicollinearity Test Based on Tolerance and VIF Values of Independent Variable (Learning Organization).	251
3.30	Correlations Among the Exogenous Variables in Independent Variable for Learning Organization.	252
3.31	Multicollinearity Test Based on Tolerance and VIF Values of Mediator Variable (Organizational Culture).	253
3.32	Correlations Among the Exogenous Variables in Mediator Variable for Organizational Culture.	253
3.33	The Correlation Interpretation adapted from Hair et al. (2017).	254
3.34	Interpretation of R^2 values according to Cohen's (1988).	255

3.35	Effect size interpretation of independent variable on dependent variable adapted from Cohen (1988), Hair et al. (2019), and Lakens (2021).	257
3.36	Methods for analyzing Research Data	258
4.1	Demographic Characteristics of Respondents (N = 331).	265
4.2	Descriptive Statistics and Interpretation of Key Constructs (N = 331).	268
4.3	Levene's test and independent t-test for Innovative Work Behaviour by Gender.	270
4.4	Descriptive Statistics of Teachers' Innovative Work Behaviour Based on Teaching Experience Levels.	271
4.5	Test of Homogeneity of Variances for Teachers' Innovative Work Behaviour (IWB).	271
4.6	One-Way ANOVA Analysis of Differences in Teaching Experience Levels with Respect to Innovative Work Behaviour.	272
4.7	Correlation Between Learning Organization and Innovative Work Behaviour.	274
4.8	Pearson correlation between Organizational Culture and Innovative Work Behaviour.	275
4.9	Pearson correlation between Learning Organization and Organizational Culture.	276
4.10	ANOVA Results for Multiple Regression.	278
4.11	Summary of Multiple Regression Analysis of Predicting Innovative Work Behaviour.	279
4.12	Multiple regression analysis for Learning Organization and Innovative Work Behaviour.	279
4.13	Types of Regression Analyses for the Mediation Effect of OC.	282
4.14	ANOVA Results for LO on IWB	282
4.15	Regression Coefficients for LO on IWB.	283
4.16	ANOVA Results for LO on OC.	284
4.17	Regression Coefficients for LO on OC.	284



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

xvii

4.18	Research Objectives, Research Questions, Hypotheses and Results.	287
------	--	-----



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi



LIST OF FIGURES

Figure No.		Page
1.1	Research conceptual framework	40
2.1	Framework for Hypotheses Testing	167
4.1	The mediation model adapted from Hayes (2009)	281
4.2	Paths illustration of mediation effect by Organizational Culture (OC)	286





LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
DLOQ	Dimensions of Learning Organization Questionnaire
EFA	Exploratory Factor Analysis
I-CVI	Item Content Validity Index
I-FVI	Item Face Validity Index
IWB	Innovative Work Behaviour
IWBQ	Innovative Work Behavior Questionnaire
KMO	Kaiser-Meyer-Olkin
LO	Learning Organization
OC	Organizational Culture
OCI	Organizational Culture Inventory
SEE	Standard Error of the Estimate
SPSS	Statistical Package for the Social Sciences
TVET	Technical and Vocational Education and Training
VIF	Variance Inflation Factor





LIST OF APPENDICES

- A Questionnaire Form
- B Random Number Tables





CHAPTER 1

INTRODUCTION



Innovation in education has emerged as a cornerstone of global competitiveness, with Technical and Vocational Education and Training (TVET) institutions playing a key role in addressing the evolving demands of industries. As nations grapple with rapid technological advancements and the transformative effects of Industry 4.0, the need for dynamic and forward-thinking approaches in education has become increasingly apparent. TVET institutions are tasked with not only imparting technical knowledge but also fostering adaptability and creativity among students to prepare them for a volatile and fast-changing job market. Central to this endeavour is the role of educators, who must continuously innovate to integrate new technologies, pedagogical strategies, and industry-aligned curricula into their teaching practices. Without this commitment





to innovation, TVET institutions risk becoming obsolete in their mission to produce a workforce equipped to meet the challenges of tomorrow.

In Malaysia, TVET educators are particularly instrumental in equipping students with the technical skills and adaptive capabilities necessary to thrive in an industrial landscape characterized by rapid digitalization and automation. Their ability to embrace and implement innovative practices referred to as Innovative Work Behaviour (IWB) is not merely a desirable trait but a professional imperative to ensure the continued relevance and impact of TVET institutions. IWB encompasses a range of activities, including the generation of creative ideas, the implementation of solutions, and the sharing of best practices among peers. For Malaysian TVET teachers, this capability is essential for bridging the gap between academic learning and industry requirements, aligning education with national and global economic aspirations. By fostering IWB, TVET institutions can position themselves as hubs of innovation and resilience, enabling Malaysia to remain competitive in an increasingly interconnected global economy. The theoretical foundation of this study revolves around the concept of a Learning Organization (LO), which emphasizes continuous learning, shared vision, and team-based problem-solving as critical enablers of organizational adaptability. In the context of TVET, adopting LO principles ensures that educators have the support and resources to experiment with innovative pedagogical practices. However, the effectiveness of LO is intricately linked to Organizational Culture (OC), which shapes the behavioural norms, values, and motivations within an institution. The interplay between LO, OC, and IWB is, therefore, critical to understanding how TVET institutions can foster a culture of innovation that empowers teachers and prepares students for the future workforce demands.





The Malaysian government has long acknowledged the strategic significance of Technical and Vocational Education and Training (TVET) in driving national development and fostering economic resilience. This recognition is evident in various policy frameworks and development plans, which consistently emphasize the transformative role of TVET in preparing a skilled workforce for a dynamic and competitive global economy. The Twelfth Malaysia Plan (2021–2025) positions TVET as a cornerstone of economic transformation, aiming to create a talent pool that is equipped to meet the evolving needs of industries. By prioritizing the enhancement of TVET systems, the government seeks to address critical challenges such as skills mismatches, regional inequalities, and workforce shortages in emerging sectors, ensuring that Malaysia remains on a trajectory of sustainable growth and industrial advancement.



One of the central themes of the Twelfth Malaysia Plan is the development of TVET educators' competencies, recognizing that the quality of education delivered is heavily dependent on the skills and innovation of its teachers. Continuous professional development, alongside the adoption of innovative teaching and learning practices, is highlighted as essential for aligning education with the demands of the Fourth Industrial Revolution. This directly connects to the necessity of fostering Innovative Work Behaviour (IWB) among TVET educators, as they play a pivotal role in integrating new technologies, methodologies, and industry-aligned approaches into their teaching. By empowering educators to adapt and innovate, the government ensures that TVET institutions remain relevant and capable of addressing both current and future workforce demands, making them key contributors to Malaysia's economic transformation agenda.





The Shared Prosperity Vision 2030 (SPV 2030) underscores the role of TVET in creating an inclusive and equitable society. By focusing on human capital development, the SPV 2030 aims to ensure that Malaysia remains competitive in the global economy. Innovation within TVET institutions is central to achieving this vision, as it enhances the quality of education and ensures alignment with emerging industry trends.

The Education Blueprint 2013–2025 provides another critical touchpoint, particularly its focus on the professionalization of teaching and the cultivation of a high-performing education system. This blueprint emphasizes the importance of fostering innovative practices among educators to improve learning outcomes and prepare students for a knowledge-based economy. Additionally, Malaysia's Industrial Revolution 4.0 (IR4.0) Policy integrates TVET as a critical component in driving digital transformation, with a focus on embedding advanced technologies and innovative pedagogies in the education system.

These aspirations are further supported by targeted initiatives such as the TVET Enhancement Program, which seeks to align curricula with industry demands and improve institutional governance. By embedding the principles of LO and fostering a supportive OC, the Malaysian government is laying the groundwork for cultivating IWB among TVET teachers. These efforts are essential not only for achieving national development goals but also for positioning Malaysia as a regional leader in education and innovation.





Globally, the transformative potential of TVET has been widely recognized as a key enabler of sustainable development and economic growth. The United Nations Sustainable Development Goals (SDGs), particularly SDG 4, emphasize the need for inclusive and quality education that equips individuals with the skills needed to thrive in a rapidly changing world. Innovative educators are central to achieving this goal, as they are tasked with designing and implementing learning experiences that prepare students for future challenges. Countries such as Germany, Singapore, and South Korea have demonstrated the potential of innovation in TVET through their policies and practices. Germany's dual education system, which integrates classroom learning with industry-based training, exemplifies how innovation in education can address workforce needs. Similarly, Singapore's SkillsFuture initiative emphasizes lifelong learning and innovation to ensure that its workforce remains globally competitive. These examples highlight the importance of fostering IWB among educators, ensuring that they are equipped to meet the demands of a knowledge-driven economy.

