



**Faculty of Cognitive Sciences and Human Development**

**Competency Profiling: Factors Relating to Employee Competency and  
the Role of Technological Change as Mediating Factor in Selected  
Agencies in Kuching, Sarawak**

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Competency Profiling: Factors Relating to Employee Competency and the  
Role of Technological Change as Mediating Factor in Selected Agencies in  
Kuching, Sarawak

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## **DECLARATION**

I Nadri Aetis Heromi Bin Basmawi (15020075) from the Faculty of Cognitive Sciences and Human Development hereby declare that the work entitled, “Competency Profiling: Factors Relating to Employee Competency and The Role of Technological Change as Mediating Factor in Selected Agencies in Kuching, Sarawak” is my original work. I have not copied from any other student’s 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. The thesis has not been accepted for any degree and it is not concurrently submitted in candidature of any other degree

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## **ABSTRACT**

This study aimed to investigate factors that contribute towards employee competency in selected agencies in Kuching, Sarawak. This is a survey design study using mixed method in order to investigate the factors in details. This study involved two different organizations which are energy supply-based industry and a government institution. A simple random sampling approach adopted in selecting respondents for quantitative approach while the purposive sampling technique was used to choose informants for the qualitative approach. There were 8 factors involved for quantitative approach which were personality, teamwork, work life balance, peer support, organizational culture, change management, work experience and dependent variable is employee competency. As for qualitative study, there were four research objectives that run parallel with the quantitative objectives. For quantitative approach data analysis four types of analysis were involved namely T-test, ANOVA, Pearson Correlation Coefficient and Structural Equation Modelling (SEM) which is for the model development. Content analysis is used in qualitative data analysis. The results from quantitative study showed that there are high positive correlations among the constructs and as for differences also the findings showed different pattern from pervious study due to local context and culture. The qualitative findings supplement and compliment the quantitative findings. In conclusion, internal and external factors are significant in order to measure employee competency levels and which suit the need of organization also were able to meet the demand from the market.

**Keywords:** Competency profiling, employee competency.

***Profil Kompetensi: Faktor-Faktor yang Berkaitan dengan Profil Kompetensi dan Peranan Perubahan Teknologi sebagai Faktor Mediator di Agensi Terpilih di Kuching, Sarawak***

**ABSTRAK**

*Kajian ini bertujuan untuk mengkaji faktor-faktor berkaitan yang menyumbang kepada kompetensi pekerja di beberapa industri terpilih di Kuching, Sarawak. Kajian ini berbentuk survei yang melibatkan kaedah campuran bagi mengkaji faktor-faktor yang berkaitan secara mendalam. Kajian ini melibatkan dua buah organisasi berbeza daripada industri berasaskan tenaga dan sebuah agensi pendidikan kerajaan. Teknik persampelan secara rawak digunakan untuk kaedah kuantitatif dan persampelan tujuan untuk kaedah kualitatif. Terdapat 8 faktor yang berkaitan dikaji untuk kaedah kuantitatif: personaliti, kerja berkumpulan, keseimbangan kehidupan dan kerja, bimbingan rakan sekerja, budaya organisasi, perubahan pengurusan, pengalaman pekerjaan dan pemboleh ubah bersandar adalah kompetensi pekerja. Bagi pendekatan kualitatif, terdapat empat objektif kajian yang selari dengan kaedah kuantitatif. Empat bentuk analisis digunakan untuk menganalisis kaedah kuantitatif yakni ujian - t, ANOVA, Pekali Korelasi Pearson dan Structural Equation Modeling (SEM) yang khusus untuk pembangunan model. Dapatan kajian kuantitatif menunjukkan bahawa terdapat perkaitan yang positif di antara konstruk dan bagi ujian perbezaan juga terdapat perubahahan dari segi pola perbezaan daripada dapatan kajian lepas. Dapatan dari pendekatan kualitatif menyokong dan mendokong dapatan kuantitatif. Kesimpulannya, faktor dalaman dan luaran amat penting bagi mengukur tahap kompetensi pekerja dan berkesesuaian dengan keperluan organisasi serta mampu memenuhi kehendak pasaran.*

**Kata kunci:** *Profil kompetensi, kompetensi pekerja.*

## TABLE OF CONTENT

|                                       | Page |
|---------------------------------------|------|
| <b>DECLARATION</b>                    | i    |
| <b>ACKNOWLEDGEMENT</b>                | ii   |
| <b>ABSTRACT</b>                       | iii  |
| <b>ABSTRAK</b>                        | iv   |
| <b>TABLE OF CONTENT</b>               | v    |
| <b>LIST OF TABLE</b>                  | xiii |
| <b>LIST OF FIGURE</b>                 | xv   |
| <br>                                  |      |
| <b>CHAPTER 1 : INTRODUCTION</b>       | 1    |
| 1.0 Overview                          | 1    |
| 1.1 Background of the Study           | 2    |
| 1.2 Problem Statement                 | 4    |
| 1.2.1 Methodological Gap              | 7    |
| 1.2.2 Empirical Gap                   | 9    |
| 1.2.3 Theoretical Gap                 | 12   |
| 1.2.4 Practical Gap                   | 13   |
| 1.3 General Objectives                | 15   |
| 1.3.1 Specific Objectives             | 15   |
| 1.4 Research Questions                | 16   |
| 1.4.1 Quantitative Research Questions | 16   |
| 1.4.2 Qualitative Research Questions  | 17   |
| 1.5 Research Hypothesis               | 18   |

|       |                                         |    |
|-------|-----------------------------------------|----|
| 1.6   | Conceptual Framework and Proposed Model | 29 |
| 1.6.1 | Proposed model                          | 30 |
| 1.7   | Significance of the Study               | 31 |
| 1.7.1 | Significance to Organization            | 31 |
| 1.7.2 | Significance to Practitioners           | 31 |
| 1.7.3 | Significance to Benchmarking            | 31 |
| 1.7.4 | Significance to the Body of Knowledge   | 32 |
| 1.8   | Limitations of the Study                | 32 |
| 1.9   | Definition of Terms                     | 33 |
| 1.9.1 | Personality                             | 33 |
| 1.9.2 | Teamwork                                | 33 |
| 1.9.3 | Working Experience                      | 34 |
| 1.9.4 | Organizational Culture                  | 34 |
| 1.9.5 | Change Management                       | 34 |
| 1.9.6 | Peer Support                            | 35 |
| 1.9.7 | Work Life Balance                       | 35 |
| 1.9.8 | Technological Change                    | 35 |
| 1.9.9 | Competency                              | 36 |
| 1.10  | Summary                                 | 36 |
|       | <b>CHAPTER 2 : LITERATURE REVIEW</b>    | 37 |
| 2.0   | Introduction                            | 37 |
| 2.1   | Competency Profiling in Malaysia        | 37 |
| 2.1.1 | Personality on Competency Profiling     | 41 |
| 2.1.2 | Teamwork on Competency Profiling        | 44 |

|                                         |                                             |    |
|-----------------------------------------|---------------------------------------------|----|
| 2.1.3                                   | Working Experience on Employee Competency   | 47 |
| 2.1.4                                   | Organization Culture on Employee Competency | 49 |
| 2.1.5                                   | Change Management on Employee Competency    | 52 |
| 2.1.6                                   | Peer Support on Employee Competency         | 55 |
| 2.1.7                                   | Work Life Balance on Employee Competency    | 56 |
| 2.1.8                                   | Technological Change on Employee Competency | 58 |
| 2.2                                     | Related Models and Theories                 | 60 |
| 2.2.1                                   | Boyatzis's Model of Competency              | 60 |
| 2.2.2                                   | Harwell's Model of Job Performance          | 63 |
| 2.2.3                                   | Vroom's Expectancy Theory                   | 66 |
| 2.3                                     | Findings from Similiar Past Studies         | 68 |
| 2.4                                     | Summary                                     | 73 |
| <b>CHAPTER 3 : RESEARCH METHODOLOGY</b> |                                             | 74 |
| 3.0                                     | Introduction                                | 74 |
| 3.1                                     | Research Design                             | 74 |
| 3.2                                     | Population and Sampling Procedure           | 75 |
| 3.2.1                                   | Quantitative Population and Sampling        | 75 |
| 3.2.2                                   | Qualitative Population and Sampling         | 76 |
| 3.3                                     | Research Intstrumentation                   | 79 |
| 3.3.1                                   | Quantitative Instrument                     | 79 |
| 3.3.2                                   | Qualitative Instrument                      | 83 |
| 3.4                                     | Pilot Study                                 | 85 |
| 3.4.1                                   | Expert Comments                             | 84 |
| 3.5                                     | Validity and Reliability                    | 86 |

|                             |                                                                              |     |
|-----------------------------|------------------------------------------------------------------------------|-----|
| 3.5.1.1                     | Quantitative Reliability and Validity                                        | 86  |
| 3.5.1.2                     | Normality Test                                                               | 87  |
| 3.5.1.3                     | Convergent Validity, Average Variance Extracted and<br>Discriminant Validity | 88  |
| 3.5.1.4                     | Outlier                                                                      | 89  |
| 3.5.2                       | Qualitative Reliability and Validity                                         | 89  |
| 3.6                         | Ethical Consideration                                                        | 90  |
| 3.7                         | Procedure for Data Collection                                                | 91  |
| 3.7.1                       | Quantitative Data Collection Procedure                                       | 91  |
| 3.7.2                       | Qualitative Data Collection Procedure                                        | 92  |
| 3.8                         | Procedure of Data Analysis                                                   | 93  |
| 3.8.1                       | Quantitative Data of Analysis Procedure                                      | 93  |
| 3.8.1.2                     | Structural Equation Modeling and Model Implication                           | 94  |
| 3.8.1.3                     | Measurement Model                                                            | 95  |
| 3.8.1.4                     | Bootstrapping Decision                                                       | 96  |
| 3.8.2                       | Qualitative Data of Analysis Procedure                                       | 96  |
| 3.9                         | Summary                                                                      | 97  |
| <b>CHAPTER 4 : FINDINGS</b> |                                                                              | 98  |
| 4.0                         | Introduction                                                                 | 98  |
| 4.1                         | Demographic Profile of Respondents                                           | 98  |
| 4.2                         | T-test Analysis                                                              | 102 |
| 4.3                         | ANOVA Test on Age, Period of Service and Level of Education.                 | 103 |
| 4.3.1                       | ANOVA Analysis on Period of Service and Employee<br>Competency               | 104 |

|                                                                                                                                                                                                    |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 4.3.2 ANOVA Analysis on Age and Employee Competency                                                                                                                                                | 104 |
| 4.3.3 ANOVA Analysis on Employee Education and Employee Competency                                                                                                                                 | 105 |
| 4.4 Correlation Between Personality, Teamwork, Working Experience, Organizational Culture, Change Management, Peer Support, Work Life Balance and Technological Change Towards Employee Competency | 106 |
| 4.5 Normality Test                                                                                                                                                                                 | 108 |
| 4.6 Construct Validity, Average Variance Extracted and Discriminant Validity                                                                                                                       | 109 |
| 4.7 Outlier                                                                                                                                                                                        | 110 |
| 4.8 Measurement Model                                                                                                                                                                              | 111 |
| 4.9 Structural Model                                                                                                                                                                               | 114 |
| 4.10 Result for Hypothesis Testing                                                                                                                                                                 | 116 |
| 4.11 Path Diagram Structural Model                                                                                                                                                                 | 117 |
| 4.12 Mediation Test                                                                                                                                                                                | 118 |
| 4.13 Summary of Data Analysis for Quantitative Method                                                                                                                                              | 122 |
| 4.14 Qualitative Finding                                                                                                                                                                           | 125 |
| 4.14 Demographic Profile of Informants                                                                                                                                                             | 125 |
| 4.15 Internal Factors that Affect Employee Competency                                                                                                                                              | 128 |
| 4.16 Main Factors that Affect Employee Competency                                                                                                                                                  | 130 |
| 4.16.1 The Need of Competency                                                                                                                                                                      | 131 |
| 4.16.2 Main Factors Affecting Employee Competency                                                                                                                                                  | 132 |
| 4.16.3 Strategies to Improve Competency                                                                                                                                                            | 134 |
| 4.17 Incompetency and Year of Service                                                                                                                                                              | 135 |

|                                                     |                                                                                                                |            |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------|
| 4.17.1                                              | Period of Service Represent Employee Competency                                                                | 136        |
| 4.17.2                                              | Incompetent after Few Years in Service                                                                         | 137        |
| 4.17.3                                              | Reasons for Being Unable to Perform Job Effectively                                                            | 139        |
| 4.18                                                | Technological Change that Affect Employee Competency                                                           | 140        |
| 4.18.1                                              | The Importance of Technology to Perform Job                                                                    | 141        |
| 4.18.2                                              | Usage of Technological Device to Perform Job                                                                   | 142        |
| 4.18.3                                              | Technological Change Affecting Employee Competency                                                             | 143        |
| 4.19                                                | Summary                                                                                                        | 145        |
| <b>CHAPTER 5: DISCUSSION, IMPLICATION, SUMMARY,</b> |                                                                                                                | <b>146</b> |
| <b>RECOMMENDATION AND CONCLUSION</b>                |                                                                                                                |            |
| 5.0                                                 | Introduction                                                                                                   | 146        |
| 5.1                                                 | Discussion                                                                                                     | 146        |
| 5.2                                                 | Genders and Employee Competency                                                                                | 146        |
| 5.3                                                 | Period of Service and Employee Competency                                                                      | 147        |
| 5.4                                                 | Age and Employee Competency                                                                                    | 151        |
| 5.5                                                 | Level of Education and Employee Competency                                                                     | 151        |
| 5.6                                                 | Personality and Employee Competency                                                                            | 152        |
| 5.7                                                 | Peer Support and Employee Competency                                                                           | 153        |
| 5.8                                                 | Work Life Balance and Employee Competency                                                                      | 154        |
| 5.9                                                 | Indirect Effect of Teamwork and Technological Change<br>as Mediating Factor towards Employee Competency        | 154        |
| 5.10                                                | Indirect Effect of Work Experience and Technological Change<br>as Mediating Factor towards Employee Competency | 156        |
| 5.11                                                | Indirect Effect of Organizational Culture and Technological                                                    | 157        |

|      |                                                            |     |
|------|------------------------------------------------------------|-----|
|      | Change as Mediating Factor towards Employee Competency     |     |
| 5.12 | Indirect Effect of Change Management and Technological     | 157 |
|      | Change as Mediating Factor towards Employee Competency     |     |
| 5.13 | The Effect on Technological Change and Employee Competency | 158 |
|      | 5.13.1 Role of Technological Change as Mediator            | 163 |
| 5.14 | Direct Effect on Teamwork and Employee Competency          | 164 |
| 5.15 | Direct Effect on Change Management and Employee Competency | 165 |
| 5.16 | Direct Effect on Organizational Culture and Employee       | 165 |
|      | Competency                                                 |     |
| 5.17 | Direct Effect on Work Experience and Employee Competency   | 166 |
| 5.18 | Main Factors that Contribute towards Employee Competency   | 167 |
| 5.19 | Competency Level                                           | 170 |
| 5.20 | Implications of the Study                                  | 172 |
|      | 5.20.1 Theoretical Implication                             | 172 |
|      | 5.20.2 Boyatzis Model of Competency and Current Model      | 173 |
|      | 5.20.3 Model Implication                                   | 174 |
|      | 5.20.4 Practical Implication                               | 175 |
| 5.21 | Research summary                                           | 176 |
| 5.22 | Recommendations for Future Study                           | 178 |
| 5.22 | Conclusion                                                 | 179 |
|      | <b>REFERENCES</b>                                          | 180 |
|      | <b>APPENDICES</b>                                          | 190 |

## LIST OF TABLE

|                                                                                          | <b>Page</b> |
|------------------------------------------------------------------------------------------|-------------|
| Table 2.1    Supporting Organizational Change towards<br>Employee Competency             | 53          |
| Table 2.2    Relationship Between Competencies and Competitiveness                       | 58          |
| Table 3.1    Quantitative Instrument                                                     | 82          |
| Table 3.2    Likert Scale                                                                | 82          |
| Table 3.3    Qualitative Open –Ended Survey Questionnaire                                | 83          |
| Table 3.4    Demographic Profile for Pilot Test                                          | 85          |
| Table 3.5    Exploratory Factor Analysis and Reliability Test                            | 86          |
| Table 3.6    Normality Test                                                              | 87          |
| Table 3.7    Measurement Model Decection Criteria                                        | 95          |
| Table 3.8    Bootstrapping Decection Criteria                                            | 96          |
| Table 4.1    Response Rate                                                               | 99          |
| Table 4.2    Demography Profile of Respondent                                            | 100         |
| Table 4.3    T- Test Analysis for Gender and Employee Competency                         | 102         |
| Table 4.4    Summary of ANOVA Test                                                       | 103         |
| Table 4.5    ANOVA Result for Period of Service                                          | 104         |
| Table 4.6    ANOVA Result for Age                                                        | 104         |
| Table 4.7    ANOVA Result for Employee Education                                         | 105         |
| Table 4.8    Pearson Correlation Matrix                                                  | 106         |
| Table 4.9    Normality Test                                                              | 108         |
| Table 4.10   Construct Validity, Average Variance Extracted<br>and Discriminant Validity | 109         |

|            |                                                  |     |
|------------|--------------------------------------------------|-----|
| Table 4.11 | Outlier                                          | 110 |
| Table 4.12 | Regression Estimate on Latent Construct          | 115 |
| Table 4.13 | Fits Indexes                                     | 115 |
| Table 4.14 | Mediation Test for Teamwork                      | 118 |
| Table 4.15 | Mediation Test for Work Experience               | 119 |
| Table 4.16 | Mediation Test for Organizational Culture        | 120 |
| Table 4.17 | Mediation Test for Change Management             | 121 |
| Table 4.18 | Summary of Data Analysis for Quantitative Method | 122 |
| Table 4.19 | Demographic Profile of Informants                | 125 |
| Table 5.1  | Competency Level                                 | 170 |

## LIST OF FIGURE

|                                                                  | <b>Page</b> |
|------------------------------------------------------------------|-------------|
| Figure 1.1      Conceptual Framework                             | 29          |
| Figure 1.2      Proposed Structural Model                        | 30          |
| Figure 2.1      Team Competency Model                            | 45          |
| Figure 2.2      Model of Effective Job Performance               | 61          |
| Figure 2.3      Model of Job Performance                         | 63          |
| Figure 3.1      Sample Size Formula                              | 76          |
| Figure 3.2      Pilot Study                                      | 84          |
| Figure 3.3      Quantitative Data Collection Procedure           | 91          |
| Figure 3.4      Qualitative Data Collection Procedure            | 92          |
| Figure 3.5      Quantitative Analysis Procedure                  | 93          |
| Figure 3.6      Qualitative Data Analysis Procedure              | 96          |
| Figure 4.1      Measurement Model                                | 113         |
| Figure 4.2      Structural Model                                 | 114         |
| Figure 4.3      Path Diagram Structural Model                    | 117         |
| Figure 4.4      Mediation Test on Teamwork                       | 118         |
| Figure 4.5      Mediation Test on Work Experience                | 119         |
| Figure 4.6      Mediation Test on Organizational Culture         | 120         |
| Figure 4.7      Mediation Test on Change management              | 121         |
| Figure 4.8      Internal Factors that Affect Employee Competency | 128         |
| Figure 4.9      Main Factors that Affect Employee Competency     | 130         |
| Figure 4.10     The Need of Competency                           | 131         |

|             |                                                          |     |
|-------------|----------------------------------------------------------|-----|
| Figure 4.11 | Main Factors Affecting Employee Competency               | 132 |
| Figure 4.12 | Strategies to Improve Competency                         | 134 |
| Figure 4.13 | Incompetency and Year of Service                         | 135 |
| Figure 4.14 | Period of Service Represent Employee Competency          | 136 |
| Figure 4.15 | Incompetent after Few Years in Service                   | 137 |
| Figure 4.16 | Reasons of Being Unable to Perform Job Effectively       | 139 |
| Figure 4.17 | Technological Change that Affect Employee Competency     | 140 |
| Figure 4.18 | The Importance of Technology to Perform Job              | 141 |
| Figure 4.19 | Usage of Technological Device to Perform Job             | 142 |
| Figure 4.20 | Technological Change Affecting Employee Competency       | 143 |
| Figure 5.1  | Incompetency and Year of Service                         | 148 |
| Figure 5.2  | Technological Change Affect Employee Competency          | 162 |
| Figure 5.3  | Main Factors that Contribute towards Employee Competency | 167 |

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.0 Overview**

The purpose of this study is to explore into competency profiling also the factors affecting employee competency and employee profiling in selected agencies in Kuching, Sarawak. Competency profiling is a technique to recognizing precise skills, knowledge, attitude and behavior essential to fulfill a job (Woodruffe, 1993). In most profitable industry its definitive objective is to offer the value to the external shareholder and stakeholder.

In classifying competency, numerous organizations makes a dichotomy between competencies, which refer to desired individual traits and behavior competency, which are the knowledge and skills required to bring about performance enrichment. In this study competency element are divided into eight (8) domains which are personality, teamwork, working experience, organizational culture, change management, peer support, work life balance and technological change. This study is addressing general competency in selected agencies in Kuching, Sarawak.

This study consists of 17 quantitative objectives and 4 qualitative objectives. Primary method of this study is quantitative method whereby secondary method is qualitative method. Structural equation modeling, t-test, ANOVA and correlation matrix was used to analyses the quantitative method. Meanwhile for qualitative method content analysis was used to analyses the findings from qualitative method.

This study provide competency model that affecting employee competency. The main element in the model tested are teamwork, organizational culture, change management, work experience, technological change as a mediator, and employee competency.