Malaysia's efforts to align its TVET system with global best practices reflect its commitment to creating a resilient and adaptive workforce. By integrating LO principles and nurturing a conducive OC, Malaysian TVET institutions can position themselves as hubs of innovation, contributing not only to national development but also to the global discourse on education reform. This alignment with global perspectives is critical as Malaysia seeks to remain competitive in an interconnected world.

This research is timely and relevant, given the Malaysian government's aspirations and the global emphasis on innovation in education. By examining the





relationships between LO, OC, and IWB among TVET teachers, this study aims to provide actionable insights into how institutions can foster innovation and improve their contributions to national and international development goals.

1.2 Background of the Study

As the global economy increasingly emphasizes innovation and adaptability, the educational sector, particularly Technical and Vocational Education and Training (TVET), must evolve to meet these demands. The studies highlight significant trends in TVET globally, reflecting diverse approaches to addressing educational and economic needs. According to King and Palmer (2019), there is a growing emphasis on aligning TVET with labor market demands to ensure that graduates possess relevant skills. Their study underscores the importance of integrating industry partnerships and employer input into curriculum development to enhance the employability of TVET graduates.

Similarly, Lee and Choi (2020) explore how global TVET systems are adapting to technological advancements and the shift towards Industry 4.0. They argue that TVET programs must incorporate digital skills and emerging technologies to prepare students for the future workforce. Their research highlights the need for continuous curriculum updates and investments in modern training facilities to keep pace with technological changes. Regional variations in TVET approaches reflect different economic and social priorities. In Europe, for example, the European Commission (2021) has emphasized the importance of creating flexible and inclusive TVET systems





that can adapt to changing economic conditions. Their report discusses initiatives aimed at improving the quality and relevance of TVET through increased funding, policy reforms, and cross-border cooperation. According to Peters and O'Neill (2020), competency-based education is gaining traction as a method to ensure that TVET programs are aligned with industry standards. Their study demonstrates that competency-based approaches, which focus on demonstrating skills rather than time spent in training, can enhance the relevance and quality of TVET.

In recent years, Malaysia has undertaken several initiatives to enhance its TVET system. The Malaysian government has introduced policies to integrate Industry 4.0 technologies into TVET programs. This includes incorporating advanced manufacturing, robotics, and digital skills into curricula to prepare students for the future workforce (Yusof & Tan, 2023). The Malaysian government has developed the National TVET Master Plan to streamline and standardize TVET programs across institutions. This plan aims to improve the quality and relevance of TVET education and ensure better alignment with labor market needs (Ministry of Education Malaysia, 2022). There is a growing emphasis on collaboration between TVET institutions and industry partners. These partnerships help to ensure that training programs are responsive to current industry requirements and provide students with real-world experience (Cheong & Chong, 2023). In Malaysia, TVET institutions are pivotal in preparing students for the labor market by providing them with practical skills and knowledge. However, the ability of TVET educators to foster innovation and deliver cutting-edge instruction is crucial to achieving these goals (Mohd & Kamarudin, 2022).





The Malaysian TVET sector is comprised of various institutions and programs designed to cater to different educational and vocational needs. Key institutions include Polytechnics and Community Colleges, Vocational Colleges, Skills Development Centers and Universities with TVET Programs. Polytechnics and Community College are institutions which offer diploma and certificate programs that are closely aligned with industry requirements. They provide specialized training in fields such as engineering, information technology, and business (Khan et al., 2023). The Vocational Colleges are focused on providing technical skills and practical training, vocational colleges play a significant role in preparing students for specific trades and occupations. They offer programs in areas such as automotive technology, culinary arts, and construction (Chong et al., 2022). The Skills Development Centers are the centers, which include those under the Ministry of Human Resources, offer short courses and certification programs aimed at enhancing the skills of both new and existing workers. They focus on areas such as entrepreneurship, digital skills, and advanced manufacturing (Ahmad & Yusof, 2021). The universities with TVET Program are some of the Malaysian universities which offer TVET programs within their faculties, integrating vocational training with higher education degrees. These programs aim to provide a comprehensive education that combines theoretical knowledge with practical skills (Kumar & Abdullah, 2022).

The Malaysian TVET sector aims to achieve several key objectives such as skill development, economic growth, social inclusion and lifelong learning. Within the skills development context, TVET aims to equip individuals with the practical skills needed to meet industry demands and enhance employability. This involves aligning curricula with industry standards and technological advancements (Lee & Ali, 2022). In the





aspect of economic growth, by developing a skilled workforce, TVET supports economic development and competitiveness. Skilled workers contribute to productivity improvements and innovation in various sectors (Wong et al., 2023). TVET is able to create the social inclusion because TVET aims to provide opportunities for marginalized and disadvantaged groups, including women and rural communities, to gain skills and improve their socio-economic status (Sulaiman & Ismail, 2023). The Malaysian TVET sector aims to develop lifelong learning by promoting continuous learning and skills upgrading, ensuring that the workforce remains adaptable to changing job market requirements and technological advancements (Tan & Lim, 2024).

TVET in Malaysia has undergone significant changes since its inception. Initially focused on basic vocational training, the sector has progressively evolved to meet the needs of a modern economy. The Malaysian government has increasingly recognized the importance of TVET in its economic and educational policies, leading to substantial reforms aimed at enhancing the quality and relevance of vocational training (Ministry of Education Malaysia, 2023).

In recent years, the government has emphasized the need for a more robust and dynamic TVET system. This shift is part of a broader strategy to improve the alignment of TVET programs with industry needs and technological advancements. The Malaysia Education Blueprint 2015-2025 (Higher Education) and the 12th Malaysia Plan highlight the strategic importance of TVET in achieving national development goals (Ministry of Education Malaysia, 2023).





Efforts have been made to modernize TVET curricula to better align with industry requirements and emerging technologies. This includes the integration of Industry 4.0 concepts such as automation, data analytics, and digital skills into training programs (Omar & Zulkifli, 2024). There has been a push to upgrade TVET institutions' infrastructure and resources. This includes the establishment of new vocational colleges and the upgrading of existing facilities to provide more advanced training equipment and technologies (Kassim & Ahmad, 2024). Strengthening partnerships between TVET institutions and industries is a central theme in recent reforms. Collaborative programs, apprenticeships, and internships are being promoted to ensure that students gain relevant hands-on experience, and that training is aligned with real-world job requirements (Chong & Lai, 2023).



Educational and Training (TVET) sector as this sector is seen as being capable of sustaining and developing the nation's workforce supply (Minghat & Yasin, 2022). Through the Malaysia Education Blueprint 2015 – 2025 (Ministry of Education, 2024), the community colleges, vocational colleges and polytechnics will be a premier higher education TVET provider that developed skilled talent to meet the growing and changing demands of industry and promotes individual opportunities for career development.

Ensuring that TVET programs remain up to date with technological advancements and market needs is a persistent challenge (Omar & Zulkifli, 2024). With the advent of Education 4.0, institutions are now required to convert traditional classrooms into digital ones that meet learning goals that emphasis creativity and





innovation in teaching and learning (Goker, 2023). Industry 4.0, previously known as the Fourth Industrial Revolution, has brought forth a huge social shift, which provides an impetus for educational transformation (Lee et al., 2021). According to Harkins (2021), Education 1.0 responded to the needs of the agrarian era, Education 2.0 came about from the first industrialization boom, Education 3.0 emerged from a globalized world, and now Education 4.0 is shaped by the era of burgeoning innovations. Therefore, teachers and schools are expected to train, shape, and produce students who will join a future workforce of innovative creators and implementors (Carvalho, 2022).

Globally, TVET systems are undergoing significant transformations to align with the demands of Industry 4.0, which emphasizes the integration of advanced technologies, digital skills, and lifelong learning. Many countries are revising their TVET strategies to address skill gaps, enhance employability, and support economic growth. For instance, initiatives like UNESCO's Strategy for TVET (2022–2029) focus on equipping learners with the skills necessary to thrive in rapidly evolving industries while promoting sustainable development.

In Malaysia, the TVET sector has been a critical pillar of national education reforms aimed at fostering a skilled and innovative workforce. Programs such as the 11th and 12th Malaysia Plans have emphasized enhancing the quality of TVET institutions and aligning their curriculum with industry standards. Despite these efforts, challenges persist, including keeping pace with technological advancements and meeting the diverse needs of industries. Locally, reforms have improved the relevance of TVET curricula, but continuous adaptation is required to address the dynamic demands of the workforce.





This evolving landscape underscores the critical role of Innovative Work Behaviour (IWB) among TVET educators. By fostering innovation in teaching practices and professional development, educators can enhance the quality and relevance of vocational training, equipping students with the skills needed for future industry demands.

Innovative Work Behaviour (IWB) among educators plays a critical role in enhancing educational quality and aligning outcomes with the dynamic demands of the job market. Within the context of Technical and Vocational Education and Training (TVET), educators face the dual responsibility of imparting technical expertise and fostering essential skills such as critical thinking, creativity, and adaptability in students. As industries evolve rapidly, the ability of TVET educators to innovate is crucial for ensuring that teaching methods and curricula remain effective and relevant.

Educators who demonstrate IWB are more likely to embrace New Pedagogical Approaches, leveraging novel teaching strategies to enhance student engagement and learning outcomes. For example, integrating technology into classrooms through digital tools and online resources can create interactive and dynamic learning environments that better prepare students for future challenges (Nguyen, 2023). Such innovative practices not only elevate the quality of vocational training but also position TVET as a key driver of workforce readiness and national development.

The ability to engage in IWB, which is defined as the generation, promotion, and implementation of novel ideas (Janssen, 2023) is crucial for meeting these demands and enhancing educational outcomes. TVET teachers are encouraged to develop and





cultivate an Innovative Work Behaviour (IWB) in TVET institutions since innovation play crucial role in promotion of economic development for any country. Although several scholars attempt to define IWB (Siregar et al. 2019), the most common definition in the literature is the one proposed by Janssen (2000) where IWB means the behaviour of employees to create, introduce, and apply new ideas intentionally at work, within a group or an organization with the intention of contributing to performance.

Innovative Work Behaviour is a crucial component in the field of education, as it significantly influences teaching practices, institutional development, and the overall educational experience. This concept, which encompasses the generation, promotion, and implementation of new ideas and practices, is essential for educational institutions aiming to adapt to changing needs and improve their effectiveness. The importance of fostering Innovative Work Behaviour in education has gained increased recognition in recent years, particularly considering evolving educational demands and technological advancements. Innovative educators can design personalized learning experiences that cater to individual students' needs and learning styles. This personalization helps to address diverse learning needs and promotes better student achievement (Lee & Lee, 2024). Cheng & Liu, 2023

The importance of Innovative Work Behaviour (IWB) can be identified by its impact on enhancing the employees work role performance and generation of innovative outputs such as competitiveness (Aslam & Ismail, 2022). Studies by Liu et al. (2022) have shown that high levels of IWB are associated with increased job satisfaction and engagement. Employees who are involved in innovative processes report greater fulfillment and motivation. According to Hafizah (2024), several





previous studies have proposed that the elements of Innovative Work Behaviour include opportunity exploration, idea production, idea promotion (championing), and idea realization (implementation).

Furthermore, emphasize that the innovation process begins with opportunity discovery, which entails becoming aware of opportunities to make something new out of current difficulties. It is described as a dynamic process of production and association, the generation of representations and categories of opportunity, and the communication of ideas, that may be abstract, tangible, or visual. Exploring opportunities helps to generate new ideas. It is believed that this is the phase in which new ideas are produced for products, processes, or services to improve them. Novel ideas emerge during the idea-generation stage and are then promoted. Idea promotion entails introducing and propagating these concepts in the workplace by influencing key actors or influential figures and rallying champions for the innovation process

Thurlings et al. (2021) highlighted the significance of Innovative Work Behaviour among teachers helping the educators in keeping themselves up to date with dynamic changes in the society, facilitates new learning and technology. A study by Zhang and Yang (2022) explored how intrinsic motivation and psychological well-being facilitate IWB, emphasizing the need for supportive work environments that enhance employee motivation.

To create a competitive society, teacher's innovative work behaviour is the starting point for developing citizens as creative and innovative thinkers since innovative behaviour also refers to the process of developing, generating, applying or





promoting new ideas by employees to increase job performance (Bawuro et al., 2021). Yean et al. (2020) indicated that Innovative Work Behaviour can be defined as intentional creation, introduction and application of new ideas within a work role, in order to benefit the individual or organization performance. The teachers who have innovative work behaviour can work creatively, contribute ideas and are able to provide positive outcomes for the organization where they work.

In dealing with the challenges of delivering quality TVET education at the vocational colleges, TVET teachers are required to develop innovative work behaviour (Runhaar, 2021) In the ever challenging and globally competitive environment, innovative mindset and behaviour among teachers and instructors is crucial in ensuring the success of educational institutions (Nik Ramli & Norhajawati, 2021). Innovation and creativity are contributing towards change and schools must be able to identify individual abilities to innovate and to make it as a practice (Aduni, 2021). Institutions that encourage innovation among their staff create a culture of continuous improvement. This culture supports ongoing development and adaptation, ensuring that institutions remain relevant and effective in meeting educational demands (Smith & Jones, 2024).

Innovative practices play a crucial role in enabling educators to adapt to changes, acquire new knowledge, and enhance students' academic achievements. These practices also equip students with the skills needed to compete in the job market and contribute to overall economic development. For educators, innovativeness can streamline administrative processes, improve resource management, and optimize organizational operations. For example, adopting new management software can





improve data handling and communication efficiency within educational institutions (Cheng & Liu, 2023). Similarly, advances in technology, such as collaborative platforms and digital tools, support knowledge sharing and enhance IWB by offering new ways to generate and implement ideas (Koch et al., 2020).

However, many TVET teachers face significant challenges in adapting to rapidly advancing technologies and industry demands. These challenges often hinder their ability to implement innovative practices effectively. As highlighted by Paavola et al. (2021), the development, adoption, and implementation of innovation are critical areas for understanding the true impact of innovative behavior among teachers. Research is essential to identify strategies that promote IWB among TVET educators, ensuring that they are equipped to foster innovation in their classrooms, enhance students' learning experiences, and meet the evolving needs of industries and the workforce.

Recent research underscores the significance of Learning Organizations (LO) in promoting innovative behavior by creating environments that foster continuous learning and collaboration. LO structures are designed to facilitate knowledge acquisition and sharing, which in turn supports the creative and innovative capacities of their members (Ng et al., 2024). For example, implementing regular professional development programs, establishing mentoring systems, and creating collaborative platforms can empower teachers to experiment with new ideas and adopt innovative practices. Studies have shown that teachers working in learning-oriented environments, where resources such as training, feedback mechanisms, and peer support are readily available, are more likely to engage in innovative behaviours (Zhang et al., 2023).





A Learning Organization is characterized by its focus on continuous learning, adaptability, and knowledge sharing, creating an environment where employees can innovate and grow (Baker & Buelens, 2021). This concept, initially popularized by Senge (1990), has been further explored in recent years, highlighting its relevance to educational settings. For TVET teachers, working within a Learning Organization can potentially enhance their Innovative Work Behaviour which is essential for adapting teaching methods and addressing evolving industry needs (Nguyen, 2023).

A Learning Organization continually enhances its capacity to learn, adapt, and grow by promoting a culture of continuous learning and improvement. For Malaysian Technical and Vocational Education and Training (TVET) teachers, becoming a Learning Organization involves multiple facets, including professional development, knowledge sharing, technology integration, feedback mechanisms, and leadership (Jamaludin et al., 2023). Learning Organizations provide the necessary resources and support for employees to engage in innovative work behaviour. They equip employees with knowledge, skills, and a supportive environment conducive to creativity. In a Learning Organization, employees learn from each other through shared experiences and collective knowledge, which can inspire and facilitate innovative thinking.

Incorporating Learning Organization (LO) into the framework is essential, as current research consistently demonstrates that organizations with a strong learning orientation foster higher levels of innovation (Ng et al., 2023; Zhang et al., 2022). Unlike traditional organizational structures that often prioritize rigid processes, LO promotes adaptability through knowledge sharing, collaboration, and continuous





improvement. This dynamic approach creates an environment where employees are well-equipped and motivated to engage in innovation.