### **1.1 Background of the Study**

Competency profiling is significant in order to ensure competency levels of the employees are meeting the requirement of the organization. Employee competency levels and performance should be measured in numerical manner, by observation and could be seen as benchmarking for future improvement on specific skills, ability and knowledge. Competency is defined as a clusters of behavioral pattern that essential to carry out a position in order to accomplish related job and task with high competency (Woodruffe, 1993).

This study is crucial for practitioner, organization and even for Sarawak State Government. Sarawak state government is on its transformation journey particularly addressing on high quality employee and talent management under the transformation agenda SCS 10-20 Sarawak Civil Service (Sains, 2013). As far as High quality employee and talent development is concerned, competency profiling act as tools to measure the capabilities human capital that are needed by the state government in order to achieve high income nation and world class civil service. There are lacunae in the practice of competency profiling in Sarawak this is due to lack of study conducted and dynamic change of organization structure as well as the disruptive change that force organization to adapt with today practice.

Unlike any other industries, two industries that involved in this study closely engage with technological change that will disrupt the function and the quality of its productivity. For Sarawak Energy Berhad, competency profiling is imperative in order to ensure all the man power are able to perform their work effectively. In order to do that, other contributing factors need to be consider when performing competency profiling particularly involved with technological change. Poor quality of service will tarnish bad image to the organization.

The essence of organization performance and good quality service is by providing impactful and good practice of competency profiling to the organization. Since Sarawak Energy Berhad one and the only government link company that spearheading electricity, engineering and maintenance work in Sarawak. It's rational and relevant to choose Sarawak Energy Berhad as one of the target population in this study. The impact of this study will give the true image on what is the actual status of competency profiling in Sarawak context.

For Polytechnic College of Sarawak, the need of competency profiling is also significant in order to provide high skills training man power for Sarawak. Polytechnic College in Malaysia produce more than 35000 graduate that hold diploma level yearly in average (Utusan, 2018). As a place for technical education hub it is important for Polytechnic to ensure its employee are competent and high quality of employee in order to support the need of government transformation plan particularly for Sarawak.

The critical issue for Sarawak Energy Behad and Politechnic College Kuching are lack of competency profiling study, disruptive change that influence technological competency, internal factors that related to this study and competency issue among the

employee from both organization. To support this statement, the preliminary interview done in the beginning of the research in order to safeguard the suitability of the study.

This study targets a Polytechnic College (one public institution) and Sarawak Energy Berhad which are both located in Kuching, Sarawak. The selected agencies in this study are one of the government agencies that is successfully operating and established locally which focus on delivering knowledge, educating, and talent development for potential worker which emphasizes on vocational and technical skills that are required in today's market. Meanwhile the Sarawak Energy Berhad is a government linked company that is operating and focusing on developing and maintaining the distribution of electricity in Sarawak.

In order for these agencies to successfully carry-out its mission and vision, internal and external factors should be put under consideration in order to ensure employee in the organization are competent. Internal factors in this context mean the other indicators that influence human capital for example what trigger employee competency. This study will benefit human resource practitioners and organization in term of competency identification and talent identification. The need of this study should be align with organizational interest.

## **1.2 Problem Statement**

Global rivalry, technological disruption and demand are crafting a more knowledge concentrated, tempestuous, and multifaceted and undefined organizational setting. Crafting new methods of competitive benefit has become a main part of distress for management in such an undefined and competitive organizational setting. In the modern world, factors that relate towards competency and performance have always become the major obstacles that

hinder organization to produce competent employees that is fit in dynamic industrial movement. As a result of the technological change and forces from the market, organization need to adapt, align to its objectives and strategy in order to encounter changes and global economic disruption. A study done in the local university in Malaysia (Rahman, Abdullah, Agus and Rahmat, 2007) showed that there were vast gaps between the level of competencies in organization and the level of importance on competencies selected in organization.

In addition, the study also found positive correlation between the personality traits and the levels of competencies. Generally, these findings are consistent with the findings from other studies done by Nirachon and Faridah (2011). Some organization only measure employee competency based on knowledge, abilities and skills and did not include other indicators that contribute towards employee competency. Take for instance technological advance, personality and change management. Employee and organization are required to meet the changes that are necessary in order to meet the demand from the global market.

Factors that trigger employee competency could be based on the change on demand of the job, organization structure, culture, dynamic change on the market demand and economic factor. These factors associated with the objectives of the study.

Thus, competency profiling is necessary in order to help organization to overcome forces from the market and technological changes. The need of this study could help organization to understand the significance and implication of competency profiling in the organization. Over the past ten years, numerous organization and governmental institution highlighted the issues such as organizational transformation, performance management, employee development and succession planning by the implementation of competency

modelling programs through strategic initiatives aimed to align employee productivity with job requirements. The issue on “how employee competency can help in achieving organization strategy and objective” has become the main issue in achieving organizational effectiveness (Draganidis and Mentzas, 2006). Employee is the core foundation for organization in order to achieve the desired future strategy.

A strategic area of competence is an area in which the organization must be competent and align with individual competency by translating employee competency to organizational performance (Tovey, 1994). For the organization and individual to succeed, it is necessary for to possess capabilities in each area of competencies. Many organizations did not consider linking employee competency and strategic planning as part of overall competency. The issue of competencies has occurred in the 21<sup>st</sup> century and can be easily associated to the issue of employability. It is becoming more crucial to be able to classify the domain of related competencies and their execution, within the stipulated time (Civelli, 1998). New proficiency makes it essential for employee and industry to comprehend a type of “behavioural language” will have an operative influence on fast shifting situations and circumstances.

There are many factors that contribute towards incompetent and poor talent identification such as ambiguous task description, internal and external factors, recruitment and selection, poor training and need analysis implementation, work place conflict and support from organization. Horton (2000) states that it is difficult to measure employee competency performance due to status quo, internal and external issue and unique talent of the employee. Competency profiling helps organization to identify employee competency.

However, most of organizations are unable to include internal and external factors when performing competency profiling. Thus, the implementation of competency profiling that cover internal and external factors are vital in order to ensure employee is competent for their current and suitable with the needs from the job market.

In this study there are Four (4) main research gaps which are methodological gap empirical gap, theoretical gap and practical gap.

### **1.2.1 Methodological Gap**

Methodological gaps in this study describing the gaps on single quantitative or qualitative method, single method of data collection and specific population and only focus on one department or single organization only.

The first methodological gap in this study is focusing on single research methodology only. A study done by Rahman, Abdullah, Agus and Rahmat (2007) only focus on quantitative approach which only make a conclusion based on numerical manner by investigating the relationship between independent variables towards dependent variable. By adapting only one method, it is hard to study and understand the phenomenon of competency profiling.

Another local context study done by Salleh, Sulaiman, Mohamad and Sern (2015), emphasis on qualitative method by using thematic approach. The method that was used to explore the perspective from lecturers and employees. However, due to the methodological gap in the study, the study cannot draw the conclusion from quantitative input in order to enrich the representation of the study from both method.

A descriptive study done by Jainudin, Francis, Tawie, and Matarul, (2015) provide different insight, this study is only concerned to describe the status of course of program that

relevant for potential employee to align with their job interest in the future. This study only limited to one method in order to draw the conclusion of the study.

On the other hand, study done by Wickramasinghe and De Zoyza (2009) employed quantitative approach which only emphasis on studying the difference based on the competency areas and skills cluster. This study did not combine correlation, regression and qualitative study.

Study done by Hanapi and Nordin (2014) adapt qualitative approach in order to investigate what cause unemployment and under competency in Malaysia context. The study limited to qualitative approach which tend to be bias when only discover the findings based on qualitative perspective.

All of the methodological gaps aforementioned should be confine by adapting two approaches. Creswell and Clark (2007) proposed that mixed method approach is necessary due to the following reasons which are to validate and strengthen qualitative and quantitative data that could outweigh the weaknesses of both qualitative and quantitative method. It is seen as more complete and comprehensive rather than using only qualitative or quantitative alone as both approaches give a different picture and it provides more evidence. However, some studies provide very specific aim and objective which could reflect the adaptation of methodology in their study. Some studies only narrow down to one department which could be biased in term of representation of the study. The need of this study is to close the methodological gap based on methodology, data collection and population. Previous study may be conducted based on the need of organization.

### **1.2.2 Empirical Gap**

Previous studies showed inconsistent findings based on different need and analysis conducted, local studies provides different finding compared to international and Asian

studies. Inconsistent finding may lead to conflict of opinions, model development and discussion on the findings among the scholars who lead seminal research in their respective country.

A small number of the study that concerning internal factors contribute toward employee competency. An international study done by Gilgeous and Parveen, (2001) concerning on core competencies that link with internal factors only focus on competency requirement that link with internal factors such as job requirement and skills in the manufacturing firm in UK. Inconsistent findings may occurs due to different need and contributing factors involved. On top of that, inconsistency also occurs due to different context culture and population. Study done by Gilgeous and Parveen, (2001) may be differ, if the context and population is different for instance the study context is done in Asian context. Culture, value and skills possesses may be different due to the status of the nation such as developed or developing country. This element is significant as a causative factors why inconsistent in term of the findings occurs.

As for local study, Hinami and Nordin (2014) provide different insight and finding pertaining to the competency requirement based on the organizational needs. Hinami and Nordin (2014) found that lecturer competency and quality of education are the factors that contribute toward the unemployment and graduate competency. However, the inconsistency occurs when another similar study conducted by Salleh, Sulaiman, Mohamad and Sern (2015) revealed that the competency should be gained by it's the potential employee before entering the industry. The inconsistent finding from both local study is due to the population that involved, method and research interest. Meanwhile, another study done by Wickramansinghe and De Zoyza, (2009) in the Asian context stated that competency requirement is not only covering knowledge, skill clusters and abilities it also involved

internal and external factors such as the abilities of peers and manager to shape employee competency. However, the study only cover skills clusters, culture, manager and peer support as domain to defined competency issue in the organization. The empirical findings might be inconsistent as compared to the study that was found in local and international context. There are many lacunae that makes this study is significant in 21<sup>st</sup> century, particularly addressing on the technological change. Study done by Karanja (2015) explained due to the emergence of new technology new set of competencies are vital for individual, organization, and country to perform well in the market. Technological change is the “disruptive agent” that could change the entire process, and practice of the organization if the organization failed to realize what is coming to eliminate their core process of the industries. To understand how technological change has emerged in Malaysia, Particularly in Sarawak context, Sarawak State Government has shifted its direction and embark its new vision and mission by creating new Key Focus Area on “Digital Economy” (Sarawak Civil Service, 2018).

To ensure the survival in 21<sup>st</sup> century, it is a must for all industries in Sarawak to adapt and align with the initiative that spearheaded by The State Government of Sarawak. As far as technological change is concerned. Technological skills that comprises of technical skills, non-technical skills, adaptation change management, internal and external factors also need to be consider for further study. Technological change affecting the whole set of competency element that belong to the employees and organization (Karanja, 2015) not only at the international level also at the local context. Due to this effect, it is vital for this study to cover technological change as mediator in this study. Mediating factor in this study is important in order to comprehend the current status of the emergence on technological change in Sarawak context. Sarawak State Government might look into the issue of

technological competency as threat to achieve its agenda particularly the “Digital Economy Transformation” thus technological change in this study will benefit to the body of knowledge, organization, and policy maker to understand the actual situation as its preliminary study to understand current competency of the employee in Sarawak.

Based from the empirical studies done by Gilgeous and Parveen, (2001), Wickramansinghe and De Zoyza, (2009) Hinami and Nordin (2014) Salleh, Sulaiman, Mohamad and Sern (2015), and Karanja (2015) provides different findings based on research needs. The studies aforementioned, did not look into teamwork, change management, organization culture and work experience as one “Whole Element” in the study. Of course the studies aforementioned above are significant to construct, develop this study, issues, hypothesis, and literatures. According to the Boyatzis (2008) on “Competencies in 21<sup>st</sup> Century” explained that when assessing the competency internal factors such as organizational environment that comprises of teamwork, change management, and organizational culture is significant for competency requirement this was based on the model that was proposed by Boyatzis (2008). Meanwhile for work experience is another component in the model that concerning on individual requirement for competency (Boyatzis, 2008). Teamwork, change management, organizational culture and work experience are substantial elements when conducting the study pertaining to the competency profiling. The selection elements was guided based on competency model proposed by Boyatzis, (2008). To conclude the empirical gaps based on international, Asian and local context. It was shown that previous studies was done based on the selection criteria’s due to organizational and research interest of the previous scholars. This will make the findings to be vary based on the current organizational needs and context. On top of that, previous also study done in

different region, and contexts that make the perception, and culture influence the output of the study.

This difference was mentioned by the Creswell and Clark (2007) in his study when conducting and comparing the empirical study based on organizational interest. However, for the purpose of impact to the body of knowledge it is imperative to ensure the study explore or investigate the perception from different region in order to comprehend the gravity of the issue in depth.

### **1.2.3 Theoretical Gap**

Previous studies only bring in theory based on internal factors that contribute toward employee competency, take for instance team work model by Margerison (2001) which only provide a common system for assessing team work problem and opportunities as well as individual competency as the indicator toward team competency. Margerison (2001) indicated that individual competency will define team performance and competency through knowledge and alter behaviour that is transferred among team members. Based on this statement, it does clearly defined that previous study only covers internal factors that reflex employee performance and competency.

It is significant for current study to provide both theoretical and model from the perspective which covers work life balance, psychological factors and external factors that correlate with employee competency. Study done by Cheng, Yang and Peng (2011) suggested a theoretical framework or model to study the effects on individual perception and social knowledge support on workforces' which is not only focusing on human factors and covering external factors.

Some studies may overlook external indicators that could reflect employee competency such as technological change. Based from a study done by Omer, (2012) competencies are divided into business knowledge, change management, and technological competencies which is significant for the study to include competency model or theory based on external factors. Employee competency not only comes from internal factors it is also driven by external factors that may lead toward employee competency. As a result from this theoretical gap, current study proposed to cover both elements in order to close theoretical gap.

#### **1.2.4 Practical Gap**

The practice and implementation of competency profiling is vital in order to measure the levels of employee competency. Most of the practices are done in international context and less practice in local context. In Sarawak, the implementation of competency profiling is only based on the system development and only limited to civil service. The implementation of employee profiling was only based on competency-based training and the development of information system that link towards balance scorecard whereby very much less practice done due to the factors of budget, size of the business and as well as time consuming.

The need of this practice is significant in order to develop high skill worker that is linked with the 11th Malaysia plan and vision 2020. The practice of employee competency profiling in Sarawak is still at the preliminary stage, this initiative require much effort to link toward to the “Government Transformation Plan” and balanced scorecard initiative that was just implemented effectively for last 2 years in Sarawak by Sarawak Chief Minister (Sains, 2013).

Sarawak is going towards its blueprint to develop high skill status. The need and practice of competency profiling is significant in order to link with government initiative and to produce high skill worker in Sarawak. Not many studies are done on competency profiling in Sarawak the context of which correlate with the initiative of “Government Transformation Plan”, balance scorecard and the implementation of competency profiling. The contribution of cognizance in this field is vital in order to provide an efficient practice for human resource development, policy benchmarking and performance management system in Sarawak.

The increase of number objections were recorded by the community due to postponements in responding and giving services to the community by the Malaysian public sector. Based from the data of the Public Complaint Bureau (PCB as cited in Azmi, Ahmad, & Zainuddin, 2009) the numeral of objections recorder by the Malaysian public sector is expressively greater than the number of grievance recorded by PCB.

This portray that service standard is not meeting the expectation of the clients despite the fact the public sector has been practicing the Malaysian Remuneration System or Sistem Saraan Malaysia which aims to produce highly competent employee that accountable for environmental vicissitudes and clients requests by providing good service (PSDM, 2002 as cited in Azmi, Ahmad, & Zainuddin, 2009).

This was completed partially by applying competency based career advancement and performance management practices in the public sectors since 1st November 2002 (Putra Nurwan & Hizatul, 2004 as cited in Azmi, Ahmad, & Zainuddin, 2009). The need of competency profiling practice in Malaysia is significant in order to achieve service excellence. Therefore, this study will investigate the factors that may contribute towards employee competency.

### **1.3 General Objectives**

The purpose of this study is to examine whether there is any relationship and mediating effect between internal and external factors towards employee competency.

#### **1.3.1 Specific Objectives**

- a. To determine the differences in employee competency based on gender.
- b. To determine the difference in employee competency based on period of service.
- c. To determine the difference in employee competency based on age.
- d. To determine the difference employee competency based on levels of education.
- e. To determine the relationship between personality and employee competency.
- f. To determine the relationship between peer support and employee competency.
- g. To determine the relationship between work life balance and employee competency.
- h. To determine the indirect effect of teamwork and technological change as mediating factor towards employee competency.
- i. To determine the indirect effect of Organizational Culture and technological change as mediating factor towards employee competency.
- j. To determine the indirect effect of change management and technological change as mediating factor towards employee competency.
- k. To determine the indirect effect of work experience and technological change as mediating factor towards employee competency.
- l. To determine the effect of technological change towards employee competency.
- m. To determine the direct effect on Teamwork and employee competency
- n. To determine the direct effect on Change Management and employee competency

- o. To determine the direct effect on Organizational Culture and employee competency
- p. To determine the direct effect on Work Experience and employee competency
- q. To choose the best fits model for teamwork, work experience, organizational culture, change management and employee competency.
- r. To study the internal factors that affect employee competency.
- s. To study the main factors that lead to employee competency.
- t. To study the factors on why some employees are still incompetent after working for few years.
- u. To study whether technological change lead to employee competency.

#### **1.4 Research Question**

##### **1.4.1 Quantitative Questions**

- a. What is the difference in employee competency based on gender?
- b. What is the difference in employee competency based on period of service?
- c. What is the difference in employee competency based on age?
- d. What is the difference in employee competency base on levels of education?
- e. What is the relationship between personality and employee competency?
- f. What is the relationship between peer support and employee competency?
- g. What is the relationship between work life balance and employee competency?
- h. What is the indirect effect of teamwork and technological change as mediating factor towards employee competency?
- i. What is the indirect effect of work experience and technological change as mediating factor towards employee competency?

- j. What is the indirect effect of Organizational Culture and technological change as mediating factor towards employee competency?
- k. What is the indirect effect of change management and technological change as mediating factor towards employee competency?
- l. What is the effect of technological change towards employee competency?
- m. What is the direct effect on Teamwork and employee competency?
- n. What is the direct effect on Change Management and employee competency?
- o. What is the direct effect on Organizational Culture and employee competency?
- p. What is the direct effect on Work Experience and employee competency?
- q. What is the best fits model for teamwork, work experience, organizational culture, and change management and employee competency?

#### **1.4.2 Qualitative Research Questions**

- a. How does internal factors affect employee competency?
- b. What are the main factors that contribute towards employee competency?
- c. Why are some employees still incompetent after working for a few years?
- d. Does technological change contribute towards employee competency?

## **1.5 Research Hypothesis**

According to Horton (2000) the dichotomy between competency and old-fashioned methods to human management is that the former strains contributions, comprising behavioral features of the employee while the latter output and performance on the work. Therefore, this study justifies that there are positive relationship between personality, internal and external factors towards employee competency. In this study, employee competency is the dependent variable which consists of knowledge, skill and ability. The independent variables in this study are personality, teamwork, working experience, organizational culture, organizational change, peer and management support, work life balance and technological change. The hypothesis is developed based on the previous study done in related fields.

### **1.5.1 Alternate Hypothesis (H<sub>a1</sub>)**

#### **H<sub>a1</sub>: There is a Significant Difference of Employee Competency Based on Gender**

Individual competency not only is defined based on internal factors, it also reflects from demography factor such as individual gender. Employee's gender reflects different levels of competency in order to perform task effectively. To support this hypothesis and statement, a study that was done by Krefting (2003) on intertwined dissertations of value and gender in USA indicated that the gendered nature of academic life in the USA is construed based on 'uncertain bigotry'. Krefting, (2003) study explained gender stereotypes are philosophical and unbending slightly than merely expressive.

Their effect on education service processes is improbable to reduce merely with the passage of time or evidence on women's competences. Previous study significant to this

study is due to test of the hypothesis on how the difference in term of gender reflects on employee competency. Based from the study done by Krefting (2003) it indicated that “women continue on the side-line working hard to prove they possessed the competency to ‘play the game at all’ while men convincingly presume assistant and aiming on strategizing recognition”.

Based on this statement it does clearly show that there is a significant difference in term of desire on competency based on the gender. Previous study is only interested in identifying gender stereotype and promotion at work place based on gender. However, current study is interested in looking at the difference based on gender with competency and what restrict male and female from becoming a competent employee.

### **1.5.2 Alternate Hypothesis (H<sub>a2</sub>)**

#### **H<sub>a2</sub>: There is a Significant Difference of Employee Competency Based on Period of Service**

Employee period of service is significant in order to determine whether the employee understand the nature of the task. Period of service is similar with accumulated working experience for individuals who are employed by their respective organization. The differences between individual years of services in organization will determine the proficiency of employee competency. A study done by McCampbell, Jongpipitporn, Umar and Ungaree, (1999) on seniority based promotion in Thailand revealed that length of service, seniority of the employee and promotion provide a negative impact on the performance of the organization. This phenomenon occurred due to bias in term of evaluation on employee performance for promotion to the higher ranking position.

Previous study only concerned on how employee can be promoted based on seniority and length of service. However, current study proposes that there is a significant difference of employee competency based on length of service.