The distinctiveness of LO lies in its focus on empowering employees to take initiative and experiment, which are crucial for fostering Innovative Work Behaviour (IWB) (Paavola et al., 2021). Regular feedback mechanisms and open communication channels within LO have been shown to facilitate the generation, refinement, and implementation of innovative ideas (Koch et al., 2020). Previous studies often lacked practical, systemic approaches to supporting innovation, focusing primarily on individual or organizational factors in isolation. By addressing these gaps, LO offers a holistic framework that combines structural support, empowerment, and a culture of continuous learning to drive sustainable innovation in the workforce.



Organizational Culture, defined as the shared values, beliefs, and practices that shape an organization's environment (Cameron & Quinn, 2021), plays a pivotal role in mediating the relationship between a Learning Organization and its members' innovative behaviours. Recent studies highlight that a supportive Organizational Culture can amplify the positive effects of a learning-oriented environment on employee innovation, while a rigid or misaligned culture can hinder these outcomes (Wang & Wang, 2022). In the context of TVET institutions, where the educational and industrial landscapes are rapidly evolving, fostering an innovation-driven Organizational Culture is essential. Potential solutions include promoting a culture of collaboration, encouraging risk-taking, and aligning organizational practices with the principles of continuous learning. By cultivating these cultural elements, TVET institutions can create an environment where educators feel empowered to experiment,





share knowledge, and adopt innovative practices to meet the demands of a changing workforce.

A study by Mura et al. (2022) found that an Organizational Culture that values learning and experimentation significantly enhances. Organizational Culture mediates the relationship between Learning Organizations and Innovative Work Behaviour by influencing how the learning-oriented practices are perceived and enacted by the teachers. An Organizational Culture that values openness and transparency can enhance the effectiveness of learning initiatives. When employees feel comfortable sharing knowledge and ideas without fear of negative consequences, they are more likely to engage in innovative work behaviour. A culture that encourages risk-taking and experimentation supports the innovative process by reducing the fear of failure.



Employees in such cultures are more willing to propose and test new ideas.

Within the context of shared vision and goals, when the values of a Learning Organization align with the broader Organizational Culture, employees are more likely to embrace learning and innovation. A culture that aligns with the organization's goals of continuous improvement and adaptability facilitates the integration of learning practices into everyday work. Cultures that recognize and reward innovative efforts motivate employees to engage more actively in innovative work behaviour. Positive reinforcement for creative contributions reinforces the behaviours that Learning Organizations seek to promote. In a culture that promotes collaboration and teamwork, knowledge sharing is more effective.





Jamaludin et al. (2023) discussed the need for ongoing professional development tailored to the specific needs of TVET teachers. They argue that a structured approach to CPD, focusing on practical industry-relevant skills, is essential for developing a Learning Organization within TVET institutions.

Learning Organizations that foster such a collaborative environment can see a more direct translation of learning into Innovative Work Behaviour. Organizational Culture can influence the formation of informal networks where employees exchange ideas and support each other's innovative efforts. These networks are crucial for disseminating and applying new knowledge. Norms and practices within an organization can determine how learning is applied. For instance, the Organizational Culture that emphasizes practical application of new knowledge ensures that learning translates into actionable and innovative outcomes. Sani and Abdullah (2024) highlight how fostering a culture of innovation within TVET institutions involves not just supporting technological advancements but also encouraging teachers to develop and implement new teaching methods and practices

Organizational Cultures that incorporate feedback mechanisms support the iterative process of learning and innovation. Regular feedback helps teachers to refine their ideas and approach, enhancing their Innovative Work Behaviour. Research shows that Organizational Culture significantly impacts how learning practices are implemented and perceived. Studies have found that specific cultural dimensions, such as collectivism and individualism, can influence how learning and innovation processes are supported within organizations. Organizations with strong cultures of learning and





innovation exemplify how supportive cultures enhance the effectiveness of Learning Organization and promote Innovative Work Behaviour.

The relationship between Learning Organizations and Innovative Work Behaviour is well-established, but the role of Organizational Culture as a mediator in this relationship has gained increasing attention. Understanding how Organizational Culture influences this dynamic can provide insights into how organizations can better leverage their learning-oriented practices to foster innovation. Organizational Culture affects how knowledge is shared and utilized. A culture that promotes collaboration and open communication enables more effective dissemination of new ideas and practices, thus enhancing Innovative Work Behaviour.



amplify the impact of learning initiatives on innovation. Teachers in such cultures are more likely to engage in Innovative Work Behaviours because they feel their contributions are valued and have the support needed to implement their ideas. The Organizational Culture of innovation and openness mediates the relationship between Learning Organization and Innovative Work Behaviour Specifically, they observed that a supportive culture enhances the effectiveness of Learning Organization processes in fostering innovation (Aduni, 2022).

Globally, the ideal TVET system is envisioned as one that integrates cutting-edge technologies, aligns curricula with industry demands, and fosters lifelong learning to equip students with the skills needed for dynamic and competitive job markets (UNESCO, 2022; Peters & O'Neill, 2020). Countries like Germany and Finland





exemplify this ideal by successfully combining theoretical knowledge with hands-on training, ensuring that graduates are workforce-ready (European Commission, 2021). In Malaysia, while policies such as the National TVET Master Plan and the Malaysia Education Blueprint (2015–2025) aim to achieve similar goals, the current situation reveals persistent challenges that hinder progress. These include the misalignment of curricula with workforce needs, educators' difficulties in adapting to Industry 4.0 technologies, and inadequate institutional support, such as outdated facilities and limited professional development opportunities (Yusof & Tan, 2023; Cheong & Chong, 2023; Omar & Zulkifli, 2024).

To address these challenges, adopting the principles of Learning Organization (LO) and fostering a supportive Organizational Culture (OC) are promising solutions.

LO emphasizes continuous learning, adaptability, and collaboration, enabling educators to innovate and refine their teaching practices (Senge, 1990; Baker & Buelens, 2021). Meanwhile, OC creates an environment that values risk-taking, transparency, and knowledge sharing, empowering educators to experiment with and implement innovative ideas (Cameron & Quinn, 2021; Wang & Wang, 2022). By integrating LO principles with a supportive OC, TVET institutions can bridge existing gaps, ensuring educators are well-equipped to meet evolving educational and workforce demands.

In conclusion, the challenges faced by TVET institutions, including rapid technological advancements and evolving industry demands, highlight the need for research into the relationship between Learning Organizations (LO), Organizational Culture (OC), and Innovative Work Behaviour (IWB). These challenges have revealed gaps in educators' ability to adapt and innovate within their teaching practices.





Organizational Culture serves as a critical mediating factor, either strengthening or limiting the effectiveness of LO in fostering innovation. By fostering a culture that prioritizes risk-taking, knowledge sharing, and employee empowerment, organizations can address these gaps, ensuring that learning initiatives effectively promote innovation. This research seeks to identify strategies that enable TVET educators to respond to the dynamic needs of students and the workforce.

1.3 Problem Statements

Global perspectives reveal several recurring problem statements in TVET systems. A significant issue is the alignment between TVET curricula and labor market demands.

According to Wang and Liu (2020), many TVET programs struggle to keep pace with rapid technological advancements and evolving industry needs. Their study highlights that outdated curricula and inadequate industry input results in a skills mismatch, affecting the employability of TVET graduates. Moreover, infrastructure and resource limitations present another critical challenge. According to Nguyen et al. (2021), inadequate facilities and insufficient training equipment hinder the quality of TVET. Their research indicates that many TVET institutions, particularly in developing regions, face significant barriers due to limited financial resources and outdated technology. In addition, there is a growing concern about the inclusivity and accessibility of TVET programs. Zhang and Huang (2022) discuss how marginalized groups, including women and individuals from low-income backgrounds, often face barriers to accessing quality TVET. Their study emphasizes the need for policies and programs that enhance equity and inclusion within TVET systems.





In Malaysia, TVET teachers in the Polytechnics, Community colleges, Vocational colleges and public skills training institutions with competency and skills affects the students' progress as it is an important component of the TVET institution (Ismail et al., 2021). In responding to the IR4.0 and striving for efficient economy are heavily in cultivation of knowledge, skills and competencies of their people mainly educators including teachers in TVET institution. The competent, qualified, skilled and experienced TVET teachers are primarily the knowledge and innovation drivers of any society (Blaskova et al., 2022).