### **1.5.3 Alternate Hypothesis (H<sub>a3</sub>)**

#### **H<sub>a3</sub>: There is a Significant Difference Employee Competency Based on Age**

Age of employee defines the maturity of the employee when performing job at work place and more likely related to competency based on age of the employee. Study done by Kroll (2003) in Germany on the obstacles of the age and competency construction in business for inventions and human resource policy revealed that as the age increase the health of the employee reduce due to aging factor that restrict older employees from performing in their job effectively. Kroll (2003) also indicated that age of the employee determine the level of competency depending on the nature of the job. The previous study is significant for current study in order to investigate employee competency based on the different among age group of the employees in the organization.

### **1.5.4 Alternate Hypothesis (H<sub>a4</sub>)**

#### **H<sub>a4</sub>: There is a Significant Difference of Employee Competency Based on Level of Education.**

Education is significant in order to determine the level of understanding about the task that the individuals are required to perform. Study done by Akkermans, Brenninkmeijer, Seth, and Schaufeli, (2013) stated that “Young staff with minor educational level showed less work resources (independence and social sustenance), greater physical stresses, low dedication, greater emotional tiredness, and poorer health and productivity

compared with the greatly educated employee. Variances were also detected among educational clusters in the connections in the Job demand resource model, most remarkably a mutual association between dedication and competency, and between emotional tiredness and competency in the cluster with lower levels of education”. From the previous study, it clearly showed that individual competency and performance are based on education levels. However, previous study is only based on the Netherlands perspective. Current study intended to investigate whether employee competency differ based on education.

#### **1.5.5 Alternate Hypothesis (H<sub>a5</sub>)**

**H<sub>a5</sub>: There is a Significant Relationship between Personality and Employee Competency**

According to the study done by Day and Silverman (1989) proposed that personality construct are vital as analysts for job performance and competency when it prudently corresponding with the proper job and business. The results indicate that the overall validity of assortment strategies might be enriched with the inclusion of measures such as significant personality domains when properly matched to job and business. Therefore, it is crucial for current study to include personality in order to investigate underpinning factors that contribute towards employee competency.

#### **1.5.6 Alternate Hypothesis (H<sub>a6</sub>)**

**H<sub>a6</sub>: There is a Significant Relationship between Peer Support and Employee Competency**

Cheng, Yang and Peng (2011) suggested a framework to study the influence of perceived employee and societal learning assistant on workforce acceptance of competency-based e-learning systems. The study from previous scholar revealed the progressive influence of perceived employee learning assistant and perceived support for encouraging a custom of cooperation on workforce purpose to adopt the competency-based e-learning system. It is also stated that perceived assistant for enhancing social ties had an insignificant influence on worker behavioral objective. Therefore, the elements of peer support are crucial in determining employee competency level based on peer influence and support from management.

#### **1.5.7 Alternate Hypothesis (H<sub>a7</sub>)**

**H<sub>a7</sub>: There is a Significant Relationship between Work Life Balance and Employee Competency**

Current study proposed to include work life balance element in order to determine the correlation between work life balance and employee competency. Thus, the practice of work life balance and work life conflict issues also could affect employee performance and competency. The study done by Voydanoff (2004) on the influence of job demands and resources on work to family conflict and facilitation revealed that time and strain-based job demands display comparatively strong progressive interactions of work to family conflict, while permitting resources and psychological rewards display comparatively strong

progressive connections toward work-to-family facilitation. Some organizations require employee to perform and to be competent in performing their task. However, the effect of work demand that need employee to be competent effect employee work life balance and create strain due to the expectation that is set by the organization. Therefore, in this study element of work life balance could be seen as a vital core in determining employee competency level.

#### **1.5.8 Alternate Hypothesis (H<sub>a8</sub>)**

**H<sub>a8</sub>: There is a Positive Indirect Effect on Teamwork and Technological Change as Mediating Factor towards Employee Competency**

The study conducted by Kauffeld (2006) on the effect of self-directed group work on team performance showed that independent teams are more productive than old-style work groups on seven out of 12 aspects of competencies. Independent teams displayed high competency, to some degree better professional and self-competence but no larger social proficiency when concluding optimization job.

Furthermore, the job features involvement, official group communication, endless development process, training and group oriented job were linked to team performance in the sample of independent work teams. The need to include teamwork in this study is vital in order to determine the effect of teamwork towards employee competency.

### **1.5.9 Alternate Hypothesis (H<sub>a9</sub>)**

**H<sub>a9</sub>: There is a Positive Indirect Effect on Work Experience and Technological Change as Mediating Factor towards Employee Competency**

The study conducted by Avolio, Waldman and McDaniel (1990) on the relation descriptive powers of age and total years of experience showed that experience was a greater forecaster of competency than age. An itemization of work into five occupational groups shown a moderating influence for occupational type. Results also indicated that age and experience display nonlinear connections with performance and competency. Employee competency also based on how much experience and knowledge that is exposed to the employee. Thus, the element of working experience is crucial in order to measure employee competency not just based on core competency only.

### **1.5.10 Alternate Hypothesis (H<sub>a10</sub>)**

**H<sub>a10</sub>: There is a Positive Indirect Effect on Organizational Culture and Technological Change as Mediating Factor towards Employee Competency**

Competency and its role in attaining standard performance remains one of the main issues in 21<sup>st</sup> century. However, it is not suffice for leaders, managers, and employees to reveal personal competencies (Zwell, 2000). Rather, an entire organization must be integrated to craft a culture of competence. This culture can then be passed along to next generations of employees who will continue to underwrite to, and reinforce, a company future. A study conducted by Zwell (2000) provides insight, and narrow approach to accomplishing organizational success through enhanced individual and group job performance and satisfaction. This study defines those essential qualities that lead to high performance, then illustrates, stage by stage, how companies can pinpoint and develop

individual leadership, managerial, and employee competencies for thoroughgoing personal and link it with organizational culture and strategies. In this study, organizational culture is crucial as a stimulation to determine employee competency based on the culture practice by the organization.

#### **1.5.11 Alternate Hypothesis (H<sub>a11</sub>)**

##### **H<sub>a11</sub>: There is a Positive Indirect Effect on Change Management and Technological Change as Mediating Factor towards Employee Competency**

The requirement to overcome and professional to deal with competency profiling is by differentiating and portraying job competency in a descriptive manner for targeted group. Job is determined by the escalating stride in strategy development and implementation. (Vakola, Soderquist & Prastacos, 2007). In the organizational setting, competencies can be adopt for decoding strategy into relevant task and individual aptitude that employee can comprehend and therefore translate it into support system for change. The obstacles here is not only to be able to assess the organizational central competencies is necessary for a business to perform but also assess the appropriate blend of competency and behaviors that the individuals need to retain in order to align with relevant competencies (Vakola, Soderquist & Practices, 2007). The previous study done by Vakola, Soderquist and Prastacos (2007) indicated that it is important to include change management as a supporting factor that trigger employee competency level.

#### **1.5.12 Alternate Hypothesis (H<sub>a12</sub>)**

##### **H<sub>a12</sub>: There is a Positive Effect on Technological Change and Employee Competency**

The development of technologies in work place, internet and web based information technology has a very important impact on employee and organizational function. Based on the study conducted by Omer (2012), indicated that new competency should include transforming human resource management from administrative functions to strategic focus and defines new competencies of successful human resource professionals. Based on the finding from previous study, competencies are divided into business knowledge, change management and technological competencies. Human resource professionals can be unsuccessful in adaptation of information technology in business although they know about technology. Technology gives a significant impact on employee competency and proficiency in term of the use on technology at work place. The need to include technological change and adaptation on the use of technology are significant in order to determine the level of employee competency.

#### **1.5.13 Alternate Hypothesis (H<sub>a13</sub>)**

##### **H<sub>a13</sub>: There is a Direct Effect on Teamwork and Employee Competency**

Teamwork is important in order to develop individual competency, learning and to measure the effectiveness of learning process from team member. Previous study done by Blanco, Echaluze, Penalvo and Conde (2015) stated that individual performance is significant in order to ensure the success of the team. The developing of this hypothesis was derived from earlier study in order to determine the direct effect of teamwork and employee competency.

#### **1.5.14 Alternate Hypothesis (H<sub>a</sub>14)**

##### **H<sub>a</sub>14: There is a Direct Effect on Change Management on Employee Competency**

The changes in operational system and management process are the challenge for employee and organization. The changes are in management affecting organizational process, productivity, and the competency of the employee. Study by Maria and Klass, (2007) stated that the alteration of new behaviour due to change management is a must for every single employee in order to reinforce employee competency through training and development. Previous study concerned in supporting changes during the process of change management particularly in employee performance and competency. This study is interested in investigating the direct effect on change management and employee competency.

#### **1.5.15 Alternate Hypothesis (H<sub>a</sub>15)**

##### **H<sub>a</sub>15: There is a Direct Effect on Organizational Culture and Employee Competency**

Organization culture provides a better understanding on how the member within of the organization adapt to the practices, belief, norm and tradition. Organizational culture will shape individual belief, practice and also will affect performance and competency. Previous study done by Siew (2004) is primarily concerned with the cause-effect relationship between culture, performance and competency. Siew (2004) also found that there a significant relationship between organizational culture and work performance. Current study is interested in studying the effect of organizational culture and employee competency. The development of the hypothesis was based from previous study.

#### **1.5.16 Alternate Hypothesis (H<sub>a</sub>16)**

##### **H<sub>a</sub>16: There is a Direct Effect on Work Experience and Employee Competency**

Work experience can be used to measure employee knowledge, skills and abilities. However, how far does work experience become significant in order to measure competency. A study that was done by Ko and Chung, (2015) on “The effect of teaching quality and professional experience” revealed that expert knowledge has a moderating influence on the affiliation among education excellence and student learning efficacy. Current study is also interested to investigate the direct effect of work experience and employee competency. In this study, the development of hypothesis is based on the argument and the finding from previous study.

## 1.6 Conceptual Framework and Proposed Model

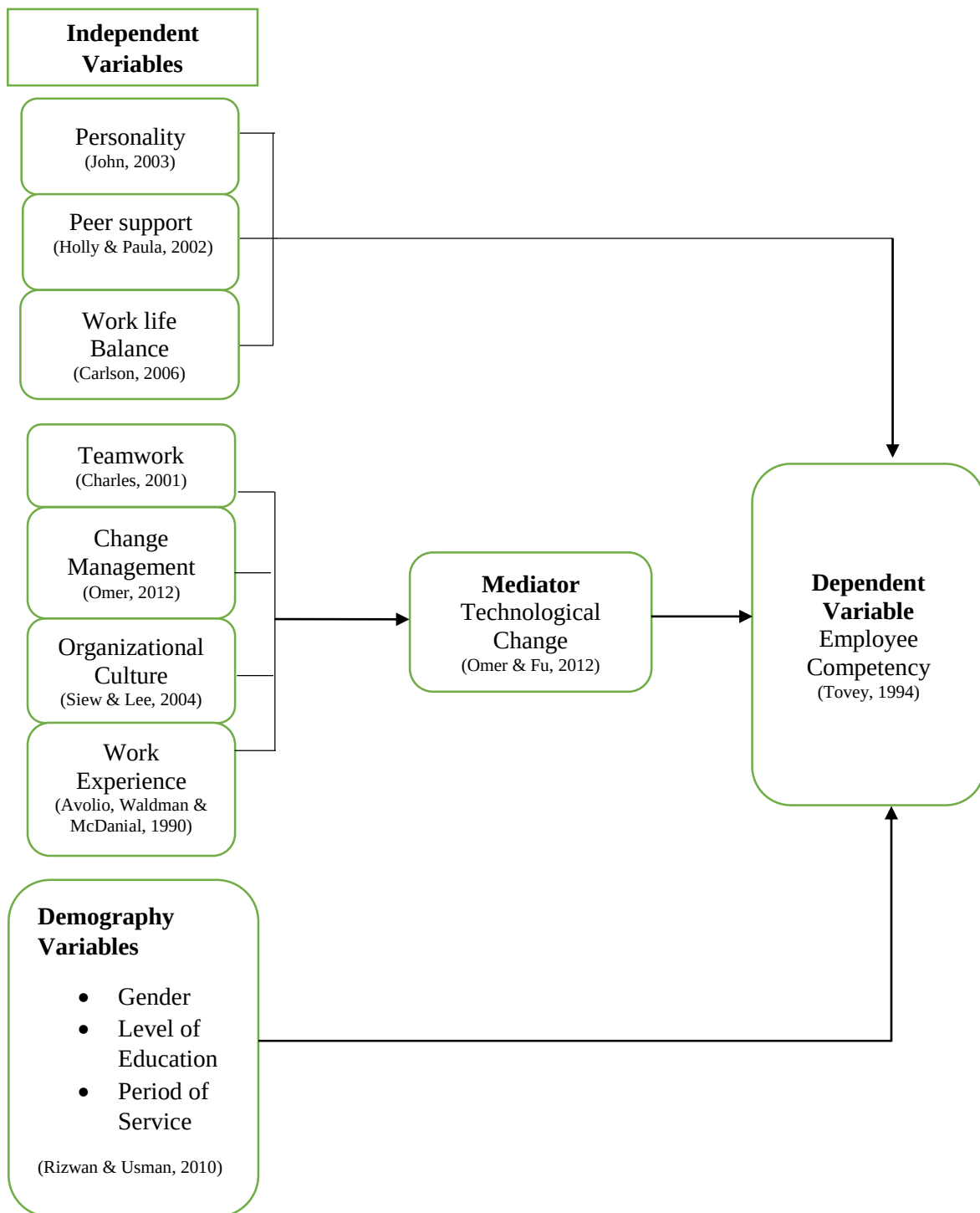


**Figure 1.1:** Conceptual Framework

### 1.6.1 Proposed Model

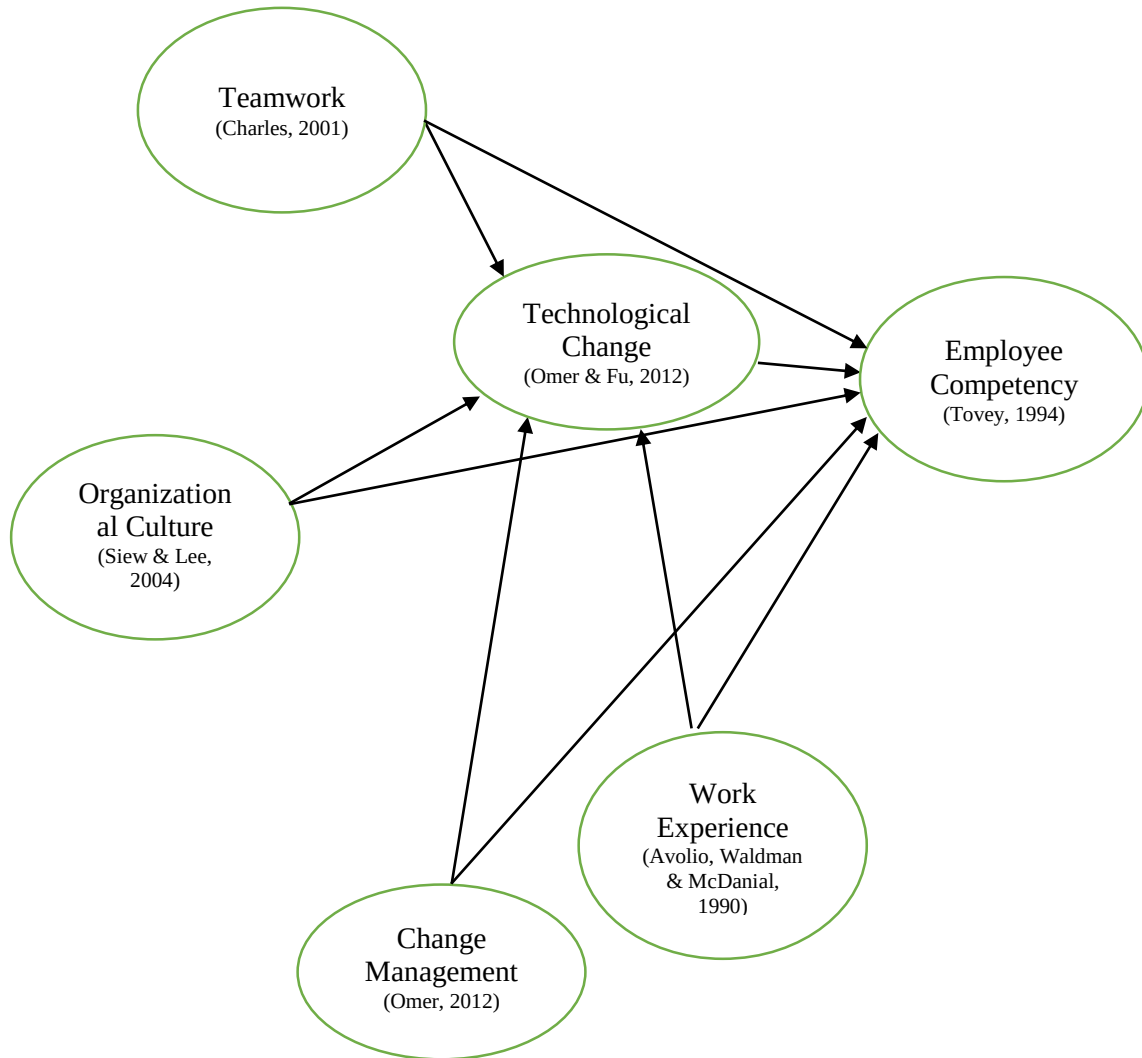


**Figure 1.2:** Proposed Structural Model

## **1.7 Significance of the Study**

### **1.7.1 Significance to Organization**

This study could contribute knowledge to human resource practitioner and organization. On top of that, organization can utilize the knowledge to forecast what kind of competency system that is suitable for employee and strategy to use in the future. Therefore, with this study it is crucial for organization to extract all information to provide an attractive and efficient plan to increase individual performance, organization and integrate with balanced scorecard initiative.

### **1.7.2 Significance to Practitioners**

The finding of this study could also help human resource practitioners to further enhance their practices in the organization in order to improve their current practices. Thus, human resource practitioner needs to be aware on the changing trends of the factors that drive incompetent employees as a result of individual need, environment factors and mushrooming of new industries such as website industry.

### **1.7.3 Significance to Policy and Benchmarking**

Apart from contributing to the past research, this study would also benefit in terms of improving policies and benchmarking. Policy makers especially could come out with new or improved policies in accordance to the findings of research. This study would enable the policy makers to create more relevant and significant policies relating to competency level based on organization need. In addition, new policy could also amend the existing policy in order to suit the current needs.

#### **1.7.4 Significance to the Body of Knowledge**

This study has significance in order to grant the cognizance in the field of human resource development. The main contribution in this study is a model development, the model could be used to improve and formulate new study in the same field and provide the greater impact on epistemology particularly in the field of human resource development. This knowledge could benefit practitioners, organization and even for local government, the finding in this study could be used to evaluate the current situation in employee profiling and identify the most possible best solution in employee profiling.

#### **1.8 Limitation of the Study**

This study is unable to include other elements that may contribute towards employee competency such as technical competency, motivation, business industries and facilities. It is restricted to the selected internal and external factors only. The first limitation in this study is it is unable to cover technical competency such as how competent employee use technical instrument in order to perform the task. Present study is only interested to examine the connection and the effect between internal and external factors towards employee competency where the aim is only narrowing down to the selected internal and external factors that are most possible to correlate toward employee competency. Another limitation in this study is unable to include facilities factors and work place condition that correlate with ergonomic issue such as lighting and work place condition.

This study does not include employee motivation, although employee motivation is unique element in organization which provides many kind of cause and effect towards employee competency for instance emotional and feeling while doing their task.

On top of that, another limitation in this study is unable to cover other industrial sectors such as education and plantation.

## **1.9 Definition of Terms**

The relevant terms for this study are first defined conceptually and then followed by operational definition in that order of sequence.

### **1.9.1 Personality**

Personality is well-defined as a vibrant and structured group of features possessed by an individual that uniquely affect his or her thinking, motivations, aptitude, and attitude in different condition (Bradley and Hebert, 1997). Another scholar defined personality as a behavior which differentiates one person from another (Beer and Brooks, 2011). Meanwhile for this study personality is defined as an individual behavior that consists of five core element which are extrovert, neuroticism, and openness to experience, agreeableness and conscientiousness.

### **1.9.2 Teamwork**

For teamwork it is defined as a group of people who work together, coordinating and achieving its objectives (Raimo Nurmi, 1996). Teamwork is also defined as collaboration among individual who share the same interest and goal (Kozlowski, Grand, Baard and Pearce, 2015). In this study, teamwork is defined as a group of people who work together in order to achieve objective and transfer knowledge among group members.

### **1.9.3 Work Experience**

Avolio, Waldman and McDaniel (1990) defined work experience as total years of experience in an occupation. Work experience is also defined as experience that the individual gain during his or her employment (Lu and Zhuang, 2014). Meanwhile, in this study working experience is defined as accumulative knowledge, skill and abilities from previous employment and exposure towards related job.

### **1.9.4 Organizational Culture**

Organizational culture is defined as a social control system that shapes individual's behavior in the organization (You, Church, Zikic, 2004). Schein (2010) defined culture is the greatest challenging business aspect to transform, enduring organizational output, services, originators and leadership and all other physical characters of the organization. His organizational model brightens culture from the viewpoint of the observer, described at three levels articles, adopted values and rudimentary underlying expectations. Meanwhile, in this study context organizational culture is describe as the norm and routine that is accepted by the members in the organization as organizational culture in order to support policy and existing system.

### **1.9.5 Change Management**

Change management is defined as a method to transition people, groups, and organizations to a desired future in order to meet the demand and effectiveness (Weber & Weber, 2001). Change management is also defined as organizational change as a “planned, extraordinary, original effort that makes contribution to the organizations in reaching new aims and fulfilling the existing ones successfully (Owen, 1987 as cited in

Altunay, Arli and Yalcinkaya, 2012). Meanwhile, in this study organizational change is defined as the situation whereby the organization is moving towards a blueprint in transforming the organization based on current need of the market or due to global force.