Innovative Work Behaviour among TVET teachers is crucial for addressing the aforementioned challenges and improving TVET outcomes. Innovative Work Behaviour includes activities such as developing new teaching methods, integrating technology into the curriculum, and fostering an environment of continuous improvement. Recent studies highlight the impact of Innovative Work Behaviour on TVET effectiveness. According to Patel and Kumar (2020), TVET teachers who engage in innovative practices contribute significantly to enhancing the quality of education and training. Their research shows that teachers who adopt new pedagogical approaches and integrate digital tools into their teaching practices can better meet the needs of modern learners. Furthermore, the role of organizational support in fostering Innovative Work Behaviour among teachers is crucial. Roberts and Smith (2021) explore how institutional support, including professional development opportunities and a supportive work environment, influences teachers' willingness to engage in innovative practices. Their study finds that institutions that invest in training and create a culture of innovation see higher levels of Innovative Work Behaviour among their educators.





Despite the benefits, promoting Innovative Work Behaviour among TVET teachers is not without challenges. According to Brown and Adams (2021), teachers often face resistance to change from institutional structures and colleagues. Their study highlights the importance of leadership and change management strategies in overcoming these barriers and fostering an innovative culture within TVET institutions. Additionally, there is a need for ongoing professional development to support innovative practices. Singh and Lee (2022) argue that continuous training and exposure to new teaching methodologies are essential for enabling TVET teachers to stay updated and implement innovative practices effectively. Their research suggests that structured professional development programs can significantly enhance teachers' innovative capabilities. Recent studies highlight the impact of Innovative Work Behaviour on TVET effectiveness. According to Ahmad and Rahman (2021), TVET teachers who engage in innovative practices contribute to better student engagement and learning outcomes. Their study shows that teachers who implement modern pedagogical techniques and utilize digital tools can significantly enhance the educational experience for their students.

In Malaysian technical institutions, TVET teachers are still unaware of the importance of developing Innovative Work Behaviour at workplace that involves crucial elements such as idea exploration, idea generation, idea championing, and idea implementation (Izzati, 2022). Despite the benefits, promoting Innovative Work Behaviour among TVET teachers faces several challenges. According to Zainuddin and Omar (2022), teachers often encounter resistance to change from institutional structures and colleagues. Their study highlights the importance of leadership and strategic change management in overcoming these barriers and fostering an environment





conducive to innovation. Professional development is also a critical factor. Azman and Tan (2021) argue that continuous training and exposure to new teaching methods are essential for enabling TVET teachers to implement innovative practices effectively. Their research suggests that structured and ongoing professional development programs are necessary to support teachers in adopting new methodologies and technologies.

The recent educational challenges in developing countries have involved embedding innovation in all aspects of academia. In Malaysia, the government rolled out the Malaysia Education Blueprint (2013 – 2025), to ensure that innovation gets integrated into teaching and learning practices, as a strategic move to provide quality, relevance, and competent individuals and employees (Ministry of Education, 2023). In line with this, the Malaysian school standard curriculum has been revised and fine-tuned into a holistic package, that encompasses the elements of balance, creativity, critical thinking, and innovation, in the fields of science, technology, and communications (Ahrari et al., 2021). Schools and teachers should not neglect the standards of a student's physical and mental development, which includes their attitude, values, self-esteem, humanity, and spirituality.

The new curriculum also emphasizes the use of innovation in content creation and delivery, which directly affects the quality of teaching and learning (Enzai et al., 2021). In Education 4.0 environments, the convergence of talents and creativity often takes place. Teachers, as innovation stewards, are expected to upskill, take on new tasks, take ownership of activities that foster creative growth, and be part of the change processes which shape the new school culture.





The challenges are real and overwhelming, which is why most teachers shun innovation at work. Izzati (2022) reported that Malaysian school teachers are stuck in their comfort zone, preferring to use only conventional and familiar learning strategies, and fall back on blanket solutions. Thus, the heterogeneity of students is not acknowledged, whereby different methods and approaches are much more suited ingredients to nurture a facilitative environment that encourages teachers to develop Innovative Work Behaviour (Izzati, 2022). In dealing with the challenges of delivering quality TVET education, TVET teachers are required to develop Innovative Work Behaviour (Runhaar, 2022). Janssen (2019) describes Innovative Work Behaviour as intentional creation, introduction, and application of new ideas within work roles, groups, or organizations, in order to benefit role performance, the group or the organization. However, Innovative Work Behaviour is not fully practiced by the teachers because some of them believe that their ideas do not matter or could not be implemented (Baer, 2022) thus limiting the creation of interactive and creative teaching and learning in classroom.

Less exposure of creative problem solving to students by teachers during teaching and learning process in classroom due to lack of teachers' Innovative Work Behaviour may affect the development of students' problem-solving skills. According to Creative Problem-Solving Assessment for International Student Assessment (PISA), Malaysia was ranked 39 out of 44 in a creative problem-solving test that measures the skills young people used when facing with everyday problems (OECD, 2015).

As Learning Organization is described as an organization that involves a continuous process of transformation through learning of all members within and





outside the organization (Pedler et al., 2019), the concept of Learning Organization must be also applied to education institutions in Malaysia including TVET institution. Without Learning Organization, teachers will less be encouraged to create the opportunities for continuous learning, encourage dialogue and inquiry, encourage group collaboration and learning, build systems for acquiring and sharing knowledge (Aduni, 2022). Learning Organization is crucial since it empowers teachers to share vision, create organizational relationships with community and environment, and provide strategic leadership for learning (Marsick & Watkins, 2005).

Another aspect that contributes to the development of Innovative Work Behaviour among the TVET teachers is Organizational Culture. As an Organizational Culture is the system of the behaviour, values, beliefs, and habits that direct individuals' behaviours in an organization, it influences every aspect of organizational life and behaviour. An effective Organizational Culture is one of the crucial elements that affect an organization's ability to be successful in the long run. Since the Learning Organization involves the development of systems for acquiring and sharing knowledge by implementing Organizational Culture, it will promote cooperative culture that focuses on flexibility, cooperation, knowledge sharing, trust and teamwork. Meanwhile, without Organizational Culture practices will affect the innovativeness, consistency and effectiveness of organization (Chang & Lin, 2007). Innovativeness in Organizational Culture is a process that directs teachers to produce new, useful and comprehensive outcomes whereas effectiveness in Organizational Culture focuses on competitiveness, target accomplishment, production and performance thus support and embrace innovativeness and creativity (Gumusluoglu & Ilsev, 2019). Innovation elements in





Organizational Culture determine the strategy, goals and modes of operating in a Learning Organization (Johari, 2021).

Despite the recognized importance of fostering innovation for organizational success, many organizations struggle to create environments that effectively support and stimulate Innovative Work Behaviours. Therefore, this study seeks to examine how the principles and practices of a Learning Organization such as continuous learning, knowledge sharing, and adaptability impact teachers' Innovative Work Behaviours, and identify the mechanisms through which these organizational characteristics influence creativity and innovation within the workplace.

In the era of Education 4.0, educational organizations are increasingly recognizing the significance of fostering the Organizational Culture that supports continuous learning and innovation to maintain a competitive edge. However, there is a lack of comprehensive understanding regarding how Learning Organization defined as entities that prioritize knowledge acquisition, dissemination, and utilization that affect employees' Innovative Work Behaviour, and how Organizational Culture mediates this relationship. Existing research has demonstrated that Learning Organizations can enhance employee performance and adaptability. Similarly, Innovative Work Behaviour, which includes activities such as idea generation, experimentation, and implementation, is essential for organizational success. Nonetheless, the specific mechanisms through which Learning Organizations influence innovative work behaviour remain unclear. Furthermore, Organizational Culture, which encompasses the shared values, beliefs, and practices within an organization, may play





a crucial role in shaping this influence, yet its mediating effect has not been thoroughly explored.

Despite the adoption of Learning Organization principles in Malaysian TVET institutions, challenges remain in effectively leveraging these practices to boost innovative behavior among teachers. Research by Lim et al. (2024) indicates that while there is a commitment to becoming Learning Organizations, the impact on teachers' Innovative Work Behaviour is often mediated by the prevailing Organizational Culture. In some instances, cultural barriers such as resistance to change and lack of support for innovation can undermine the effectiveness of Learning Organization practices. Therefore, this study aims to address this gap by examining the direct impact of Learning Organizations on employees' innovative work behaviour. In addition, the study also seeks to fulfil the research gap on the role of Organizational Culture as a mediator in the relationship between Learning Organizations and innovative work behaviour.