#### **1.9.6 Peer Support**

Peer support is defined as the support from peer that consist of knowledge, experienced and emotional aid (Ley, Roberts & Willis, 2010). Copeland and Mead (2005) defined peer support as supporting one another in moving towards life and to lead, based on an intentional style of relationship. In this study, peer support is defined as support system that encourage individual to be competent in performing their tasks.

#### **1.9.7 Work Life Balance**

Another variable which is work life balance is also used in this study. Work life balance refers to the ability of the individual to balance their work and household responsibilities successfully based on demography background (Wheatley, 2012). Meanwhile, Tayfun and Catir (2014) defined work life balance as the organization's gaining advantage with the employee's aim to evaluate their experiences in the business or in the areas out of the work. In this study, work life balance refers to the factor that associate between the responsibility at work and responsibility at home as the factor that contribute towards employee competency in performing their task.

#### **1.9.8 Technological Change**

Technological change is defined as main long-term technological variations in the approach of social roles are fulfilled. Technological change does not only includes variation in technology, but also disrupt in user, policy, industrial systems, infrastructure, and

organization culture (Geels, 2002). Meanwhile, another scholar defined technological change as the changes in product, devices, processes and practices that effect the performance of individual of organization (Grubler, Nakicenovic and Victor, 1999). In this study technological change is defined as change and the progress of technology in performing task.

#### **1.9.9 Competency**

Competency is defined as group of behavioural arrays that the binding necessities to carry to a position in order to achieve its job and roles with competence (Woodruffe, 1993). Meanwhile, Shellabear, (2002) defined competency profiling is typically a technique for classifying specific skills, knowledge, attitudes and behaviour essential to accomplishing a job, role or task. In this study competency is defined as the groups of linked abilities, skill and knowledge to perform task.

#### **1.10 Summary**

This chapter has discussed the introduction, background of the study, problem statement, objective, research questions, research hypothesis, and conceptual framework, significance of the study, limitations of the study and definitions of terms as well. Each of these components has its own significance towards this research. The background of the study consists of a brief discussion of the background issues. The entire chapter shapes for the understanding on what this study is all about. The ensuring chapter delves with the review of related literature.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter relates the issues and argument from the past similar studies. Issues related to this study touch on topics with regards to competency profiling and factors that contribute towards employee competency. The next few sections cover the theories that informed in this study. In addition, the third part of this chapter explains the review of the previous study findings and the chapter ends with a short summary.

#### **2.1 Competency Profiling in Malaysia**

Competency profiling is crucial in order to align with other functional expertise from another department for instance how one individual expertise could interrelate with other individual expertise and transform it into output. Woodruffe (1993) defined Competency profiling as typically a method for identifying specific skills, knowledge attitude and behavior necessary to fulfill a task, activity or career. In order to achieve vision 2020 Malaysia need to highlight the key competencies regardless of types of industries or profession. High skills worker and competent employees are crucial as the engine for the government to achieve government transformational plan.

Local study done by Suhairom, Musta'amal, Amin, and Johari (2014) indicated that competency model is significant in order to determine the levels of employee competency. In the previous study, independent variables were divided into career competency, personality, technical competency and non-technical competency which is highly correlated toward work performance.

The development of this model could help human resource practitioners to understand employee competency based on the job assigned. There are gaps in the previous study, previous study only highlights few areas which do not cover external factors that may contribute toward employee competency such as change management, technological change, work life balance and peer support. The need of competency profiling is necessary in today world due to the changing of business market and global economic conditions. Competency is not only restricted for those who work or those who search for new job it is also useful for university to identify student competency before they leave university.

Marthandan, Jayashree, and Yelwa (2012) stated that the communication and teamwork skill top the list as the competency acquired by the students when they left the universities. Second are the managerial and entrepreneurial skills. This is a good sign that the students are ready and are confident to be managers. They are also confident of the practical skills that they acquired in universities during their stay there. Values, attitudes and professionalism and problem solving and scientific skills are lagging behind with the students when they left the university.

Based from this finding, Marthandan, Jayashree, and Yelwa (2012) explained that most of the students require the necessary knowledge, skills and abilities in order to survive when they left university. Marthandan, Jayashree, and Yelwa (2012) highlighted this issue due to lacking of competency and high unemployment among graduates in Malaysia.

To support the finding from the study that was done by Marthandan, Jayashree, and Yelwa (2012), a study done by Hanapi and Nordin (2014) stated that one of the aspects that contribute to the unemployment problem amongst the Malaysian graduates is the quality of the graduates. There are employers in the industry, who provide negative comments on the

graduates and mentioned that the graduates do not have the suitable skills and qualifications, which meet the needs of the industry. Besides, the graduates are weak in the aspect of employability skills and do not show a good working performance.

Findings of the study done by Hanapi and Nordin (2014) also show that the majority of the respondents agreed that graduates 'attributes, lecturers' competency and the quality of education, which is referred to the curriculum of the field of study, are factors that contributed to the unemployment problem among Malaysian graduates. Competency issue among graduates is critically affecting Malaysia that makes most organizations and practitioners questioning the quality of graduates in Malaysia. Another study done by Azmi, Ahmad and Zainuddin (2009) stated that competency based career development exercise is the finest exercise that ought to be executed by any public sector in Malaysia in order to acquire greater excellence services. The findings also revealed that there was a significant connection between competencies based career development exercise and all service excellence domains found in the Malaysian public sector. Competencies help individual to develop his or her career based on their career interest. Therefore, it is significant as a tool to help employee to shape the future of career development. A qualitative study on "Academia and Practitioner Perspectives on Competencies Required for Technical and Vocational Education Students in Malaysia" done by Salleh, Sulaiman, Mohamad and Sern (2015) showed that both academic faculties and employees experts reach a decision that graduates need to own the essential competencies before entering the industry. It seems that many industry need graduates who are extremely driven and eager to learn within the organization.

Furthermore, the experts urge that hands-on training or internships are significant component that has to be inserted into courses provided in public universities. There were many studies highlighting graduate competencies due to dynamic changes in employability market today. There are previous studies addressing this issue because of feedback that was made by industries.

A local study on competency that was done by Jainudin, Francis, Tawie, and Matarul, (2015) stated that in order to improve employability of the graduates, industrial training program was introduced as one of the obligatory necessities in the course. The purpose of the training is to improve student's competency, knowledge and skills needed to succeed at the workplace. By experiencing industrial training, students will be able to find the connection of model that they studied and practice them in the real world. This study required to define the apparent level of competency of UITM students by the industrial and faculty supervisors during the industrial training (Jainudin, Francis, Tawie, & Matarul, 2015).

There was lack of local study done on Competency Profiling particularly addressing the target sample in this study namely:-Sarawak Energy Berhad and Polytechnic college Sarawak. As far as competency is concerned, Sarawak Energy Berhad only performing competency profiling based on managers evaluation and need assessment.

Thus, it is difficult to search related study that significantly address to these the two organization (Sarawak Energy Berhad and Polytechnic College) that are involved in this study. In order to support the relationship on sample used in this study for Sarawak Energy Berhad, A qualitative study on "Academia and Practitioner Perspectives on Competencies Required for Technical and Vocational Education Students in Malaysia" done by Salleh,

Sulaiman, Mohamad and Sern (2015) can be used as a guidelines to explore the competency profiling in technical field particularly at Sarawak Energy Berhad.

Study done by Jainudin, Francis, Tawie, and Matarul, (2015) might be similar to the interest target group for polytechnic college of Sarawak also the nature of the business is also similar with polytechnic college since there are both in the same industry. Previous study emphasises on training as exposure for competency development. However, how far does statement from previous study could help in exploring what are the underpinning factors that may contribute toward employee competency.

### **2.1.1 Personality on Employee Competency**

Personality trait is important in order to match individual personality and their task. Without a proper job matching with employee personality, employee may not be able to perform their task efficiently. Personality will define employee competency by matching their personality and the task.

Jung (1921) mentioned that personality test measures individual preferences for dealing with and relating to people, processing information, making decisions and matching individual personality and task.

Personality element in this study is important to match up with an employer's requirements. Personality element is widely used by organizations for assessment centres, team building, coaching, competency profiling and personal development. Personality is vital in aligning the task and individual personality. The alignments of these two elements are necessary in order to measure employee competency.

In another study done by Day and Silverman (1989) indicated that personality is important in order to stimulate job performance and competency if it is carefully matched with the appropriate occupation and organization.

Another study done by Nirachon and Faridahwati (2011) on personality and managerial competency explained that conscientiousness influences managerial competency either in a positive or negative way (Judge et al., 2002; Robertson et al., 1999; Shao and Webber, 2006 as cited in Nirachon and Faridahwati, 2011).

The influence either in positive or negative way is depending on how the individual cope with the related competency. For positive influence is depending on the ability of the individual to adapt with the competency elements meticulously, this is based on how eloquent the individual is when alerting himself or herself to the surrounding. In other word, is the individual able to achieve the standard managerial dimension on conscientiousness.

On the other hand, negative influence is when the situation of the individual are not able to achieve the standard of managerial dimension competency based on individual diligence Conscientiousness is found to be positively related to dimensions of managerial competencies such as leadership, problem solving and analysis, planning, organizing, coordinating, customer service orientation, and dealing with others, but negatively to communication.

Second, openness (or its facets) also influences managerial competency either in a positive or negative way. For example, while “fantasy” (a facet of openness) has a negative relationship to leadership, value has a positive relationship.

Neuroticism is found to influence visionary leadership, a dimension of managerial competency, in a negative way. Personality is significant in order to determine employee competency. Based on previous findings above, it has been shown that personality provides positive correlation towards employee competency. Thus, current study aims to investigate the need of personality in order to determine employee competency level.

Another study on personality done by Alharbi (2012) The effect of Personality types and workforce Work-Related behaviour on workforce productivity with the Moderating influence of Organizational Culture: The Case of Saudi Arabia revealed that personality types and work- related behaviour such as job participation and organizational obligation have direct progressive important connection with employee work competency, with the moderating influence of organizational culture in the Saudi Arabian context.

This study addressed how employee personality link towards employee work performance. Employee with high work performance could also be considered as high level of competency. Employee personality also affects the performance of the company and team. Therefore, personality is much more related to employee competency.

In another study done by Scheepers, Lombarts, Aken, Heineman and Arah, (2014) on “Personality traits affect teaching performance of attending physicians” revealed that diverse personality type have both diverse progressive and negative influence on diverse elements of education performance. Of all the discoveries, the most unresolved one is that extraverted presence physicians are assessed as better educator, both on general and detailed education performance.

Previous study addressed how personality affect teaching performance meanwhile current study is interested in studying on how personality of the employee effect employee competency. Previous study is significant in order to draw guidelines for current research to understand the essence on how personality correlate with employee performance and competency based from the big five theory.

### **2.1.2 Teamwork on Employee Competency**

Teamwork in organization is important in order to help organization to achieve their objectives. Performance in the team depends on individual competency and much more relates to team competency. A study done by Margerison (2001) on team competencies provide an in depth understanding on how individual competency relates to team competencies. Margerison (2001) also suggest that there is a misplaced aspect in term of individual talent and individual competency rather than team competency and there is not enough attention on team competency. Some organizations may only focus on individual competency without considering team competency as the indicator that contributes towards the individual competency.

According to Margerison, (2001) there were nine team competencies which are advising, innovating, promoting, developing, organizing, producing, inspecting, maintaining and linking.



**Figure 2.1:** Team Competency Model  
Adapted from: Margerison, (2001).

Through this model as shown in Figure 2.1 above, it provides a common system for assessing team work problem and opportunities as well as individual competency as the indicator toward team competency. Individual competency will define team performance and competency through knowledge and alter behaviour that is transferred among team members.

Another study that was done by Olupeliyawa, Hughes, and Balasooriya (2009) indicated that team training is essential, especially from a perspective of improving inter-professional collaboration and safety. Their study also stated that team competencies is based on continued training and exposure on organizational shared valued and vision. Teamwork competency is significant in order to determine the level of employee competency based on the training received by the members of the team, exposure to high profile project, exposure on decision making which required high cognitive ability.

Previous study also stated that individual competencies are based on team learning and team support.

In order to achieve their goals, team leader have to ensure that all the team members are competent in order to complete the task assigned. To ensure team members are competent, practitioners or higher authority in the organization should consider team training and team building as the essence to achieve higher degree of team competencies (Salas, Rosen, Burke, & Goodwin, 2009). From team training, the member of the team could sharpen their soft skills, communication skill, decision making skill, attitude, leadership skills and knowledge. Team training helps the member of the team achieve the desired competency level that is aligned with the nature of the task that was assigned.

Blanco, Echaluze, Penalvo and Conde (2015) indicated in their study that the analysis of the members are considered individually, constant with previous studies which supporting the superiority of the employee productivity of their fellows is an essential key for the achievement of the team (Storm, 1999 as cited in Blanco, Echaluze, Penalvo & Conde ,2015). Previous study done by Blanco, Echaluze, Penalvo and Conde (2015) also explained that individual performance is significant in order to ensure the success of the team. Based from the statement above, it does clearly indicate that employee competency correlated with individual performance and teamwork performance.

Employee competency is the essence of teamwork competency. Previous study suggested that future study ought to discover the likelihood of containing the study of the connection of employee performance in the teamwork perspective and its possible to distinguish incongruities. This is significant for current study in order to explore and

understand more on how teamwork influence employee competency. Thus, this study expects to have positive correlation between teamwork and employee competency.

### **2.1.3 Working Experience on Employee Competency**

Unlike teamwork, working experience is another indicator that may provide a significant impact towards individual competency. The more working experience and exposure on the specific task the more likely employee is to be competent. However, how far could this statement influence employee competency? The study done by Avolio, Waldman and McDaniel (1990) on the relative explanatory powers of age and total years of experience in an occupation for predicting supervisory ratings of work performance indicated that experience was a better predictor of performance than age.

Employee working experience will define the levels of competency in performing their task and also the duration of service. On top of that, previous study also found that experience exhibit nonlinear relationships with performance and competency (Avolio, Waldman & McDaniel, 1990). Another study done by Rosen and Lara-Ruiz (2015) revealed that there was a significant difference between generation based on work experience, belief, attitude and technological proficiency. Working experience will define the proficiency of employee competency. Previous study addressing year of experience was a better predictor of performance than age. Employee year of experience is necessary as the factor or the domain that contribute toward high degree of competency. Not many studies are done on working experience and employee competency in Sarawak. Current study is intended to investigate this issue and adding year of experience as one of the main factors that may contribute towards employee competency.

Another study done by Ko and Chung, (2015) on “The effect of teaching quality and professional experience” revealed that professional experience has a moderating effect on the relationship between teaching quality and student learning effectiveness. In other words, when teachers have low professional experience, the students learning satisfaction will not have a significant relation with teaching quality. However, when teachers have high professional experience, the better the teaching quality, the higher the student’s satisfaction will be. The levels of professional experience correlate positively with teaching quality and students’ learning satisfaction.

Previous study is significant in order to determine the levels of employee competency based on working experience and professional experience of the employees. Through working experience employee will have high quality of work and not only competent while performing their task. Previous study is only interested in addressing the issue of professional working experience and only focusing on quality and satisfaction and not much on employee competency. Therefore, current study is significant in order to determine the levels of employee competency based on working experience.

Dougherty and Gelder (2015) in their study, stated that least qualifications, which performance as a main screening tool for candidates and employing agencies, are founded in portion of expectations on the level of education and work experience, but those expectations require more reflection and consideration given their role in recruitment agency. Previous study highlights on the value of employment for new workers with considerable public sector experience versus those with limited or without work history.

Working experience is important when hiring new employees or promoting new candidate for upper management position. Working experience will determine how much

knowledge, skills and abilities that employees possessed and suit with the position that will be assigned to respective candidates. Previous study draws the guideline for current study to investigate and to comprehend how working experience is necessary for employee competency.

#### **2.1.4 Organizational Culture on Employee competency**

Culture has been categorised by numerous scholars as “somewhat to do with the human and exclusive unique quality and style of organization” (Kilman et al., 1985 as cited in Siew, 2004) “the way we do things around here” or the “expressive non-rational qualities of an organization”. Previous study done by Siew (2004) intended to examine the likely relations between organizational culture and performance among Singaporean industries. The purposes are dual, first it efforts to explore if the culture construct be operationalized along distinct, duplication domain, and second, it efforts to evaluate how culture influence organizational performance.

In order for organization to achieve the desired performance, the factor such as employee competency should be considered in aligning with organization culture, culture is act as an internal construct, and it is describing as the common values and customs of the organization’s members (Siew, 2004). This is fitting, where previous study is mainly focus with the cause-effect interaction between culture, performance and competency. Meanwhile current study is interested to investigate positive effect between organizational culture and technological change as mediating factors towards employee competency. Previous study highlights the significance of organizational culture towards organizational performance which is important to measure the necessary element that helps to trigger organizational

performance (Siew, 2004). However, previous study done by Siew (2004) is not concerned on how culture affects employee competency.

Martins and Coetzee (2007) in another study, explained that the business structure induced significant less progressive involvements from females, whites, production employees and the age group below 35. It is stated from the output that the less progressive involvement pertaining to the leadership practice, specifically in communication, monitoring, and decision making might be likely reasons for these involvement. This study revealed that different group of employees and different gender of employee showed different results based on experience towards organization culture, diversity, interdepartmental relation and managers relationship. The study done by Martins and Coetzee (2007) is significant in explaining the nature on how organizational culture influence employee personality, competency and leadership. Organizational culture is considered as a norm in organization that helps to shape employee through and working culture. Through organizational culture employee could understand the essence of the vision and mission of the company and translate it into desired action that is significantly important for organization effectiveness. Of course before questioning organizational effectiveness organization should look at organizational culture that may contribute toward employee competency.

The study done by Martins and Coetzee (2007) is addressing this issue and only interested in personality, emotional intelligence and basic competency did not cover employee competency profiling that is necessary in performing task and only narrowing down to internal factors. However, through the limitations from previous study, current study intends to investigate the association between organizational culture and employee

competency. Shahzad (2014) in another study on “Impact of organizational culture on employees’ job performance” revealed that there was a significant connection between organizational culture and employee’s job performance at software houses in Pakistan.

Correlation shows the  $r$  - value of 0.415 and with 0.000 as the level of significance to prove that there was a progressive connection between the organizational culture and employee’s performance.

Based on regression and correlation results, the alternate hypothesis showed the link between culture and employee’s job performance within the organization. Strong culture within the organization leads to increase of the employee’s commitment towards accomplishing the objective of the organization with a common path. It is very helpful to increase the performance of the employees.

Shahzad’s (2014) study is significant in order to measure the levels of employee performance and based on organizational culture. Organizational culture may not directly influence on employee competency but directly influence on employee performance. Previous study is significant in order to help current study to investigate how organizational culture effect employee competency at work place.

The finding for this study may help practitioners to review on how organization can help employee to shape their competency domains based on the organizational practice and organizational culture.

### **2.1.5 Change Management on Employee Competency**

There are a numerous of matters that require special attention in order to develop the method for competency management if the aims is to explore support in skills for executing strategy-driven change management initiatives. First process, is looking into a necessity to move towards advancing view and active method to competency modelling. Competency modelling emphasises on the analysis that evaluate skills and related competency in the long run. Traditional way of linking change management to competency resulting the out-dated and create difficulties to strategy execution (Antonacopoulou & Fitzgerald, 1996 as cited in Maria & Klas, 2007). As business needs are changing, business leaders are recognising the value of employees who are not only highly skilled but, more importantly, can adapt to changes, learn quickly, commit themselves to continuous professional and personal development.

The competency management is time-paced with the rollout of the corporate wide restructuring project. This gives a unique opportunity to observe and analyse, through participant observation and interviews with executives and branch employees, how the competency framework actively could translate the strategy behind the transformation into actions at the levels of individual job holders, and how it supported change. A study done by Maria and Klas (2007) revealed six particular areas that are significant for supporting organizational change towards employee competency as stated in Table 2.1.

**Table 2.1:** Supporting Organizational Change towards Employee Competency

| <b><u>Potential positive impacts for supporting strategic change</u></b> | <b><u>Levers/actions for tapping into this potential</u></b>                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communication of strategic Changes                                       | Translate specific defined objectives into competencies, functional behavioural competency profiles. Use specific efforts, such as role-play, in order to illustrate how competencies will make the organisation operate in order to meet its goals.                                                                                                                                                             |
| Improvement of employees' understanding of how to reach goals            | Accompany the competency framework with clear guidelines methodologies for linking competencies to goals, for clarifying what is desirable, for conducting competency-based evaluation. Follow up frequently on employees' understanding of what is expected Clarify what behaviours/abilities will be needed in the short-, mid-more long-term future.                                                          |
| Improvement of feedback from branches to headquarters                    | Use the competency framework as a basis for conducting assessment centres interviews already at the definition stage of change efforts<br>Search for gaps in competencies that could transform into serious obstacles to change processes. Take actions to initiate a bridging of these gaps before rolling out the change effort                                                                                |
| Incorporation of new behaviours                                          | Develop training programs to follow up on the reinforcement of competencies identified as missing in the gap analysis. As change unfolds, training needs will change Facilitate the exchange of opinions ideas through training. This will support the change process not only in terms of acquisition of new knowledge skills directly applicable in operations, but also in terms of changing behaviours roles |
| Enhancement of employee participation in change implementation           | Give to a pool of high performing high potential managers the role of coaches in the development of the competencies of their colleagues. Tap into this resource of change agents in order to reinforce the communication about the need for change about the true meaning of competencies required in new roles                                                                                                 |
| Institutionalising changes                                               | The shift to a competency-based performance management system allows HR management to start institutionalising change through better goal setting, clarification of expectations, reward of behaviours that support new strategic objectives                                                                                                                                                                     |

Adapted from: Maria & Klass, (2007).

Six particular areas that are proposed by Maria and Klass, (2007) explained that change management should be done based on strategic changes and explained clearly about change to every employee and how to achieve it. This is significant because employee knowledge, skills and abilities are the asset of the organization that is needed to be maintained and polish based on the needs of the current market. Organizations that face change management need to consider the potential issue of resistance for change and competency. Employee may feel jeopardized due to the changes that are made by the

management. Therefore, in the six particular areas proposed by Maria and Klass, (2007), stated that the alteration of new behaviour is a must for every single employee in order to reinforce employee competency through training and development. Study done by Maria and Klass, (2007) is vital for current study to explore in detail on how change management is important in shaping employee competency.

Kansal and Chandani, (2014) in another study on “Effective Management of Change During Merger and Acquisition. Procedia Economics and Finance” indicated that poor change management may affect organizational performance, human resource function and employee performance. Based on the study done by Kansal and Chandani, (2014) it is revealed that change management should be performed based on the need of the market and not necessarily effect current employee competency.

Change management should be done without effecting employee competency and meeting the business need. Based on the previous study also indicated that change management affect employee performance due to merger, downsizing and resizing which require new knowledge, skills and abilities.

Due to merger, downsizing and resizing, employee are being forced to accept the changes in term of management style, tools, procedure and policy which may reflect the performance of the employee and organization. Previous study is significant in helping current study to investigate the effects of change management that may influence employee competency.

### **2.1.6 Peer Support on Employee Competency**

Having peers to teach one another is a key that bids many assistances, including involvement of the training responsibility among various and vesting all employee involvement with a sense of ownership. Peer support is significant in providing support in term of knowledge sharing, transfer learning and improves knowledge, skills and abilities of the employee. Through this support system, employee could increase the levels of competency and levels of confidence in order to perform the related task for their duty.

A study done by Wu and Rocheleau (as cited in Holly & Paula, 2002) that analysed an investigation of training in private sector and public sector, stated that a the contribution on percentage of an employee learning comes from support by colleagues and other type informal learning. Employee competency not only comes from the exposure of the task or related experience, it also come from support system that helps employee to defuse the knowledge, skills and ability.

To support the statement above, a study done by Goldwasser, (2001) indicated that majority of workplace learning takes place outside the classroom in an informal setting among employee and their peers. Goldwasser (2001) also stated that many organizations are helping employees to hone their skills and update their knowledge by offering staff development opportunity which cover the element of increasing employee competency.

Another study done by Sykes (2015) revealed that peer support is acted as support group that help employee to perform better in their work. Sykes (2015) also indicated that employees with greater peer advice ties will have greater access to their peers and the information they could provide, thus being able to use the employee support more effectively

than employees who have less peer advice ties because of which will have limited access to information from peers.

Peer support is important to help individual to develop their competency. Previous highlighted key variables in the study such as peer advice, job performance, job satisfaction, and job stress and system satisfaction. Result from the previous study is significant in order to support current study to investigate how employee competency depends on peer support in order to be competent at work place.

#### **2.1.7 Work Life Balance on Employee Competency**

In this study, work life balance refers to the factor that associates between the responsibility at work and responsibility at home as the factor that contribute towards employee competency in performing their task.

In the recent work life balance research literature, there is a wide-ranging acknowledgement pertaining to readiness of work life balance and practices that lead to advantageous output. Among the benefits of contribution on work life balance practice research emphasized significant progress in the community image of the industry as the management is perceived to be generally accountable (Benito, 2007). Study done by Nelson et al., (1990) explained that there are several tangible advantage such as declining of absenteeism, reducing stress rate, greater levels of performance, competency, enhanced quality of life, and happiness and commitment among staff. On top of that, study done by David, Eugenia and Juan (2012) also mentioned that work life balanced antecedence is significant for job satisfaction and the work performance of the employee in the organization.

Based on previous literature and research, the element of work life balance as an indicator in this study is crucial in order to measure employee competency. As it is stated from previous study done by David, Eugenia and Juan (2012) many organizations ignore the practice of work life balance due to ambiguous results that do not provide a tangible benefits to the organization and poor understanding towards work life balance practice.

In addition, work life balance practice is considered the key for retaining and attracting highly qualified professionals (men and women) (Benito, 2007). For all of the above reasons, the availability of work life balance practices, even if employees do not use them, can be expected to increase organisational performance (David, Eugenia & Juan, 2012). Work life balance practices for employees can help to foster the employees' quality of life by reducing work-life conflict and, as a consequence, workers will be more satisfied, more competent, motivated and committed to their employers. As a result, the previous stresses that work life balance practices can help organisations to increase their results in productivity, competency, performance, and reduce turnover. Takahashi, Lourenço, Sander and Souza (2014) in another study on "Competence development and work-family conflict professors and gender" indicated that work family conflict contribute towards informants competency due to the demand of the work and family. However, previous study also stated that most of professors enjoy their work although having work family conflict and demand at work that forces them to balance their work. Takahashi, Lourenço, Sander and Souza (2014) also stated that due to commitment, university professors dedicated their life to university and always seeking for improvement and development for their competency. Work life balance is vital in order to help employee to develop their competency. Therefore, study done by Takahashi et al., (2014) is significant in order to investigate the underpinning reasons as to what can contribute toward individual competency.

### 2.1.8 Technological Change on Employee Competency

The emergence of new technology and market variations have appeared to be critical issues on competencies due to significantly linked with individual productivity, competency, direction of the performance and overall competitiveness of industries. Table 2.2 explained Technological changes provide a significant impact towards organization performance particularly on employee competency in dealing with technological changes. It is also important in order to define employee competency.

**Table 2.2:** Relationship between Competencies and Competitiveness

| No | Competencies                                | Subject Performance | Objective Performance | Overall Competitiveness |
|----|---------------------------------------------|---------------------|-----------------------|-------------------------|
| 1  | Niches Identification                       | 0.111               | 0.075                 | 0.116                   |
| 2  | New product development                     | 0.106               | 0.118                 | 0.069                   |
| 3  | Work environment optimization               | 0.329**             | 0.077                 | 0.123                   |
| 4  | Use of customer to define quality standard  | 0.350**             | 0.138                 | 0.114                   |
| 5  | Introduction of new technology              | 0.333**             | 0.186*                | 0.212**                 |
| 6  | Use of information to optimize decisions    | 0.345**             | 0.052                 | 0.1300                  |
| 7  | Identification of market changes            | 0.336**             | 0.158*                | 0.160*                  |
|    | Regression analysis for dependent variables | $R^2=0.7175$        | $R^2=0.044$           | $R^2=0.07$              |
|    | Subject performance, objectives             | Sig.=0.000          | Sig.=0.9              | Sig.=01.67              |
|    | Performance and competitiveness             | $F=5.6$             | $F=0.51$              | $F=0.120$               |

**Notes: \* and\*\* significance at the 0.05 and 0.01 levels, respectively**

Adapted from: Rajesh, Suresh, & Deshmukh (2008)

An example is the use of new technology in manufacturing company that requires employee to adapt to the changes. Hamel and Prahalad (1994), defined core competence as a bundle of skills and technologies that enable a company to provide a particular benefit to the customers.

Study done by Rajesh, Suresh and Deshmukh (2008) provide significant findings which indicated that there were significant correlation on introduction of new technology and employee performance. Introduction of new technology requires employee to adapt and learn new skill which require devotion of time and willingness to learn in order to become competent. Rajesh, Suresh and Deshmukh (2008) also indicated that introduction of new technology and identification of market changes was most important because they are significantly correlated with subjective performance, objective performance, and overall competitiveness at specified levels of significance. The reason for these observations may be fast changing market conditions and product features. To support the study done by Rajesh, Suresh and Deshmukh (2008) a study done by Gunes, Gokcek and Bacanak (2010) confirmed that introduction of technology at work place will affect the performance of employee. Gunes, Gokcek and Bacanak (2010) explained in their study that many teachers are not competent when dealing with data base. However, they are considered as competent when dealing with basic use of computer operation skills. This means the exposure of technological changes at work place affect the performance of the employee.

Karanja (2015) in another study revealed that worker competency has been absolutely affected by organizational change. The construct that has changed the most and affect worker competency positively is technology. The objectives of Karanja's (2015) research were to mainly evaluate the influence of technological change, structure change, the changing roles and accountabilities of worker and the changes in organization structure on the performance of employee.

Previous research pursued to answer matter raised pertaining the influence of technological change, structure change, the changing function, responsibilities and change in management on workforce competency. The important of previous research was to study variations in the workplace over time in a business who experiencing a number of changes and to define how it influence the workforce. Previous study is vital for current study to explore and investigate the issue of technological change, and how technological change effect employee competency.

## **2.2 Related Theories and Models**

### **2.2.1 Boyatzis's Model of Competency ( Seminal Study in Employee Competency)**

Boyatzis (2008) proposed that the competency based approach is common practice in human resource management. Job competency is a group of behaviour patterns that an employee is required to possessed where one would be capable of performing job related work and operation with high competencies. Job competency comprises of motives, personality, skills, self concept, knowledge or an attribute that permit an employee to perform a task or activity within a specific task.

Motives, personality and self-concept are unseen behavioural competencies that are difficult to cultivate. Nonetheless, behavioural competencies have become crucial aspects of individual performance due to rapid change and diverse workforce. Skill and knowledge are technical competencies that can be improved simply by training and they induce improved employee job performance.

Hence, in order to accomplish effective job performance, employees need to obtain both practical and behaviour competencies and use these together in performing job

(Vathanophas and Thaingam, 2007). Boyatzis (2008) model showed that effective act and enhancement of job performance only occurs when all relevant domains of organizational environment, job demands and individuals competencies fit with each other. This means that if any one or two of those domains are varying and do not link with each other, then futile behaviour is expected to be occurs. Figure 2.2 shows the model of effective job performance.

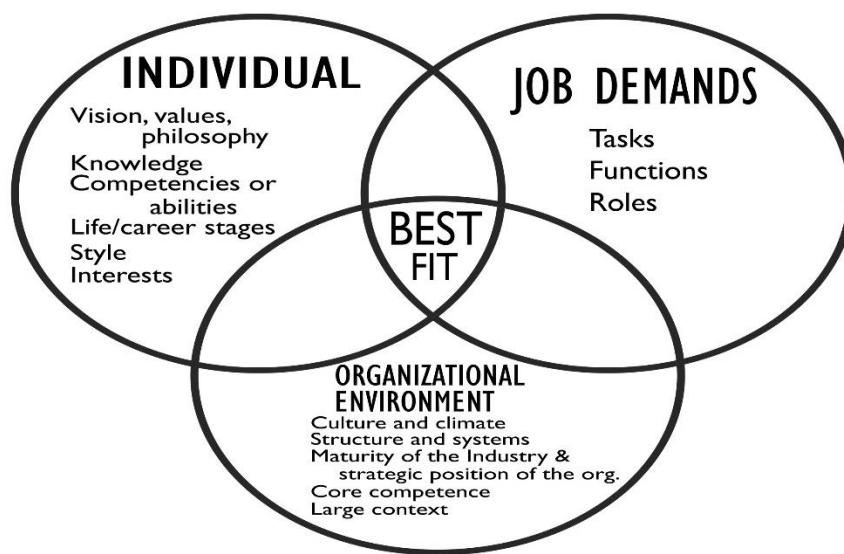


**Figure 2.2:** A model of effective job performance  
(Source: Boyatzis, 2008)

This model suggests that individuals' competencies represent individuals' capabilities which are needed to carry out their job responsibilities successfully. These job requirements are considered as individuals' job demand. The competencies are individual charismatic or aptitudes which enable them to show applicable and exact actions (Boyatzis, 2008).

Effective job performance is the action of gaining relevant results essential on the job through specific actions and being constant with policies, procedures and circumstances of the organizational setting (Vathanophas and Thaingam, 2007).

In order to classify job-specific competencies that will fit with the other two elements of the model; individual competencies and organizational environment, the study used a concept model from a previous study was used as a guideline. The conceptual framework can be seen above Figure 2.2 (Boyatzis, 2008)

### **Boyatzis Model and Employee Competency**

This model was chosen based on the objectives of the study in order to explain the nature of this study. There were twelve (12) independent variables which covered internal and external factors and one dependent variable which is employee competency. Based on the model that was proposed by Boyatzis (2008) indicated that there were three main domains: - individual, Job demand and organizational environment. Boyatzis model covers these three domains which are similar with the current study's objectives and interests.

However, Boyatzis model only generalize domains and did not cover external factors that may contribute towards employee competency. Current study is narrowing to the specific indicators in highlighting employee competency which are personality, teamwork, working experience, organizational culture, change management, peer support, work life balance, technological change, gender, period of service, age of the respondent and level of education.

Boyatzis (2008) indicated that human factors such as individual personality plays an important role in performing the job of individual personality which covers neuroticism, extroversion and adaptability skills are necessary in performing job. Boyatzis model also

explained that individual personality contribute towards the ability to produce a good result in their job and also linked towards individual career development. Personality variable in this study is expected to provide a significant impact towards employee performance based on individual behaviour or characteristics in order to perform their job.

### 2.2.2 Harwell's Model of Job Performance

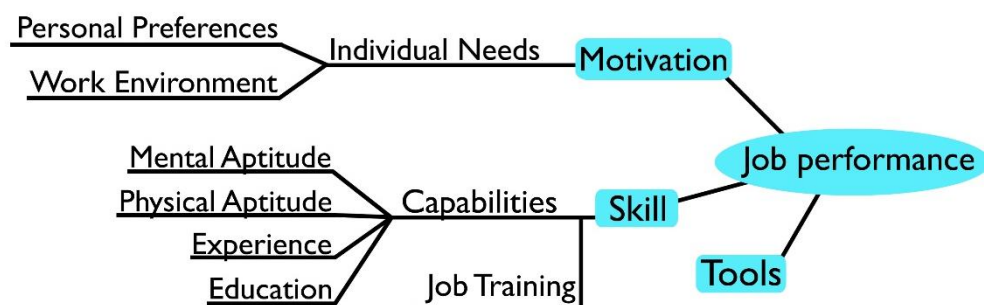


**Figure 2.3:** A Model of Job Performance (Source: Harwell, 2010).

This model indicates that an individual's performance is a function of three main elements of motivation, skill and tools. An individual's motivation is based on his or her needs and the ways in which the work environment fulfils those needs. Skill is the individual's capabilities and is the job training given to the individual. Capabilities depend on mental and physical aptitude, experience and education. The tools used for a specific job helps an individual to maximize the skills in order to increase his or her job performance for example, computer systems which are normally used as tools for knowledge workers (Harwell, 2010).

The model looks at the variables involved in achieving improved job performance and competency. These variables can be altered. Some of the variables are determined through a hiring process which chooses individuals' who are capable and motivated to work.

Other variables can be changed after hiring. This means that, organizations can provide employees with better tools, training or working environment from time-to-time (Harwell, 2010).

The term “job training” is slightly misguided in today’s world. There are many kinds of training such as professional training which basically is the daily activities on the job tool training which teaches individuals on how to use a system application simulation training like flight simulator that observes how employees do tasks in an environment that tolerates failure and shared best practices is where employees learn from each other. The word “tools” is also misinterpreted sometimes.

Most people think tools as in a hammer or a screwdriver, but an iPhone, BlackBerry, spread sheet, browser-based computer application can also be considered as tools. Tools are basically anything that helps the employee enhance his or her job performance (Harwell, 2010).

The world depends entirely on autonomous decision-making and important context is usually being left out, especially during the thought process utilized by a knowledge worker. Context is usually provided by the leadership of the particular business through statements of strategy and direction. It is not adequate to just tell an employee what to do. Organizations must prepare a set of principles for employees to follow when making decisions (as cited in Harwell, 2010). Harwell (2010) believes that motivation, skill and tools are the three key indicators to improved job competency and performance. Giving people what they need is still the best way to motivate and training absolutely transforms employees’ capabilities into reinforced skills (Harwell, 2010).

## **Harwell's Model and Employee Competency**

Harwell's model is significant in order to support the finding of this study. Harwell's model highlights 3 main domains which are significant in this study. These are motivation, skills and tools. Based on the model of job performance that was proposed by Harwell (2010), it indicated that motivation domain is important in order to explain individual need, working environment and preferences. Motivation is significant as support system that help employee to perform task. Motivation domain in Harwell's model helps current study to explain on how peer support, work life balance and organizational culture contribute toward job performance and employee competency. Harwell (2010) also explain that working environment which is much more related to organizational culture could help to shape employee motivation and to perform task effectively. However, by explaining motivation domain is not sufficient in order to seek the alignment of current study variable and Harwell's model. Harwell's model which is highlighting the issue of job performance is significant in order to measure competency.

Another domain in Harwell's model is skills. Harwell (2010) stated that employee skill is defined based on mental, physical, experience and education aptitude. From skills sub domain Harwell's model could help current study to explain in depth on employee competency. Current study is also highlighting, education, experience and mental factors as part of independent variable which is similar with Harwell's model.

Harwell (2010) stated that individual competency should be based on mental ability in order to make rational decision, acceptable physical ability, sufficient working experience and related education background. Therefore, through Harwell's model current study could investigate and explain the finding based from the model that was proposed by Harwell (2010).

Another domain in Harwell's model is tools. Tools are used for a specific job helps an individual to maximize the skills in order to increase his or her job performance for example, computer systems which are normally used as tools for knowledge workers (as cited in Harwell, 2010). Tools in Harwell's model is not necessarily physical tools or tangible equipment, it is more or less well prepared knowledge that could help individual to achieve the greater performance and competence. This domain could help current study to assist individual competency based on job knowledge.

### **2.2.3 Vroom's Expectancy Theory**

Expectancy Theory is the theory which asserts that motivation is based on people's belief's about the probability that performance will lead to reward, multiplied by the perceived value of the reward (Greenberg & Baron 2008). Expectancy theory, have been proposed, all conceive of motivation as the result of three different types of belief's that people have.

There are Expectancy, Instrumentality and Valence. The theory, proposed by Vroom, claims that individuals are driven and become more competent to work when they believe that their determinations which are the input will produce a preferred result. Vroom categorized this belief into three criteria:

1. Expectancy: A scenario where when a person is expecting that the exerted amount of effort will result in good outcome
2. Instrumentality: one's self confidence where by a good performance will be rewarded; and
3. Valence: individual beliefs that the obtained reward or outcome is able to satisfy a desirable need of the individual.

Taking all these into account, employers are suggested to strengthen the linkage between employee's belief and actual outputs. Employers in an organization can practice such a way to increase level of motivation of their employees. Employers should practice or cultivate the culture of non-monetary, monetary rewards and appreciation system which is directly linked to performance as part of their organization's culture in a way to motivate their employees. However, this method should be flexible to ensure that it is "positively valence to employees" (Greenberg & Baron 2008).

Overall, this theory gives a clear picture on how work and motivation is closely related. People behave on a rational foundation after evaluating the condition of potential result. Apart from that, this theory establishes a connection between employee's motivation and total certainty of their expectancies. The motivation is possible only when there is a clear relation between the work performance and its results.

### **Vroom's Expectancy Theory and Employee Competency**

Positive motivation helps employees to perform better and helps to shape competency of the employee. Individual belief in making things happen is significant. This is because the belief and the eagerness of individual to achieve high performance and development of competency. Vroom's Expectancy theory is operating as a tool to help individual to expect what possible outcome that his or her effort will get if the necessary action is taken.

Based on this theory it does help employee to perform better when employee belief that his or her effort will get positive result and help individual to be more competent. When employee belief that the job could be performed in a good quality of work it also could help employee to understand more about job knowledge, necessary skills that is needed to

perform the task and related abilities for the task. Thus, it is related to competency and it might be the theory that could help to reshape and develop employee competency.

### **2.3 Findings from Similiar Past Studies**

The adoption of competencies helps to improve business's performance and hence produces a competitive advantage (Lawler, 1994). Previous studies revealed several benefits related with competency adoption containing improved employee efficiency, reduction on training costs, and reduction on employee turnover (Robinson, Sparrow, Clegg & Birdi, 2007).

Undeniably, for certain, the competency method has made a radical impact. The study provides the finding and proposed assimilated and extremely structured method to the estimating of future competency necessities.

Thus, it highlighting the drawback of current approach. The adoption of this approach should allow organisations to produce comprehensive and precise estimates of future competency requirements. The vital of accurately classifying competency requirements should not be exaggerated as competency profiles are the foundation of effective human resource processes such as the valuation, selection, development, promotion, and benefits of the employees.

Therefore, the adoption of a future concentration to competency identification, as demonstrated in previous study, will allow organisations to outstandingly manipulate such human resource processes by impending them in appropriate way.

In the view of Woodruffe (1993) competencies will be the shared language of human resource world in the future and can be adopted to offer the essential model inside which an

organization that can cultivate its employees. The labour competency management method is a normal practice in several developed and developing nations (Serpell, & Ferrada, 2007).

However, there is no single description of the notion of competency. Serpell and Ferrada, (2007) has illustrated the important prospective of the competency model for the Chilean construction sector, with its undersized human resources management approach (Serpell & Ferrada, 2007). Especially, this model can be an effective method to establish the competencies required by construction site managers who are ought to solve the issue of lacunae in trained workers, as is the instance in many developing countries. The structured method of the competency model aid organization craft more purpose systems for the strategy and implementation of training programs.