Understanding these dynamics is critical for organizations aiming to design strategies that leverage learning capabilities to enhance innovation. Past research on Innovative Work Behaviour (IWB) has predominantly focused on individual or organizational factors in isolation, often overlooking the combined influence of Learning Organization (LO) and Organizational Culture (OC). Moreover, studies investigating these relationships within the context of Malaysian TVET institutions remain scarce. This research addresses this gap by examining how LO and OC interact to influence IWB, with a specific focus on the mediating role of OC.





By including LO and OC, this study provides a more holistic perspective on the factors driving IWB, setting it apart from previous research. LO was chosen for its potential to enhance organizational learning processes and adaptability, while OC was selected for its crucial role in shaping behaviors that support innovation. This integrated approach is particularly relevant for Malaysian TVET institutions, which must equip educators to meet evolving industry demands. By bridging these gaps, the study not only advances theoretical understanding but also offers actionable strategies for organizational leaders and policymakers to foster innovation and adaptability in the workforce.

1.4 Research Objectives



This study aims to address the following objectives:

- i. To identify the levels of Learning Organization, Innovative Work Behaviour, and Organizational Culture among TVET teachers of Vocational Colleges in Malaysia.
- ii. To determine the differences in Innovative Work Behaviour based on gender and teaching experience.
- iii. To determine the bivariate relationship between Learning Organization, Innovative Work Behaviour, and Organizational Culture among TVET teachers of Vocational Colleges in Malaysia.



- iv. To examine the effect of Learning Organization and Organizational Culture on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia.
- v. To examine the mediation of Organizational Culture on the effect of Learning Organization on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia.

1.5 Research Questions

To guide this investigation, the study will address the following research questions:

- i. What are the levels of Learning Organization, Innovative Work Behaviour, and Organizational Culture among TVET teachers of Vocational Colleges in Malaysia?
- ii. Is there any difference in Innovative Work Behaviour based on gender and teaching experience?
- iii. Is there any relationship between Learning Organization, Innovative Work Behaviour, and Organizational Culture among TVET teachers of Vocational Colleges in Malaysia?
- iv. Is there any effect of Learning Organization and Organizational Culture on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia?

- v. Does Organizational Culture mediate the effect of Learning Organization on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia?

1.6 Research Hypotheses

Table 1.1 summarizes the research hypotheses that will guide the analysis and interpretation of the study's findings.

Table 1.1

Research hypotheses

Hypothesis	Statement
H1a	There is a significant difference in Innovative Work Behaviour based on gender.
H1b	There is a significant difference in Innovative Work Behaviour based on teaching experience.
H2a	There is a significant relationship between Learning Organization and Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia.
H2b	There is a significant relationship between Organizational Culture and Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia.
H2c	There is a significant relationship between Learning Organization and Organizational Culture among TVET teachers of Vocational Colleges in Malaysia.
H3a	There is a significant effect of Learning Organization on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia.



Hypothesis	Statement
H3b	There is a significant effect of Organization Culture on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia.
H4	Organizational Culture significantly mediates the effect of Learning Organization on Innovative Work Behaviour among TVET teachers of Vocational Colleges in Malaysia.

1.7 Research Framework

This study employs the research framework to investigate how the characteristics of a Learning Organization, as defined by Watkins and Marsick (2015), influence the Innovative Work Behaviour of Malaysian TVET teachers, as described by De Jong and Den Hartog (2010). Additionally, it examines the mediating role of Organizational Culture, utilizing the dimensions proposed by Chang and Lin (2015).

1.7.1 Theoretical Framework

This study's theoretical framework integrates three fundamental constructs namely Learning Organization (LO), Innovative Work Behaviour (IWB), and Organizational Culture (OC) which is to examine their interconnected influence on the innovative practices of Technical and Vocational Education and Training (TVET) teachers in vocational colleges across Malaysia. By exploring the dynamic relationships among these elements, the study aims to uncover how organizational learning and culture contribute to fostering innovation among educators.





The concept of a Learning Organization is rooted in the idea that organizations must continuously adapt and evolve to thrive in changing environments. Watkins and Marsick (2015) conceptualized the LO through seven core dimensions, each essential for promoting a learning culture. These dimensions serve as a foundational lens through which educational institutions can assess and enhance their learning capabilities.

Continuous Learning, the first dimension, involves the ongoing development of individuals, teams, and the entire organization. It promotes the idea that learning is not confined to formal training but occurs through everyday interactions and problem-solving. This constant improvement is crucial for enabling educators to remain relevant and responsive to changes in teaching practices and student needs.



The dimension of Inquiry and Dialogue highlights the importance of open

communication and reflective questioning within organizations. When teachers engage in constructive dialogue, they are more likely to challenge assumptions and share knowledge, which can lead to breakthrough ideas. This culture of openness is critical for nurturing innovative thinking within educational settings.

Team Learning emphasizes the collaborative nature of knowledge creation and problem-solving. When teachers work collectively toward shared goals, they pool their expertise and experiences, which enriches the learning process and promotes innovation in teaching strategies. This collective learning also strengthens trust and cohesion among staff members.





The Embedded Systems dimension refers to the integration of learning mechanisms such as databases, feedback systems, and performance metrics into daily operations. These systems institutionalize learning and make it part of the organizational fabric, thereby ensuring that new knowledge is retained and applied across the institution.

Empowerment and System Connection are equally vital in the LO framework. Empowerment allows teachers to take initiative and make instructional decisions, fostering a sense of ownership and responsibility. Meanwhile, System Connection stresses the alignment between internal processes and external trends, enabling the organization to stay connected with industry needs and educational reforms.



Strategic Leadership, the final LO dimension, underscores the role of leaders in

modeling learning behaviors, supporting risk-taking, and embedding innovation into the organizational culture. Leaders in vocational colleges play a crucial role in creating an environment that supports experimentation and recognizes the value of continuous improvement.

Innovative Work Behaviour (IWB), based on the model proposed by De Jong and Den Hartog (2010), comprises four interrelated dimensions: Idea Exploration, Idea Generation, Idea Championing, and Idea Implementation. These stages reflect a sequential process through which teachers identify opportunities, develop creative solutions, advocate for their adoption, and implement them in real-world educational contexts.





Organizational Culture (OC), as articulated by Chang and Lin (2015), serves as a mediating variable in this study. The dimensions of Cooperativeness, Innovativeness, Consistency, and Effectiveness reflect the shared norms and values that influence behavior within vocational institutions. A culture that promotes collaboration, creativity, stability, and performance can significantly enhance the link between learning practices and innovation among teachers.

In this framework, Organizational Culture is posited to mediate the relationship between Learning Organization and Innovative Work Behaviour. By applying Hayes' (2009) mediation theory, the study investigates how cultural attributes within an institution can either strengthen or weaken the influence of learning practices on innovation. The integration of these theories offers a comprehensive understanding of the conditions under which TVET educators are most likely to engage in and sustain innovative behaviors.

This integrated framework provides a comprehensive perspective on how Learning Organization practices and Organizational Culture influence Innovative Work Behaviour among TVET teachers. By bridging these constructs, the study offers both theoretical insights and practical guidance for educational leaders aiming to foster innovation through supportive learning environments and cultural alignment.





1.7.2 Conceptual Framework

The conceptual framework of this research outlines the relationships among the key variables involved in understanding the influence of Learning Organization (LO) on Innovative Work Behaviour (IWB) among Technical and Vocational Education and Training (TVET) teachers in Malaysian vocational colleges. This study also examines the mediating role of Organizational Culture (OC) in this relationship. The theoretical framework was developed as shown in Figure 1.1. The conceptual framework is the result of identifying, analyzing, and examining the influence of each variable in the study.

Learning Organization (LO) represents an organization's commitment to fostering an environment that encourages continuous learning, adaptability, and the shared vision of enhancing organizational performance. In the context of TVET institutions, LO is particularly critical as it equips teachers with the necessary skills, knowledge, and mindset to respond to evolving educational demands and technological advancements.

Innovative Work Behaviour (IWB) refers to the process by which teachers generate, promote, and implement novel ideas in their teaching practices. IWB is essential in educational settings, especially in vocational training, where creativity and innovation are pivotal in preparing students for a rapidly changing workforce. Teachers' ability to engage in IWB is influenced by various organizational factors, including the presence of a learning-oriented environment.