Agut, Grau and Peiro (2003) have done a study that analyses on the effect of employee (age, education level, and job tenure) and background aspects (kinds of formation and number of assistants) on managerial competency requirement. Sample were collected of 80 Spanish superior from tourist agencies. Study revealed that superiors from restaurant shows greater competency prerequisite in tourist industry management and communication skills than superior from hotels.

Also education levels were adversely linked to competency requirement in customers and employees management and efficacy at work. In contrast, job tenure was clearly related to desires in customers and employee's supervision and facilities and infrastructure supervision. Age and number of assistants do not show any positive effect to competency requirement.

Another study on the impact of learning goals on emotional, social, and cognitive intelligence competency development by (Leonard, 2008) revealed that instituting learning objectives is extremely significant for improvement of individual competencies.

Subjects developed expressively more on competencies for which they set objectives than on other competencies. Previous study also illustrated better competency improvement when objectives were recalled.

The findings of this study is extremely supporting the theory of goal setting and improvement its rich experiential history. Goal setting is as favourable to the process of improving several complex social, emotional and cognitive intelligence competencies pursued over varied time horizons as it is to simple skill development and focused behavioural change.

Competency profiling is crucial in order to align with other functional expertise from another department for instance how one individual expertise could interrelate with other individual expertise and transform it into output. The study done by Wickramasinghe and De Zoyza, (2009) revealed broad levels of competencies that are significant for executives employed in one of the multiple operational capacities. The result showed the significant of competency from values and skills domain than knowledge domain through all operational areas.

In additional, its scarcely to find the similarity with the insights on the present capability and current prominence through all the operational area in the industry. The literature showed that main set of competencies are the amount of the imperceptible and perceptible, physical and non-physical properties of the firm. Main competencies are the foundation of the organization capacity to offer exclusive value to its client.

It is vital for business that are not core competence positioned need to participate in core competence development if they desire to compete in the global market (Gilgeous, & Parveen, 2001). To be become competitive excellence, organization are ought to function

more in a superficial, strategy focussed and develop a strategic planning to allow their organisation to progress the essential core competencies.

Another seminal study done by Guangrong and Kaiguang (2012) on Competency modelling research and practice in China revealed that the practice in China context provides lagged behind its implementation in terms of competency modeling. Guangrong and Kaiguang (2012) also revealed that most of the empirical study only concentrated to identifying the competency for various types of job not aiming to investigate the contributing factors that influence the competency modelling and profiling process. Previous study provides a strong baseline for current study to strengthen its argument, issues and other contributing factors.

Meanwhile study done by Atri, Venkatesh, Arun (2013) explained that extensive performance linked to competency model focuses on competency identification, competency scoring and aligning with other strategic human resource functions. Two different findings above were based on different contexts of study.

However, study in China provides different interpretation where the finding indicated that most of the study focusing on competency identification without considering the ecosystem within organization especially addressing to the internal and external factors.

On the other hand, study in India emphasizes on the competency identification based on the scoring of the competency, and aligning with the Human resource function. Previous studies are significant to ensure the literature provided is sufficient in order to argue based on the organizational context, cultural and ecosystem within organization.

Study done in Middle East by Hossein and Alireza (2015) on Competency Framework revealed that internal factors such as open-mindedness, risk-taking, patient, explicitness, motivation, trustworthiness, communication skills and value orientation provide significant contribution towards the competency of the employee. This finding is

aligned with the current study interest in order to explore other soliciting factors. Although study done by Hossein and Alireza (2015) highlighting the individual aptitude and attitude competency. It is still relevant for this study in order to comprehend the personality types that help to align with employee competency.

Unlike any other studies in competency profiling. A breakthrough study done by Sethumadhavan, Yogesh, and Badrinarayan, (2016) on competency need assessment revealed that the micro and macro gaps are the cause of the competency incongruence from current expertise and functional expertise. This study also revealed there were large gaps particularly addressing on analytical skills, self-management, and relationship management and action goal. Current study focusing on developing relevant model that suit to the local context and therefore with the guidance from previous literature to develop competency profiling is necessary. Study done by Sethumadhavan, Yogesh, and Badrinarayan, (2016) help current study to understand competency assessment issues in order to develop the relevant model for this study.

Competency model is vital as a guidelines for organization to asses and perform competency profiling. Study done in Slovak republic revealed that Porvaznik model is suitable to be used for private and public sector Zuzana (2016). The model assesses based on professional knowledge, application of skills set, and social maturity. All of the three elements are significant for organization to evaluate competency gap and profiling. Competency model in Slovak can be used in this study particularly to investigate the alignment of the competency gap and assessment before performing competency profiling. The significant of Slovak model helps current study to forecast the competency issue based on the literature proposed by Zuzana (2016).

The blend of the findings above might help current study to develop, argue, critics, and support the current findings in the next following chapter. It is also help current study to be more aware on the issue of competency profiling based on the international, Middle East and Asian context.

## **2.4 Summary**

This chapter briefly presents the issues related to the problem investigated, relevant models, theories about the study and similar findings of previous research. This chapter will link to the next chapter which delve on how this study is done.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.0 Introduction**

This chapter discusses the methodologies used in this research. The sections discussed include research design, population, sample and sampling procedures, research instrument, pilot test, validity and reliability, ethical issues, then data collection and data analysis procedures. This chapter ends with a short summary.

#### **3.1 Research Design**

This study adapted Mixed Methods Research (MMR) which basically is a survey design. It is also known as the convergent design. The design occurs when this study collect both quantitative and qualitative data during the same phase of the research process and then, mergers the two sets of results into an overall interpretation (Creswell, & Clark, (2007). It is also indicated (Creswell & Clark, 2007) that MMR is conducted due to the following reasons of validating and strengthening qualitative and quantitative data to outweigh the weaknesses of both qualitative and quantitative method. It is also seen as more complete and comprehensive rather than using only qualitative or quantitative alone. Both approaches give a different picture as it provides more evidence. Primary method in this study is quantitative approach and secondary approach is qualitative.

### **3.2 Population and Sampling Procedure**

Anderson, Sweeney and Williams (2011) defined population as a set which consists every element of interest in a particular study (as cited in Nang Nik, 2012). This is because the sample is drawn out from the population using a specific sampling technique. It actually depends on the type of study conducted. Population includes all people with the characteristics one wish to understand (Rusli et al., 2011).

#### **3.2.1 Quantitative Population and Sampling**

Unit of analysis in this study focuses on individuals since the study is about competency profiling. In this study the target populations are employees of Polytechnic Kuching and Sarawak Energy Berhad, both located in Kuching. The quantitative sample was determined by using statistical formula that was developed by Anderson, Sweeney, and Williams (2011). Probability sampling technique was used which was simple random sampling due to the availability of the respondent in the organization. In this study the target populations are the employees in the two selected agencies which are Polytechnic Kuching and Sarawak Energy Berhad. The current population of employees for Polytechnic Kuching is around 500, and 223 is a minimum sample size with 5 percent of confident interval and 95 of confident. Whereby for Sarawak Energy Berhad the population is around 800 employees, and 250 is the minimum sample size with 5 percent confident interval and 95 of confident level.

$$n = \frac{N}{1 + N e^2}$$

$$n = \frac{500}{1 + 500(0.05)^2}$$

$$n = 222.222$$

$$n = 223$$

N = size of target population

e = in exactness from sampling at confidence level

Adapted from: Anderson, Sweeney, & Williams (2011).

**Figure 3.1:** Sample size formulas

### 3.2.2 Qualitative Population and Sampling

Non probability sampling, the purposive sampling method was used to select informants. This means that the samples are drawn from the population specifically chosen based on the purpose of the study. This sampling method was used to demonstrate that a specific trait which exists in the population and align to the purpose of the study. It is not used to create a generalization of the whole population.

Purposive sampling method is considered as the most common of all non- probability sampling methods. The informants for this study were chosen based on the purpose of the study and related issue that align with research objectives.

It is the easiest, cheapest and least time consuming sampling method. To sample, volunteers are simply being asked based on the criteria set. The disadvantage of this type of samples is that, they are no evidences that they are representatives of the population to be generalized (Rusli & Hasbee, 2011). The qualitative data in this study were gathered from

Sarawak Energy Berhad with only 5 informants due to restriction and availability of the informant. The gatekeeper only allowed qualitative sample for 5 respective informants due to some workload and confidential issues raised by the Sarawak Energy berhad. While qualitative sample and data for polytechnic Kuching is not available due to some obstacle such as workload and no response from respective informants

Study done by Sandy and John (2011) on “The qualitative Research Interview” explained that in order to achieve the objectives of the study the right criteria need to be investigate and determine by the researcher based on the need of the study. The criteria should reflex the objective of the study also the population that is chosen in the study. This study was guided based on the criteria of selection proposed by Sandy and John (2011) related objectives, related demography, related sampling, variables, and related issues. All the selection of criteria was based on the qualitative research objectives.

In this study, purposive sampling is chosen based on the following requirements or special trait that is required in this study:-

***First criteria: Informant must be in the service at least 10 years above***

The main reason why the selection of respective informant should meet this criterion is due to the main aim and question that need to link with the criteria of the informant. (Sandy & John, 2011)

***Second Criteria: Informant must be dealing with technological device when performing job***

Second criterion is significant in order to justify the engagement and the use of technological device at work place and link with technological change that may affect the competency while performing the job. In order to ensure it meet the requirement of the study. The selection of the variable for the structured interview questionnaire should reflex the

qualitative objective of the study. This was mentioned in the study done by Sandy and John, (2011) mentioning that the construction of structured questionnaire should reflex the objective of the study. This where the data saturation is significant in order to ensure it meet the research objectives.

***Third Criteria: Working in the group***

The third criterion requires potential respective informants who are working in the group in order to gather the data regarding perspective and information about peer and team work that may affect employee competency.

***Fourth Criteria: Experience in change management***

The fourth criterion is the most significant part in order to search the right potential informant, for this criterion informant must be the persons who are experiencing change management in the organization either downsizing, merger or relocation of the department, centralization of the department or organization and changing structure of organization. (Sandy & John, 2011)

***Fifth Criteria: Familiar with the culture of the organization.***

This study require informants who are meeting the first criteria in order to meet fifth criteria, informants must be the persons who know well about the culture of the organization and must be the persons who are not involved with job posting to another region. For this study, 5 informants from among employees from a few departments are chosen in order to complete this study. (Sandy & John, 2011)

### **3.3 Research Instrument**

#### **3.3.1 Quantitative Instrument**

In this study, questionnaire was used as a research instrument. The Questionnaire was formulated and adapted from previous studies based on job scope and task. This questionnaire covers key areas which are knowledge, skills, ability and other aspect such as personality. Questionnaire for this study was designed to get the data from respondents based on the quantitative objectives of this study.

This Competency profiling questionnaire is divided into several sections. Section A is to identify individual competency, Second B, the employee personality, Section C, teamwork, Section D, working experience, Section E, organizational culture, Section F, change management, Section G peer support, Section H work life balance, Section I, technological change and the final Section J is for demography of the respondents.

As for Section A, justification to use instrument by Tovey (1994) was based on the statements that closely related to this study. On top of that Tovey (1994) instrument was used in many multinational company for the purpose of competency survey.

For section B, employee personality statement was selected from John (2003) where the instrument emphasis on big 5 theory. In psychology, personality profiling is significant in for organization understand the emotional intelligent of its candidate or employee. Big five theory is one of the most acceptable personality domain that is used to study personality John (2003).

For teamwork, the questionnaire and the statement was based on the study done by Charles (2001) on Team competencies. Previous questionnaire comprises of exploratory factor analysis with high reliability on each statements. The previous study statements most of them closely related to the objective of the current study. The selection was based on the need of the research objective.

For section D, working experience statement was based on the study done by Avolio, Waldman and Mc Danial (1990) “The effects of experience and occupational type”. Previous study provide the insight on how work experience and type of occupational influence individual performance. Previous study portray the elements and statements that addressing employee’s job competencies thus it is related to the interest of this study in order to adapt questionnaire develop by Avolio, Waldman and Mc Danial (1990).

Section E is on organizational culture, this section is vital for this study due to the significant of the culture that will shape individual competency. The justification was based on the empirical study that was done by Siew and Lee (2004) on “Corporate culture and organizational performance”. The findings revealed a positive effect on corporate culture and organizational performance. Previous study statements were developed based on the interview and later done by constructing quantitative questionnaire for the study. Previous study questionnaire closely related to the quantitative research objective where current study is investigating how organizational culture effect employee competency.

For change management section on section F were develop based on the study instrument developed by Omer and Fu (2012). Previous study instrument is addressing on the elements of changing role of strategic function, structure, information technology, and human resource practices function due to emergence of technology.

The change management of this study is concerning on the related element that was proposed by Omer (2012) this is due to injecting the current issues and circumstances on change management in this study. This study only limited to statement was based on the change management issues.

Peer support is another macro element in competency profiling. Section G is on peer support. Section G statements was based on the research instrument published by Holly and Paula (2002) relating to the peer support training. Current quantitative research objective is to study the relationship between peer support and employee competency. Current study instrument was guided based on the instrument was developed by Holly and Paula (2002).

Seminal study done by Carlson (2006) on work life balanced has become a trend nowadays for many work life balanced researcher. The outbreak study done by Carlson (2006) provide a greater insight on how work life balanced influence work performance and individual competency. This study adopted questionnaire from Carlson (2006) in order to study the relationship on work life balanced and individual competency.

Section I is concerning on technological change. The instrument was developed based on the research instrument developed by Omer & Fu (2012) The Impact of Information Technology on Human Resource Practices and Competencies.

Omer & Fu (2012) research instrument investigating the emergence of information technology that effecting management, function, structure and human resource practice. Since this study concerning on technological change as it mediating factor, it is relevant for this study to adopt previous study research instrument as its instrument. Research instrument herein reflex the research objectives of the study by considering the elements in the previous research instrument as its statements.

Table 3.1 shows the components in the questionnaire.

**Table 3.1:** Quantitative Instrument

| <u>Section</u> | <u>Items</u>                                                                                            | <u>No of items</u> | <u>Source</u>                         |
|----------------|---------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------|
| A              | Employee competency                                                                                     | 10                 | Tovey (1994)                          |
| B              | Personality                                                                                             | 20                 | John (2003)                           |
| C              | Teamwork                                                                                                | 10                 | Charles (2001)                        |
| D              | Working experience                                                                                      | 6                  | Avolio, Waldman & Mc<br>Danial (1990) |
| E              | Organizational Culture                                                                                  | 6                  | Siew & Lee (2004)                     |
| F              | Change management                                                                                       | 6                  | Omer & Fu (2012)                      |
| G              | Peer support                                                                                            | 6                  | Holly & Paula (2002)                  |
| H              | Work life balance                                                                                       | 8                  | Carlson (2006)                        |
| I              | Technological Advance                                                                                   | 9                  | Omer & Fu (2012)                      |
| J              | Demography of<br>respondent<br>Gender<br>Period of service<br>Age<br>Level of academic<br>qualification | 4                  | Rizwan & usman (2010)                 |

All the sections on competencies had a 5 point Likert scale as shown in Table 3.2 below. Respondents have to rate a series of statements. The values on this scale are used as a score for each respondent on each item.

**Table 3.2:** Likert Scale

| Strongly Disagree<br>(SD) | Disagree<br>(D) | Neutral<br>(N) | Agree<br>(A) | Strongly<br>Agree<br>(SA) |
|---------------------------|-----------------|----------------|--------------|---------------------------|
| 1                         | 2               | 3              | 4            | 5                         |

### 3.3.2 Qualitative Instrument

For qualitative method, this study used open- ended questionnaire as research instrument. Open ended survey questionnaire is explorative by nature and it gives informants the freedom to express their opinions. This approach seems to be specifically well-matched for the variety of transcript generated by open-ended questions as well for organizational study questions that are exploratory in nature, intended at scale or interview question improvement, and/or emergent conceptual coding structures (Jackson, & Trochim, 2002). The open-ended survey questionnaire is divided into few parts, Section A, B, C and D. Section A is regarding internal and external factors that affect employee competency. Section B asks questions regarding the main factors that contribute towards employee competency. Section C solicits why some employees are still incompetent after working for a few years. Section D comprises questions related to issue of technological change that contribute towards employee competency. Section E covers demographic information of the informants. This quantitative questionnaire takes at least 45 to 50 minutes to answer since the questions are very few in number.

**Table 3.3:**Qualitative Research Instrument: Open–ended survey questionnaire

| <b>No</b> | <b>Question type</b>                                                                | <b>Number of questions</b> |
|-----------|-------------------------------------------------------------------------------------|----------------------------|
| 1         | General Question                                                                    | 4                          |
| 2         | Research Question 1: Internal and External Factors that Affect Employee Competency. | 2                          |
| 3         | Research Question 2: Main Factors that Affect Employee Competency.                  | 3                          |
| 4         | Research Question 3: Incompetency and Year of Service.                              | 3                          |
| 5         | Research Question 4: Technological Change that Affect Employee Competency.          | 3                          |
| 6         | Demography information                                                              | 8                          |
| 7         | Suggestion and recommendation                                                       |                            |

### 3.4 Pilot Study

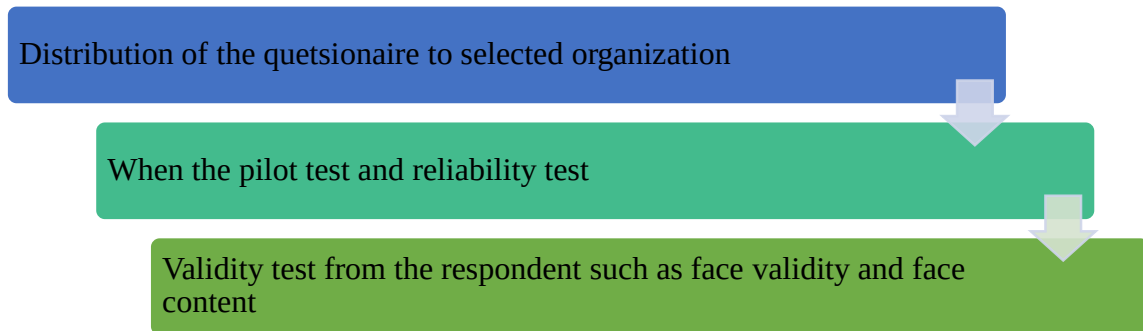


**Figure 3.2:** Pilot Study

For the quantitative approach piloting the questionnaires were distributed to each of the organization involved. Pilot study is crucial in order to get the validity test from the respondent such as face validity and face content. 100 questionnaires each were used for the purpose of pilot study. For the qualitative approach, one informant and consultations with the supervisor was done to ensure that the open-ended survey questionnaire was commented and ready for use in the actual data collection.

#### 3.4.1 Expert Comments

Expert comments is significant in order to ensure the study instrument meet it requirement, etiquette, and suitable for the local context. The comments for quantitative questionnaire are:- reduce number of statements, statements based on the Sarawak context, priority variable which one come first example dependent variable, independent variable and last section is demography variables, improvement on font size and questionnaire design to be more attractive. All the comments above has been improved and questionnaire was send to the experts for approval and review. Questionnaire was accepted without any further amendment for second time.

**Table 3.4: Demographic Profile for Pilot Test**

|                               |                      | <u><b>Demography<br/>characteristic</b></u> |  |       |
|-------------------------------|----------------------|---------------------------------------------|--|-------|
| <b>Gender</b>                 |                      | F                                           |  | %     |
|                               | Male                 | 38                                          |  | 38.0  |
|                               | Female               | 62                                          |  | 62.0  |
| <b>Age</b>                    | Total                | 100                                         |  | 100   |
|                               | 20 years and below   | 0                                           |  | 0     |
|                               | 21 years to 30 years | 16                                          |  | 16    |
|                               | 31 years to 40 years | 69                                          |  | 69.0  |
|                               | 40 years and above   | 15                                          |  | 15.0  |
|                               | Total                | 100                                         |  | 100.0 |
| <b>Period of<br/>Service</b>  | Less than one year   | 0                                           |  | 0     |
|                               | 1 year to 5 years    | 23                                          |  | 23.0  |
|                               | 6 year to 10 years   | 46                                          |  | 46.0  |
|                               | 10 years above       | 31                                          |  | 31.0  |
|                               | Total                | 100                                         |  | 100.0 |
| <b>Level of<br/>Education</b> | LCE/SRP/PMR          | 0                                           |  | 0     |
|                               | MCE/SPM/SPMV         | 0                                           |  | 0     |
|                               | STPM/DIPLOMA         | 3                                           |  | 3.0   |
|                               | DEGREE               | 73                                          |  | 73.0  |
|                               | Master/PhD           | 24                                          |  | 24.0  |
|                               | Total                | 100                                         |  | 100.0 |

Pilot study conducted with 100 samples in order to ensure the questionnaire meet it requirement. There are 4 demographic factors were used in this study namely gender, age, period of service, and level of education. Dominant respondent for gender is female with 62% followed by male 38%. As for age there were 4 age categories were detected namely 20 years and below with 0 %, 21 years old to 30 years old with 16 %, 31 years old to 40 years old with 69% and 40 years old and above with 15%. Period of service comprises of 4 categories, less than on year with 0%, 1 year to 5 years with 23%, 6 years to 10 years with 46%, 10 years and above with 31%. Final demography variable is level of education consisted of 5 categories, LCE/SRP/PMR with 0 %, MCE/SPM/SPMV with 0 %, Degree with 73%, Master/PhD with 24%.

### 3.5 Validity and Reliability

**Table 3.5:** Exploratory Factor Analysis and Reliability test

| EC                                         | PNY                    | TMK               | WE                | OC                | CM                | PS                | WLB               | TNC               |
|--------------------------------------------|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| KM0 =<br>.902                              | .912                   | .885              | .916              | .878              | .859              | .906              | .873              | .871              |
| Bartlett's<br>Test<br>= 646.874<br>p=0.000 | 1493.0<br>03<br>p=0.00 | 703.287<br>p=0.00 | 500.635<br>p=0.00 | 499.896<br>p=0.00 | 493.681<br>p=0.00 | 789.409<br>p=0.00 | 434.161<br>p=0.00 | 713.366<br>p=0.00 |
| Eigenvalue<br>=5.682                       | 10.604                 | 5.801             | 4.628             | 4.516             | 4.470             | 5.206             | 4.410             | 5.827             |
| Variance<br>=63.137                        | 53.019                 | 64.458            | 77.129            | 75.273            | 74.403            | 86.768            | 63.006            | 64.745            |
| Cronbach's<br>s<br>=.925                   | .951                   | .930              | .940              | .933              | .929              | .969              | .895              | .922              |

*Note.* EC=Employee Competency, PNY=Personality, TMK=Teamwork, WE=Working Experience, OC=Organizational Culture, CM= Change Management, PS= Peer Support, WLB= Work Life Balance and TNC= Technological Change.

#### 3.5.1.1 Quantitative Validity and Reliability

In order to ensure the questionnaire is valid and reliable, some actions have to be taken. To increase validity, the questionnaire has been shown to the expert in the field. By doing validity test such as face validity, construct validity, content validity, and criterion- related validity the questionnaires are ensured valid to be distributed to the actual respondents. For reliability, it was measured by Cronbach's Alpha. Cronbach's Alpha is translated as percentage of difference where the experiential scale will be elucidate in hypothetical absolute scale comprised of all items (Neill, 2008). In general, alpha value less than 0.6 were considered as poor, while those with alpha value of 0.7 ranges were considered acceptable and reliability above 0.8 was considered good. Factor analysis is used to determine sample adequacy, factor loading should be reported to two decimal places and use descriptive labels in addition to item numbers (Neill, 2008).

Overall the sections for reliability test was measured by using Cronbach's Alpha, section A (employee competency ) was at 0.925, section B (Personality) was at 0.951, section C (Teamwork) was at 0.930, section D (working Experience) was at 0.940, section E (Organization Culture) was at 0.933, section F (Change management) was at 0.929, section G (Peer Support) was at 0.969, section H (work life balance) was at 0.895, section I (Technological Change) was at 0.922. Exploratory Factor Analysis was performed, there are 9 factors detected, Kaiser-Meyer-Olkin assess of sampling sufficiency was above the commonly recommended value of .6 (Neill, 2008) and Bartlett's test of sphericity was at acceptable level ( $p < .05$ ). Therefore, factor analysis for this study is adequate.

### 3.5.1.2 Normality Test

**Table 3.6:** Normality Test

|                | Overall Skewness and Kurtosis |             |          |                    |                        |                   |              |                   |                      |
|----------------|-------------------------------|-------------|----------|--------------------|------------------------|-------------------|--------------|-------------------|----------------------|
|                | Employee Competency           | Personality | Teamwork | Working Experience | Organizational Culture | Change Management | Peer Support | Work Life Balance | Technological Change |
| Mean           | 3.9497                        | 3.8694      | 3.9981   | 4.0214             | 3.7806                 | 3.7863            | 4.0584       | 3.8077            | 4.0617               |
| Std. Deviation | .53695                        | .53597      | .60331   | .64939             | .77794                 | .65611            | .78702       | .81374            | .60462               |
| Variance       | .288                          | .287        | .364     | .422               | .605                   | .430              | .619         | .662              | .366                 |
| Skewness       | -.311                         | .000        | -.956    | -.316              | -.871                  | -.260             | -.1293       | -.729             | -.245                |
| Kurtosis       | -.908                         | .128        | 4.266    | -.072              | 1.628                  | .018              | 3.198        | .798              | -.306                |

Normality is defined as the "shape of the data distribution or an individual metric variable and its correspondence to the normal distribution, which is the benchmark for statistical methods" (Hair et al., 2012). Defilement of normality might affect the valuation process or the clarification of the output especially in SEM analysis. According to Hair et al.

(2012), skewness should be at the range of +- 0.3 and Kurtosis +- 0.7. The result above showed that overall Skewness and kurtosis with 9 constructs.

### 3.5.1.3 Convergent Validity Average Variance Extracted and Discriminant Validity

Construct's validity can be identify by evaluating convergent validity and discriminant validity, it is describe as the extent to which observed variables of specific variable segment a greater percentage of the difference in general (Hair et al., 2012). Formula below provide more accurate calculation in order to measure internal reliability for construct reliability

$$CR = \frac{(\sum_{i=1}^n \lambda_i)^2}{(\sum_{i=1}^n \lambda_i)^2 + (\sum_{i=1}^n \delta_i)}$$

Factor loadings of variable, average variance extracted (AVE), and construct reliability (CR) approximation are applied to assess the convergent validity of the constructs (Hair et al., 2012). Furthermore, Hair et al., (2012) proposed the best standardized loading approximation between 0.7 or greater, AVE approximation between or above 0.5, and reliability approximation between the ranges of 0.7 to demonstrate acceptable convergent validity. Thus, this study, the least cut-off standards for loadings >0.7, AVE >0.5, and reliability >0.7 were adopted for evaluating the convergent validity. Formula Below will be used in this study in order to measure Average Variance Extracted.

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$$

Discriminant validity is described as to the degree to which a latent variable is truly dissimilar from other latent variables (Hair et al., 2012). Discriminant validity evaluated by a approach, proposed by Hair et al., (2012), in which the average variance extracted for each variables is matched with the conforming squared inter-construct correlations (SIC), and the AVE approximation steadily greater than the SIC approximation indicates support for

discriminant validity of the factors. This technique is adopted in this study in order to measure the discriminant validity of each of the variables.

#### **3.5.1.4 Outlier**

Kline (2005) and Hair et al., (2012) described outliers as cases with scores that are distinctively different from rest of the observations in a dataset. There are two main types of outliers i.e. univariate and multivariate outliers. A univariate outlier is the case that has an extreme value on one variable whereas a multivariate outlier is a case with an unusual combination of values on two or more variables (Tabachnick and Fidell, 2001; Kline 2005). Although, there is no absolute judgement of an extreme value, a commonly accepted rule of thumb is that scores more than three standard deviation away from the mean may be considered as outliers (Kline, 2005). Outlier is significant in order to avoid multivariate issue when adapting Structural Equation Modeling.

#### **3.5.2 Qualitative Validity and Reliability**

In this study there were four elements of trustworthy that need to be maintained which are credibility, transferability, dependability and conformability. Credibility was achieved by using proved methods and question design. Transferability was achieved by providing information about the methods, like the overview on the open- ended questionnaire survey. In order to point the dependability matter in a straight forward manner, the procedures in the study will be informed in detail, thus allowing a future study to reiterate the study, not necessarily to achieve the similar output (Antonsson, Engstrom & Verbus, 2011). Conformability was achieved by discussing in detail on how the study being executed in order for the reader to adopt whether the research has met its objectives.

### **3.6 Ethical Considerations**

Ethical consideration needed for this study are the issues regarding anonymity in which the respondent name and identity need to be kept confidential, the right to withdraw from the study and also need to send consent letter to head of department as permission for this study. On top of that, research misconduct is also important in this study. Study transgression means fabrication, misrepresentation, or plagiarism in planning, execution, or revising study, or in reporting research output. There are four study misconducts that are avoided in this study, which are as follows: -

- Fabrication in altering the input, data or output and recording or broadcasting them.
- Falsification controlling study materials, tools, or procedure, or replacing or omitting data or output such that the study is not exactly demonstrating in the study record.
- Plagiarism the behavior copy writing of another person's thoughts, procedure, output, or words or sentences without appropriate giving credit.
- Research misconduct excluded direct error or variances of judgement.

### 3.7 Procedure of Data Collection

#### 3.7.1 Quantitative Data Collection Procedure

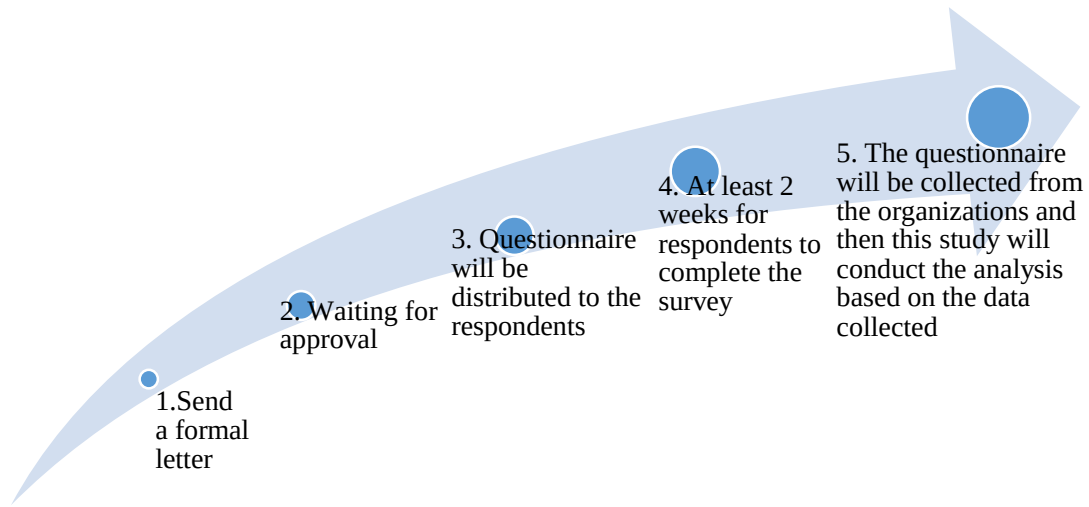


**Figure 3.3:** Quantitative Data Collection Procedure

There are few steps involved in quantitative data collection. The first step in the data collection procedure is to send a formal letter to head of department at two different organizations and respective respondents. The letter will be sent to head of department and respective respondent to get the approval to conduct research. Upon approval, questionnaire will be distributed to the respondents. It will take at least 2 weeks for respondents to complete the survey. After two weeks, the questionnaire will be collected from the organizations and then this study will conduct the analysis based on the data collected.

### 3.7.2 Qualitative Data Collection Procedure

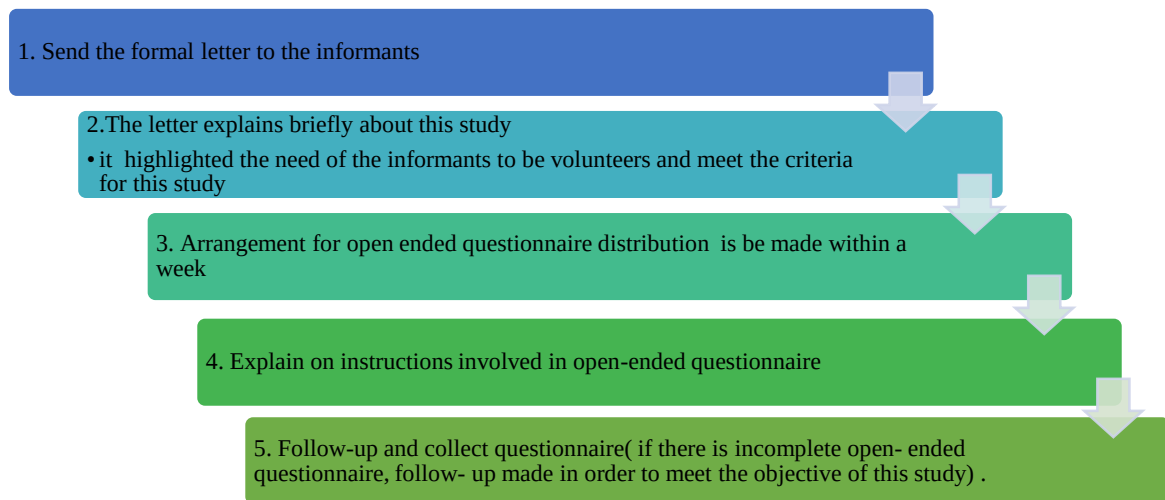


**Figure 3.4:** Qualitative Data Collection Procedure

For qualitative method there are few procedures involved. The first step of qualitative data collection is to send the formal letter to the informants. The letter explains briefly about this study and it highlights the need of the informants to be volunteers and meet the criteria for this study. Upon approval, arrangement for open ended questionnaire distribution is made within a week. There are steps and instructions involved in open ended questionnaire that the informants are required to follow which are procedure of answering open- ended questionnaire, risk or discomfort, confidentiality, participation and enquiries. Informant will have as much time as they need to answer the questions without any pressure. Therefore, follow-up for this participation is required in this study. After the completion of this open-ended questionnaire, the questionnaires are collected from the informants and data from this open- ended questionnaire is used for qualitative analysis. If there is any incomplete open-ended questionnaire, follow- up is made in order to meet the objective of this study.

### 3.8 Procedure of Data Analysis

#### 3.8.1 Quantitative Data of Analysis Procedure

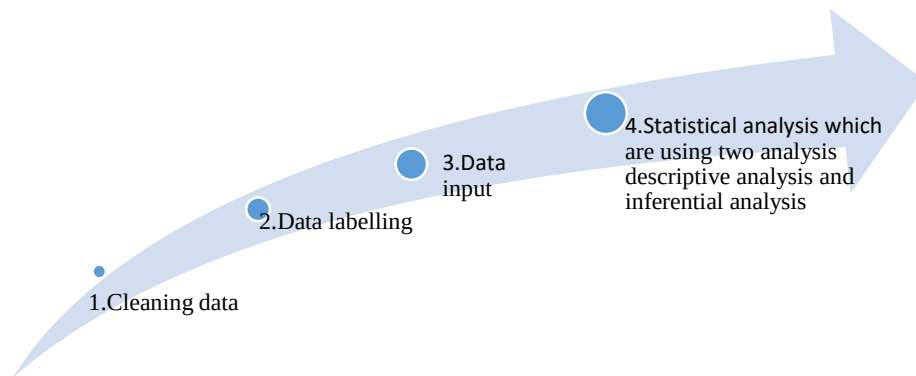


**Figure 3.5:** Quantitative Data of Analysis Procedure

In quantitative method, there were 5 stages of analysis procedure that are required in this study which are cleaning data, screen through the questionnaire, data labelling, data input, descriptive analysis and inferential analysis. The first phase of analysis is cleaning of data. This stage involves cleaning of error, contain duplicate and incomplete data. The second stage of the procedure is screening through the questionnaire. This procedure involves the confirmation of data that will be used for analysis. Third stage of analysis procedure involve with data labelling for independent variables and dependent variable. All the variables are labelled accordingly based on the purpose of the study. Fourth stage of data analysis procedure is data input, all the data from questionnaire are coded and key in by using Software Package for Social Science (SPSS Version 20.0 for Student Version). Fifth stage of data analysis procedure involve with statistical analysis which are using two analysis descriptive analysis and inferential analysis. Descriptive analysis is used to describe demography background and respondent based on demography background. Pearson correlation was used to test the relationship between independent variable and dependent variable. Structural Equation Modelling was used to develop model and Regression

analysis. There were two types of comparative analysis among variables namely: - independent t-test and ANOVA. Independent T test analysis was used to test the differences not more than two group towards dependent variable. Meanwhile, one-way ANOVA was used to test the differences of more than two groups towards dependent variable. Comparative analysis only addressing among variables and not focusing on two sample from the population. All the quantitative analysis was done by using Software Package for Social Science and AMOS 21 (SPSS Version 20.0 for Student Version).

#### **3.8.1.2 Structural Equation Modeling and Model Implication**

Structural Equation Modeling software package called Analysis of Moment Structures (AMOS), version 21, was used in this research study in order to explore statistical relationships between the test items of each factor and among the factors of teamwork, change management, organizational culture, work experience and Employee competency.

As for model implication, Structural Equation modeling the offered a systematic mechanism to validate relationships among constructs and indicators and to test relationships between constructs in single model (Hoyle, 1995, Hair et al., 2012). Secondly, it offered powerful and rigorous statistical techniques to deal with complex models (Bryne, 2001; Tabachnick and Fidell, 2001; Hair et al, 2012). In SEM, relationships among constructs and indicators are validated by using confirmatory factor analysis (CFA), also known as measurement model, and relationships between constructs are tested using the structural model. (The flow of Structural equation modeling as shown in the appendix Diagram 1.0).

### 3.8.1.3 Measurement Model

Confirmatory factor analysis is very important technique of Structural Equation Modeling (Kline, 2005) and is generally applied when there is some background knowledge of the underlying constructs and measurement items (Byrne 2001). However, it is highly recommended that confirmatory factor analysis (CFA) should be performed after exploratory factor analysis (EFA) in order to verify and confirm the scales derived from EFA (Hair et al., 2012). In practice, unlike EFA, CFA is a technique that used to confirm a priori hypothesis about the relationship between set of indicator variables (measurement items) and their respective latent variables (Byrne, 2001). There are two broad approaches used in CFA to evaluate the measurement model: (1) deciding the goodness of fit (GOF) criteria indices, (2) and evaluating the validity and reliability of measurement model (Hair et al., 2012). Therefore, the researcher used the measurement model in this research for assessing the uni-dimensionality, validity, and reliability of the measure.

**Table 3.7:** Measurement Model Decision Criteria

|                                   |                                                                      |                                         |
|-----------------------------------|----------------------------------------------------------------------|-----------------------------------------|
| <b><u>Fits Indexes</u></b>        |                                                                      |                                         |
| <b>CMIN/DF</b>                    | <b>5.0 &lt; (Hair et al. 2012)</b>                                   | Normed Chi-square                       |
| <b>p Value</b>                    | <b>0.00 &lt; (Hair et al. 2012)</b>                                  |                                         |
| <b>RMSEA</b>                      | <b>0.8 &lt; acceptable and 0.5 &lt; Excellent (Hair et al. 2006)</b> | Root mean square error of approximation |
| <b>GFI</b>                        | <b>&gt;.90 (Hair et al., 2012)</b>                                   | Goodness of Fits Index                  |
| <b>CFI</b>                        | <b>&gt;.90 (Hair et al., 2012)</b>                                   | Comparative fit index                   |
| <b>NFI</b>                        | <b>&gt;.90 (Hair et al., 2012)</b>                                   | Normed fit index                        |
| <b>Measurement model estimate</b> |                                                                      |                                         |
| <b>Estimates</b>                  | Recommendation Value                                                 | References                              |
| <b>Factor Loading</b>             | Above 0.5 is acceptable<br>above 0.7 is good                         | (Hair et al., 2012)                     |
| <b>Critical Ratio (t-value)</b>   | Should be above 1.96                                                 | (Hair et al., 2012)                     |
| <b>Standard Residual</b>          | Plus/minus 2.8                                                       | (Hair et al., 2012)                     |

### 3.8.1.4 Bootstrapping Decision

**Table 3.8:** Bootstrapping Decision Criteria

| Decision          | Direct<br>X -Y | X to Y |    | FULL MEDIATION |         |
|-------------------|----------------|--------|----|----------------|---------|
|                   | P              | BETA   | P  | SIE            | 95% CI  |
| Full mediation    | S              | Reduce | NS | S              | 0       |
| Partial Mediation | S              | Reduce | S  | S              | Outside |
| No Mediation      |                |        |    | NS             | outside |
| Indirect effect   | NS             |        | NS | S              | Inside  |
|                   |                |        |    |                | outside |

P= Significant value S= significant

Source: Hayes, (2009).

As for mediation test, the decision will be based on the criteria's that was proposed by Hayes (2009). Therefore, mediation test uses standard indirect effect and standard direct effect in order to measure whether there is any mediation in the related construct.

### 3.8.2 Qualitative Data Analysis Procedure

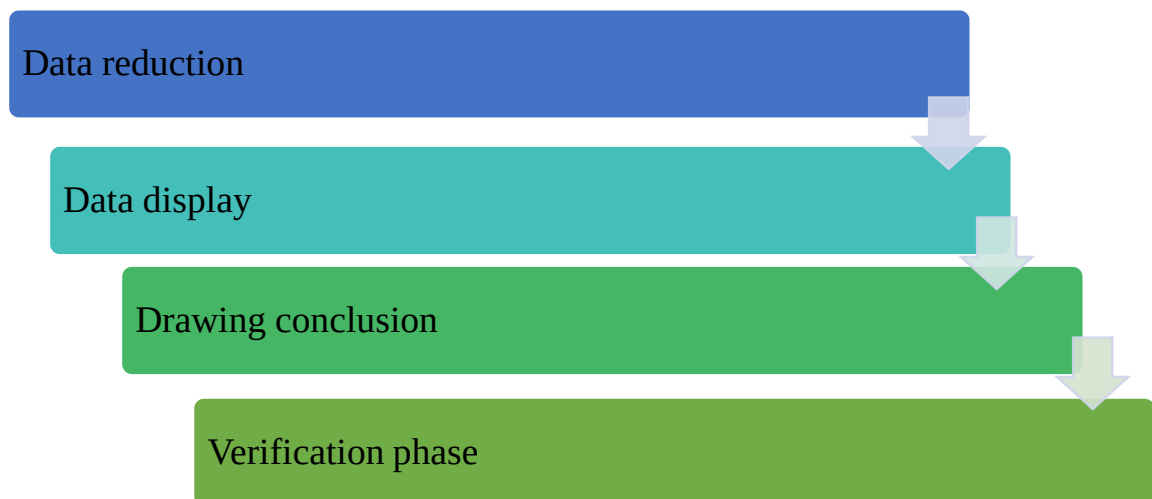


**Figure 3.6:** Qualitative Data Analysis

Miles and Huberman (1994) developed the main stages of data analysis which are data reduction, data display and lastly, conclusion drawing and verification phase. At the data reduction phase, all the necessary information are selected according to the research concern, focus, simplify, abstract, and transform data that appear in written up transcriptions or field notes. In this study, the data are used for description, which involves inductive and deductive analysis (as cited in Rusli & Hasbee, 2011, p. 188-189). At the data display phase,

information are organized, compressed assembly of information that permits conclusion drawing. The display may be an extended piece of text, diagram, matrix or chart. This is to give a way of arranging and thinking about the more textual data. Then, higher order categories and themes will emerge from the data that goes beyond those first identified at data reduction phase (Rusli and Hasbee, 2011, p. 188-189). At the conclusion drawing and verification phase, first this study needs to step back to study what the analyzed data means and to evaluate their implications for the questions at hand. Verifications are done by revisiting data as many times necessary to cross-check and verify these emergent conclusions. Then, the validity which considers whether the conclusions are being drawn from is credible warranted and defensible data are concerned. This last phase gives analysis the special appeal (Rusli & Hasbee, 2011, p. 188-189).