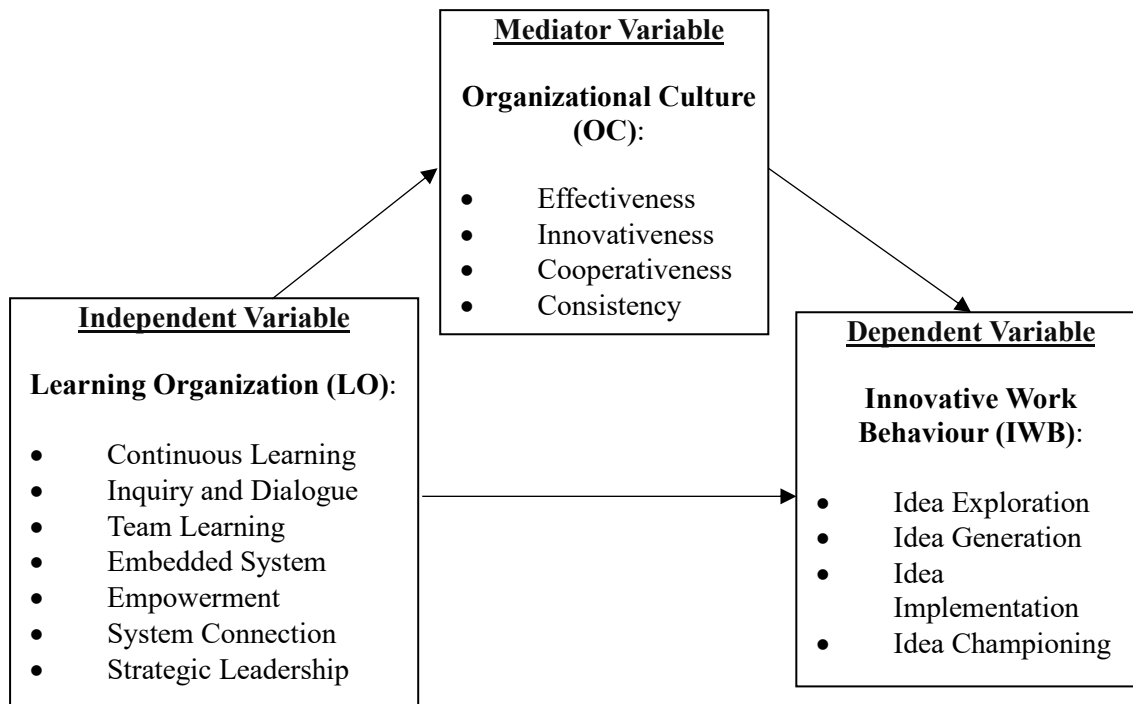




Organizational Culture (OC) serves as the mediating variable in this study, emphasizing the values, beliefs, and norms that characterize the social and psychological environment of the institution. OC plays a crucial role in translating the principles of a Learning Organization into practical, innovative outcomes. It acts as a bridge, enabling the effective transmission of learning into innovative behaviours among teachers.

The conceptual framework posits that a robust Learning Organization positively influences both Organizational Culture and Innovative Work Behaviour. Additionally, it suggests that the impact of LO on IWB is significantly mediated by OC, highlighting that a supportive and cohesive organizational culture is essential for fostering innovation in educational settings. In summary, the framework provides a structured approach to exploring how the interplay between Learning Organization and Organizational Culture influences the ability of TVET teachers to engage in Innovative Work Behaviour, ultimately contributing to improved educational outcomes and institutional effectiveness.



Figure 1.1*Research Conceptual Framework*

1.8 Significance of the Study

This study holds significant value in both theoretical and practical contexts, particularly in the fields of Vocational Education, Learning Organizations, And Organizational Culture. It contributes to the literature on Innovative Work Behaviour (IWB) by examining it within the context of Vocational Education, specifically how learning organizations influence the innovation levels of TVET teachers in Malaysia. This research offers insights into how environments that foster continuous learning and improvement can enhance creativity and innovation in educational settings.



Furthermore, it deepens the understanding of Learning Organization (LO) principles in education by linking LO with IWB, addressing gaps in the literature on how learning-oriented environments impact teacher performance and behaviour in Malaysia's vocational colleges. This study enriches the limited literature on how OC can enhance or inhibit the effect of LO on IWB, contributing to organizational behaviour studies within educational institutions.

From a methodological standpoint, this study employs a quantitative approach, adding robustness to the research in this field. The integration of content and face validity processes ensures the reliability of constructs related to LO, OC, and IWB, making a valuable contribution to refining measurement techniques in similar studies. Involving experts in organizational behaviour and organizational culture for content validation enhances the credibility of the research. Overall, this research offers valuable insights into how learning organizations and organizational culture can shape innovative work behaviour among TVET teachers, with implications for policy, management practices, and educational strategies in Malaysian vocational colleges. It also sets a foundation for further exploration of the interplay between organizational factors and teacher innovation in various educational contexts.

This research significantly contributes to the concept of Technical and Vocational Education and Training (TVET) by highlighting the role of Learning Organizations (LO) and Organizational Culture (OC) in fostering innovative work behavior (IWB) among TVET teachers. TVET institutions play a critical role in equipping students with the skills needed for the modern workforce, and this study demonstrates how creating a learning-oriented environment within these institutions





can enhance the innovative capacity of teachers. By applying the principles of a Learning Organization, the study shows how TVET institutions can promote continuous learning, adaptability, and knowledge-sharing among teachers, which are crucial for keeping pace with rapid technological and industry changes.

Additionally, the research emphasizes the importance of Organizational Culture as a mediating factor that can support innovation in TVET. This understanding is vital because it recognizes that, beyond technical competencies, the cultural dynamics within TVET institutions significantly influence the effectiveness of educational programs and teaching approaches. By fostering a culture that values innovation, collaboration, and continuous improvement, TVET institutions can better prepare their educators to develop new teaching methods, curricula, and problem-solving approaches that align



with industry needs.

In essence, this study bridges a crucial gap in TVET literature by showing that the adoption of LO principles and a supportive OC can lead to enhanced innovative behaviours among TVET educators. This can ultimately improve the quality of vocational education and training, better equipping students with the skills needed for a dynamic and evolving labour market. Furthermore, the study provides practical insights for policymakers and educational leaders in the TVET sector, offering strategies for institutional development that align with the goals of innovation and educational excellence.

The practical implications of this research are far-reaching, particularly for the management and development of TVET institutions, educational policymakers, and





educators. For TVET institutions, the study emphasizes the importance of fostering a Learning Organization (LO) to enhance Innovative Work Behavior (IWB) among teachers. By promoting continuous learning, knowledge sharing, and professional development, TVET institutions can create a culture of innovation that improves teaching methods, curriculum design, and problem-solving strategies aligned with industry needs. Understanding the mediating role of Organizational Culture (OC) allows these institutions to cultivate environments that encourage creativity, collaboration, and adaptability, further supporting the implementation of new ideas and practices.

For TVET educators, the findings suggest that those working within learning organizations and supportive cultures are more likely to engage in innovative practices.

Educators can benefit from participating in professional development programs and collaborative initiatives that promote knowledge sharing and experimentation, helping them stay updated with industry trends and technological advancements. This, in turn, enables them to create more relevant and engaging learning experiences for students. Additionally, educators can play an active role in fostering a learning-oriented environment by continuously improving their teaching approaches and encouraging innovation.

For policymakers, this research provides valuable insights into developing policies that support the transformation of TVET institutions into learning organizations. By prioritizing professional development, innovation, and improvements in organizational culture, policymakers can help TVET institutions better adapt to changing workforce demands. Policies that promote collaboration, continuous learning,





and innovation will strengthen the ability of the TVET system to equip students with the skills needed for the future workforce. Finally, the study underscores the importance of integrating innovative practices into curriculum development. Curriculum designers, in collaboration with educators, can create flexible, industry-aligned curricula that respond to technological advancements and evolving workforce needs. This ensures that students are well-prepared with practical skills for modern workplaces, enhancing the relevance and competitiveness of TVET institutions in the education sector.

1.9 Limitation of the Study

The research study aims to provide valuable insights into the dynamics between Learning Organization practices, Organizational Culture, and Innovative Work Behaviour. However, several limitations must be acknowledged to understand the scope and context of the findings.

The study may be limited by the size and representativeness of the sample used. If the research involves a relatively small sample of TVET teachers or is confined to specific institutions or regions, the findings might not be generalizable to all Malaysian TVET institutions or to other educational contexts. This limitation means that while the results may offer valuable insights into the studied population, they may not fully represent the experiences or behaviors of all TVET teachers across Malaysia or in different educational settings.