### **3.9 Summary**

This chapter briefly present research design, population, sample and sampling procedures, instrument, pilot study, validity and reliability, ethical consideration, data collection procedure and data analysis procedure.

## **CHAPTER 4**

### **FINDINGS**

#### **4.1 Introduction**

This chapter discusses the findings of the information from the distribution of survey questionnaire and distribution of open ended questionnaire. Data analyses are made based on the purpose of the study. There are two types of data analysis involved, quantitative analysis and qualitative analysis. This chapter starts with quantitative analysis and followed by qualitative analysis. Quantitative method used Pearson correlation to analyse relationship among variable, T-test was used to analyse the different between two variable whereby ANOVA was used to analyse the different between variable that has more than two group, in this variable for ANOVA Test are Period of service, age and levels of education. Subsequently, the Structural Equation Modelling was used to choose the best fit model. Qualitative findings in this chapter were divided into 4 separate parts based on research objectives and research questions. All findings were displayed in diagram and based from open ended questionnaire. This chapter end with a short summary.

#### **4.1 Demographic Profile of Respondents for Quantitative Method**

Sarawak, Bumi Kenyalang is located in Borneo Island with total population almost 2.4 mil. There are 4 main Races in Sarawak, with majority are Malay, Dayak, Iban, Melanau Chinese and 40 over ethnic groups all over Sarawak. Population is Kuching is currently increasing due to the increase of birth rate and immigrant from Malaysia peninsular and international immigrants. Population in this study is covering parameter in Kuching. (Department of Statistics Malaysia, 2015).

**Table 4.1: Response Rate**

| <b>Return Questionnaire from Polytechnic Kuching</b>   |                         |                                          |                             |                                     |                                                                     |                            |
|--------------------------------------------------------|-------------------------|------------------------------------------|-----------------------------|-------------------------------------|---------------------------------------------------------------------|----------------------------|
| <u>Date of Distribution</u>                            | <u>Date of Received</u> | <u>Quantity of Distribution</u>          | <u>Quantity of Received</u> | <u>Total complete questionnaire</u> | <u>Missing questionnaire and missing items</u>                      | <u>Return Percentage %</u> |
| 29 November 2016                                       | 4 January 2017          | 250 units of quantitative questionnaires | 117                         | 117                                 | None<br>(questionnaire is properly check by the head of department) | 46.8 percent               |
| 29 November 2016                                       | Nil                     | 5 qualitative open ended questionnaires  | 0                           | 0                                   | 0                                                                   |                            |
| <b>Return questionnaire from Sarawak Energy Berhad</b> |                         |                                          |                             |                                     |                                                                     |                            |
| <u>Date of Distribution</u>                            | <u>Date of Received</u> | <u>Quantity of Distribution</u>          | <u>Quantity of Received</u> | <u>Total complete questionnaire</u> | <u>Missing questionnaire and missing items</u>                      | <u>Return Percentage %</u> |
| 25 January 2017                                        | 13 April 2017           | 250 units of quantitative questionnaires | 74                          | 74                                  | None<br>(questionnaire is properly check by the head of department) | 29.6 percent               |
|                                                        |                         | 5 qualitative open ended questionnaires  | 3                           | 3                                   | 0                                                                   |                            |
| <b>Total Quantitative Questionnaires</b>               |                         |                                          | <b>191</b>                  |                                     |                                                                     |                            |

This study involved 117 respondents who were employees from Polytechnic Kuching, Sarawak and 74 respondents who are employees from Sarawak Energy Berhad and total of quantitative respondents were 191. Table 4.1 represent the information of respondent background which was represented based on demographic characteristics which comprised gender, period of service, age and levels of academic qualification.

**Table 4.2:** Demographic Profile of Respondents

| <b><u>Demography</u></b><br><b><u>characteristic</u></b> |                      | <b><u>Polytechnic</u></b><br><b><u>Kuching, Sarawak</u></b> |       | <b><u>Sarawak Energy</u></b><br><b><u>Berhad</u></b> |       |
|----------------------------------------------------------|----------------------|-------------------------------------------------------------|-------|------------------------------------------------------|-------|
| Gender                                                   |                      | F                                                           | %     | F                                                    | %     |
|                                                          | Male                 | 44                                                          | 37.6  | 27                                                   | 36.5  |
|                                                          | Female               | 73                                                          | 62.4  | 47                                                   | 63.5  |
|                                                          | Total                | 117                                                         | 100.0 | 74                                                   | 100.0 |
| Age                                                      | 20 years and below   | 0                                                           | 0     | 1                                                    | 1.4   |
|                                                          | 21 years to 30 years | 18                                                          | 15.4  | 43                                                   | 58.1  |
|                                                          | 31 years to 40 years | 81                                                          | 69.2  | 17                                                   | 23.0  |
|                                                          | 40 years and above   | 18                                                          | 15.4  | 13                                                   | 17.6  |
|                                                          | Total                | 117                                                         | 100.0 | 74                                                   | 100.0 |
| Period of Service                                        | Less than one year   | 0                                                           | 0     | 19                                                   | 25.7  |
|                                                          | 1 year to 5 years    | 23                                                          | 19.7  | 28                                                   | 37.8  |
|                                                          | 6 year to 10 years   | 56                                                          | 47.9  | 12                                                   | 16.2  |
|                                                          | 10 years above       | 38                                                          | 32.5  | 15                                                   | 20.3  |
|                                                          | Total                | 117                                                         | 100.0 | 74                                                   | 100.0 |
|                                                          | LCE/SRP/PMR          | 0                                                           | 0     | 1                                                    | 1.4   |
| Level of Education                                       | MCE/SPM/SPMV         | 0                                                           | 0     | 23                                                   | 31.1  |
|                                                          | STPM/DIPLOMA         | 3                                                           | 2.6   | 20                                                   | 27.0  |
|                                                          | DEGREE               | 88                                                          | 75.2  | 28                                                   | 37.8  |
|                                                          | Master/PhD           | 26                                                          | 22.2  | 2                                                    | 2.7   |
|                                                          | Total                | 117                                                         | 100.0 | 74                                                   | 100.0 |

Table 4.2 represents demographic background of respondents from Polytechnic Kuching, Sarawak as well as Sarawak Energy Berhad. Majority of the respondents were female with frequency of 73 and 62.4 percent and followed by male respondent with frequency of 44 and 37.6 percent with total respondent 117. Meanwhile for Sarawak Energy Berhad male frequency is 27 and 36.5 percent as compared to female respondent with 63.5 percent and frequency with total respondent 74. There were three age groups in this study, 21 to 30 years, 31 to 40 years and 40 years and above. Majority of the respondent from Polytechnic Kuching were age group 31 to 40 years old with frequency 81 and percentage 69.2 followed by age group 40 years and above with frequency 18 and percentage 15.4 and age group 21 to 30 years old with frequency 18 and percentage 15.4.

Whereby for Sarawak Energy Berhad majority of the respondent from age group 21 to 30 years old with frequency 43 and 58.1 percent, followed by aged group 31 to 40 years old with frequency 17 and 23 percent as compared to the Second lowest respond from age group 40 years and above with frequency 13 and percentage 17.6 and last age group 20 years and below with frequency 1 and 1.4 percent.

As for period of service, majority of Polytechnic Kuching are from the period of service group 6 to 10 years with frequency 56 and 47.9 percent followed by period of service group 10 years and above with frequency 38 and 32.5 percent and the lowest respond from period of service 1 to 5 years with frequency 23 and 19.7 percent. Meanwhile for Sarawak Energy Berhad the highest is period of Service group 1 year to 5 years with frequency 28 and 37.8 percent, less than 1 year with frequency 19 and 25.7 percent followed by 10 years above with frequency 15 and 20.3 percent, and the lowest is 6 years to 10 years with frequency 12 and 16.2 percent.

For levels of education there were three groups in this study, STPM/DIPLOMA, DEGREE and Master/PhD. Majority of the respondent from Polytechnic Kuching are from education group DEGREE with frequency 88 and 75.2 percent and respondent are from education group Master/PhD with frequency 26 and 22.2 percent. Meanwhile the lowest respond was from education group STPM/DIPLOMA with frequency 3 and 2.6 percent. Whereby for Sarawak Energy Berhad, the highest frequency and percentage is DEGREE group with frequency 28 and 37.8 percent, MCE/SPM/SPMV with frequency 23 and 31.1 percent, followed by STPM/DIPLOMA with frequency 20 and 27 percent and the lowest is Master/Phd with frequency 2 and 2.7 percent.

## 4.2 t- Test Analysis.

**Table 4.3:**t- Test Analysis for Gender and Employee Competency

| Independent Samples Test between Gender and employee competency |                             |                                         |      |                              |         |                 |                 |                       |                                           |        |
|-----------------------------------------------------------------|-----------------------------|-----------------------------------------|------|------------------------------|---------|-----------------|-----------------|-----------------------|-------------------------------------------|--------|
|                                                                 |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |                                           |        |
|                                                                 |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |        |
|                                                                 |                             |                                         |      |                              |         |                 |                 |                       | Lower                                     | Upper  |
| Employee Competency                                             | Equal variances assumed     | .337                                    | .562 | 2.364                        | 189     | .019            | .18773          | .07943                | .03106                                    | .34441 |
|                                                                 | Equal variances not assumed |                                         |      | 2.405                        | 155.155 | .017            | .18773          | .07805                | .03357                                    | .34190 |

\*\*alpha at the 0.05 level.

### H<sub>a1</sub>: There is a Significant Difference of Employee Competency Based on Gender

Table 4.3 above showed the result for T-test of employee competency based on gender. Based from the table 4.3 above, significant value was at 0.019 and alpha value was at 0.05 and Levene's test for equality of variance was at 0.845. Therefore, there was a significant difference of employee competency based on gender. Null hypothesis is rejected due to significant value lower than alpha value and alternate hypothesis is supported.

### 4.3 ANOVA Test of Employee Competency Based on Age, Period of Service and Level of Education

**Table 4.4:** Summary of ANOVA Test

| ANOVA              |                                 |                   |
|--------------------|---------------------------------|-------------------|
| <u>Variable</u>    | <u>Homogeneity of Variances</u> | <u>Sig. Value</u> |
| Age                | 0.832                           | 0.172             |
| Period of Service  | 0.664                           | 0.169             |
| Level of Education | 0.163                           | 0.239             |

Based from Table 4.4, the variables that were tested are age, period of service and levels of education from both Sectors. For the first variable showed there was no significant difference of employee competency based on age with significant value at 0.172. This is followed by period of service which showed that there was no significant difference of employee competency based on period of service with significant value at 0.169. The last variable tested in this study is levels of education which showed that there was no significant difference of employee competency based on levels of education with significant value at 0.239.

#### 4.3.1 ANOVA Analysis of Employee Competency Based on Period of Service

**Table 4.5:** ANOVA for Period of Service

| ANOVA                                              |                |     |             |       |      |
|----------------------------------------------------|----------------|-----|-------------|-------|------|
| Employee Period of Service and Employee Competency |                |     |             |       |      |
|                                                    | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups                                     | 1.451          | 3   | .484        | 1.696 | .169 |
| Within Groups                                      | 53.309         | 187 | .285        |       |      |
| Total                                              | 54.760         | 190 |             |       |      |

#### **Ha2: There is a Significant Difference of Employee Competency Based on Period of Service**

Table 4.5 above showed that there was no significant different of employee competency based on period of service and with significant value at 0.169 with mean square .484. Therefore, all group showed there was no significant difference. Therefore, the null hypothesis was accepted, and alternate hypothesis was rejected due to significant value greater than alpha value.

#### 4.3.2 ANOVA analysis of employee competency based on Age

**Table 4.6:** ANOVA Result for Age

| ANOVA                                |                |     |             |       |      |
|--------------------------------------|----------------|-----|-------------|-------|------|
| Employee Age and Employee Competency |                |     |             |       |      |
|                                      | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups                       | 1.439          | 3   | .480        | 1.682 | .172 |
| Within Groups                        | 53.321         | 187 | .285        |       |      |
| Total                                | 54.760         | 190 |             |       |      |

#### **Ha3: There is a Significant Difference of Employee Competency Based on Age**

The ANOVA Table 4.6 above indicated that there was no significant difference of employee competency based on employee's age and with significant value at 0.172 with mean square .480. Table 4.6 above showed there was no significant difference with

significant value .172. Null hypothesis is supported, and alternate hypothesis rejected with significant value .172 above the alpha value 0.05.

#### 4.3.3 ANOVA Analysis of Employee Competency Based on Employee Education

**Table 4.7:** ANOVA Result for Employee Education

| ANOVA                                               |                |     |             |       |      |
|-----------------------------------------------------|----------------|-----|-------------|-------|------|
| Employee Level of Education and Employee Competency |                |     |             |       |      |
|                                                     | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups                                      | 1.589          | 4   | .397        | 1.389 | .239 |
| Within Groups                                       | 53.171         | 186 | .286        |       |      |
| Total                                               | 54.760         | 190 |             |       |      |

#### **H<sub>a4</sub>: There is a Significant Difference of Employee Competency Based on Level of Education**

Table 4.7 showed that there was no significant difference of employee competency based on employee education and with significant value at 0.239 with mean square 0.397. Table 4.7 showed that there was no significance difference amongst all group. Therefore, there was no significance difference and alternate hypothesis was rejected.

#### 4.4 Correlation between Personality, Peer support, Work Life Balance and Technological Change towards Employee Competency

Table 4.8 showed the value of Pearson Correlation analysis between independent variables towards dependent variable. The independent variables in this study are personality, peer Support, work life balance and Employee Competency. Meanwhile for dependent variable is employee competency.

**Table 4.8:** Pearson Correlation Matrix

| <u>Variables</u>    | <u>Personality</u> | <u>Work Life Balance</u> | <u>Peer Support</u> | <u>Employee Competency</u> |
|---------------------|--------------------|--------------------------|---------------------|----------------------------|
| Personality         | 1.000              |                          |                     |                            |
| Work life Balance   | .384               | 1.000                    |                     |                            |
| Peer Support        | .469               | .407                     | 1.000               |                            |
| Employee Competency | .761               | .321                     | .460                | 1.000                      |

| <u>Dependent Variable</u> |      | <u>Independent Variables</u> | <u>Estimate</u> | <u>S.E.</u> | <u>C.R.</u> | <u>p</u> | <u>Hypothesis</u> |
|---------------------------|------|------------------------------|-----------------|-------------|-------------|----------|-------------------|
| Employee Competency       | <--- | Personality                  | .664            | .051        | 12.953      | .000     | Ha5 Supported     |
| Employee Competency       | <--- | Peer Support                 | .097            | .040        | 2.429       | .015     | Ha6 Supported     |
| Employee Competency       | <--- | Work life Balance            | -.001           | .033        | -.036       | .972     | Ha7 Rejected      |

#### Ha5: There is a Significant Relationship between Personality and Employee Competency

Table 4.8 above showed the result for correlations between Personality and employee competency. Based on the Table 4.8 above r-value was at 0.761 and significant value was at 0.000. Therefore, there is a strong positive relationship between personality and employee competency and null hypothesis was rejected with p-value 0.000( $p > 0.01$ ). Based on the

first alternate hypothesis is supported, there was a significant relationship between Personality and employee competency.

**H<sub>a6</sub>: There is a Significant Relationship between Peer Support and Employee Competency**

Table 4.8 showed the result for correlations between peer support and employee competency for. Based on Table 4.8 above the  $r$ -value was at 0.460 and significant value was at 0.015. Therefore, there was a weak positive relationship between peer support and employee competency and null hypothesis is rejected with  $p$ -value 0.000( $p < 0.01$ ). Based on the second alternate hypothesis is supported, there was a significant relationship between peer support and employee competency.

**H<sub>a7</sub>: There is a Significant Relationship between Work Life Balance and Employee Competency**

Table 4.8 showed the result for correlations between work life balance and employee competency. Based on the Table 4.8, the  $r$ -value was at 0.321 and significant value was at 0.972. Therefore, there was a weak positive relationship between work life balance and employee competency and null hypothesis is accepted with  $p$ -value 0.000( $p < 0.01$ ). Based on the third alternate hypothesis is rejected, there was no significant relationship between work life balance and employee competency.

## 4.5 Normality Test

**Table 4.9:** Normality Test

| <u>Variable</u> | <u>min</u> | <u>max</u> | <u>skew</u> | <u>c.r.</u> | <u>kurtosis</u> | <u>c.r.</u> |
|-----------------|------------|------------|-------------|-------------|-----------------|-------------|
| SecI_5          | 2.000      | 5.000      | -.427       | -2.411      | -.047           | -.132       |
| SecI_4          | 2.000      | 5.000      | -.570       | -3.214      | .170            | .479        |
| SecC_3          | 1.000      | 5.000      | -.446       | -2.514      | .680            | 1.917       |
| SEC_A5          | 1.000      | 5.000      | -.481       | -2.712      | .465            | 1.313       |
| SecC_1          | 1.000      | 5.000      | -.794       | -4.480      | 1.360           | 3.836       |
| SecF_1          | 2.000      | 5.000      | -.221       | -1.248      | -.245           | -.691       |
| SEC_A9          | 2.000      | 5.000      | .017        | .094        | -.508           | -1.432      |
| SEC_A8          | 1.000      | 5.000      | -.417       | -2.352      | .432            | 1.220       |
| SecI_7          | 1.000      | 5.000      | -.803       | -4.532      | 1.211           | 3.417       |
| SecI_3          | 2.000      | 5.000      | -.247       | -1.395      | -.671           | -1.892      |
| SecI_2          | 1.000      | 5.000      | -.422       | -2.380      | .215            | .607        |
| SecI_1          | 1.000      | 5.000      | -.547       | -3.086      | .409            | 1.153       |
| SEC_A6          | 2.000      | 5.000      | -.129       | -.730       | -.280           | -.791       |
| SEC_A3          | 2.000      | 5.000      | -.254       | -1.432      | .098            | .276        |
| SEC_A2          | 2.000      | 5.000      | -.272       | -1.534      | -.319           | -.901       |
| SecF_2          | 1.000      | 5.000      | -.240       | -1.353      | .552            | 1.558       |
| SecF_4          | 2.000      | 5.000      | -.344       | -1.940      | -.043           | -.122       |
| SecF_5          | 1.000      | 5.000      | -.739       | -4.171      | 1.065           | 3.003       |
| SecF_6          | 1.000      | 5.000      | -.616       | -3.474      | .764            | 2.157       |
| SecE_3          | 1.000      | 5.000      | -.662       | -3.735      | 1.503           | 4.240       |
| SecE_4          | 1.000      | 5.000      | -.722       | -4.072      | .808            | 2.280       |
| SecE_5          | 1.000      | 5.000      | -.799       | -4.506      | 1.186           | 3.347       |
| SecE_6          | 1.000      | 5.000      | -1.051      | -5.927      | 1.825           | 5.147       |
| SecD_1          | 1.000      | 5.000      | -.585       | -3.300      | .106            | .299        |
| SecD_2          | 1.000      | 5.000      | -.454       | -2.559      | -.057           | -.160       |
| SecD_5          | 1.000      | 5.000      | -.482       | -2.722      | .458            | 1.293       |
| SecD_6          | 1.000      | 5.000      | -.658       | -3.710      | .623            | 1.759       |
| SecC_8          | 1.000      | 5.000      | -1.207      | -6.810      | 3.317           | 9.359       |
| SecC_5          | 1.000      | 5.000      | -1.043      | -5.883      | 2.595           | 7.320       |
| SecC_4          | 1.000      | 5.000      | -.599       | -3.380      | 1.640           | 4.628       |
| SecC_2          | 1.000      | 5.000      | -.713       | -4.023      | 1.204           | 3.396       |
| Multivariate    |            |            |             |             | 290.732         | 44.415      |

Note. ECM=Employee Competency, TMK=Teamwork, EXPC=Work Experience, CULT= Organizational Culture, CHNG= Change Management and TECH= Technological Change

Normality test result above is for 6 constructs. Skewness for change management construct was at the range of- 0.221 to -.739 meanwhile for kurtosis at the range of -.043 to 1.065 Skewness for organizational culture was at the range of -.662 to -1.051 and for kurtosis was at the range .808 to 1.503.

Skewness for work experience was at the range of -.454 to -.658 and for kurtosis was at the range of -.057 to .623. Skewness for teamwork was at the range of .017 to -.481 and kurtosis was at the range of .098 to 465. Skewness for technological change was at the range of -.247 to -.803 and for kurtosis was at the range of -.047 to 1.211. The last construct is employee competency with skewness at the range of .017 to -.481 and kurtosis at the range of .098 to .508.

#### 4.6 Construct Validity Average Variance Extracted and Discriminant Validity

**Table 4.10:** Construct Validity, Average Variance Extracted and