If the study employs a cross-sectional design, it captures data at a single point in time. This approach may limit the ability to assess changes over time or to establish causal relationships definitively. While cross-sectional data can provide a snapshot of current relationships, it may not capture the dynamic and evolving nature of Learning Organization practices, Organizational Culture, and Innovative Work Behaviour.

The study may not account for all contextual factors that influence Innovative Work Behaviour and the effectiveness of Learning Organization practices. For example, institutional policies, external industry demands, and socio-economic factors may also impact the outcomes but may not be fully addressed. Omitting these factors may limit the comprehensiveness of the study and its ability to capture the full range of influences on Innovative Work Behaviour.



Organizational Culture is a complex and multifaceted construct that can vary widely between institutions. The study may face challenges in measuring and interpreting Organizational Culture consistently across different TVET institutions. Variability in how Organizational Culture is perceived and experienced by teachers may impact the ability to generalize findings across different settings or to draw precise conclusions about its mediating effects.

The instruments used to measure Learning Organization practices, Organizational Culture, and Innovative Work Behaviour might have limitations in terms of reliability and validity. For example, existing scales may not perfectly capture the nuances of these constructs in the specific context of Malaysian TVET institutions.





Measurement limitations could affect the accuracy of the data and the conclusions drawn from the study, potentially leading to incomplete or misleading findings.

1.10 Operational Definitions

To ensure clarity and precision in the research on "The Effect of Learning Organization on Innovative Work Behaviour among Vocational Colleges in Malaysia with the Mediation of Organizational Culture", the following operational definitions are provided for the key constructs.



1.10.1 Learning Organization



A Learning Organization (LO) is conceptualized in this study as an institution that continuously promotes learning, knowledge sharing, and adaptability to foster innovation and improvement. As defined by Watkins and Marsick (2015), LO refers to an organizational construct characterized by a commitment to fostering an environment where learning occurs at individual, team, and organizational levels.

For this study, LO is viewed holistically as a construct that reflects the collective efforts of TVET institutions to create a culture of continuous learning and adaptability. It encompasses the practices, policies, and systems that enable educators to acquire and share knowledge, respond effectively to changing demands, and develop innovative solutions in their teaching and professional development.





This research measures LO using a validated scale designed to capture respondents' perceptions of their institution's overall commitment to promoting learning and innovation. The construct of LO is operationalized through items that evaluate aspects such as the encouragement of professional development, openness to change, and the availability of mechanisms for knowledge sharing.

In the context of Technical and Vocational Education and Training (TVET) institutions, LO is essential for enhancing educators' ability to meet the challenges of modern teaching. By fostering a culture that values learning and innovation, TVET institutions can equip teachers with the skills and mindset needed to prepare students for evolving industry demands.



The construct of LO is a central variable in this research, hypothesized to

influence teachers' Innovative Work Behaviour (IWB) directly. As an organizational construct, LO provides the foundation for nurturing creativity, experimentation, and the application of new ideas among educators. It is also posited to interact with Organizational Culture (OC) to further enhance innovation in teaching practices.

1.10.2 Innovative Work Behaviour

Innovative Work Behaviour (IWB) is operationalized in this study as the intentional behaviors demonstrated by educators to generate, promote, and implement new ideas, solutions, or practices within their work environment. Based on Janssen's (2000) definition, IWB encompasses proactive efforts to enhance individual and organizational





effectiveness by fostering innovation in teaching methodologies, problem-solving approaches, and institutional practices.

For this study, IWB is treated as a construct that reflects the overall capacity of TVET educators to adapt and innovate in response to changing educational demands and industry trends. It highlights their ability to engage in creativity, challenge conventional practices, and contribute to the continuous improvement of their institutions.

This study measures IWB through validated survey items designed to capture educators' perceptions of their engagement with innovation. The operationalization focuses on identifying behaviors related to creating new ideas, promoting them within the organization, and translating them into practical applications. Respondents are asked to evaluate their level of agreement with statements that assess their overall involvement in innovative activities, ranging from idea generation to implementation.

In the context of Technical and Vocational Education and Training (TVET), IWB plays a crucial role in addressing the dynamic challenges of modern education. As educators are expected to integrate emerging technologies, adapt curricula to industry needs, and foster critical thinking in students, their ability to innovate becomes central to institutional success and workforce readiness.

IWB serves as the dependent variable in this research, representing the outcome of organizational efforts to foster creativity and adaptability among educators. The study examines how Learning Organization (LO) and Organizational Culture (OC) influence the development and application of IWB, providing insights into the factors





that drive innovation in TVET settings. By focusing on the construct of IWB, this research aims to contribute to the broader understanding of how innovative practices can be cultivated and sustained within educational institutions.

1.10.3 Organizational Culture

Organizational Culture (OC) is operationalized in this study as the shared values, beliefs, norms, and practices that shape the behavior, attitudes, and interactions of individuals within an institution. As defined by Chang and Lin (2015), OC represents the collective framework that influences how work is conducted, decisions are made, and innovation is fostered within an organization.



In this research, OC is viewed holistically as a construct that reflects the overall environment of collaboration, creativity, and consistency within TVET institutions. It emphasizes the role of culture in shaping how educators engage with their work and adapt to evolving educational and organizational demands.

OC is measured using validated survey items adapted to capture the perceptions of educators regarding their institutional culture. The operationalization focuses on assessing the extent to which their workplace environment supports teamwork, creativity, alignment with institutional goals, and effectiveness. Respondents are asked to evaluate their agreement with statements that reflect key cultural elements such as openness to innovation, trust, and alignment with shared values.





In the context of Technical and Vocational Education and Training (TVET), OC plays a critical role in fostering an environment conducive to innovation and continuous improvement. A supportive OC encourages teachers to collaborate, experiment with new teaching methodologies, and align their practices with institutional and industry goals. It also promotes a sense of shared purpose and trust, enabling educators to adapt to changes effectively and contribute to institutional success.

OC serves as a mediating variable in this research, linking the effect of Learning Organization (LO) on Innovative Work Behaviour (IWB). It is hypothesized that a strong and supportive OC enhances the positive effects of LO by translating learning-oriented practices into tangible outcomes such as creativity and innovation among educators. This research examines how OC facilitates the integration of LO principles into educators' behaviors, providing insights into the mechanisms through which organizational dynamics drive innovation in TVET institutions.

1.10.4 TVET (Technical and Vocational Education and Training)

In this study, TVET refers to the formal educational programs offered by vocational colleges in Malaysia under the Ministry of Education that aim to equip students with practical skills, technical knowledge, and professional competencies aligned with industry needs. Operationally, TVET is defined by the structure, objectives, and instructional strategies employed in these institutions to foster both employability and lifelong learning, as outlined in the National TVET Policy (Ministry of Education Malaysia, 2018).





1.11 Summary

This chapter establishes the foundation for understanding how Learning Organizations impact the innovative behavior of teachers within the Technical and Vocational Education and Training (TVET) sector in Malaysia. This chapter outlines the research problem, objectives, significance, and the study's overall framework.

The chapter begins by highlighting the importance of Innovative Work Behaviour (IWB) in educational settings, particularly within the TVET sector, which is pivotal for equipping students with relevant skills for the job market. Innovative Work Behaviour among teachers is crucial for improving teaching practices and enhancing educational outcomes. The role of Learning Organizations, institutions that foster continuous learning and knowledge sharing is explored as a potential driver for increasing IWB among teachers.

The Malaysian TVET system is examined in the context of its need for modernization and innovation. These efforts are necessary to meet industry demands and improve educational quality. The chapter discusses the current challenges faced by Malaysian TVET institutions and the potential benefits of cultivating a Learning Organization culture. This chapter presents the research framework, which integrates the dimensions of a Learning Organization as defined by Watkins and Marsick (2015). These dimensions include Continuous Learning, Inquiry and Dialogue, Team Learning, Embedded System, Empowerment, System Connection, and Strategic Leadership. The framework explores the influence of these dimensions on Innovative Work Behaviour.





The framework incorporates the dimensions of Organizational Culture proposed by Chang and Lin (2015), namely Innovativeness, Consistency, Cooperativeness, and Effectiveness. These dimensions are examined as mediators in the relationship between Learning Organization and Innovative Work Behaviour.

The research identifies a gap in understanding how Learning Organizations influence TVET teachers' Innovative Work Behaviour, particularly through the lens of Organizational Culture. It acknowledges that while Learning Organizations have been studied extensively in various contexts, there is limited research on their impact on TVET teachers' IWB, and how Organizational Culture mediates this relationship.

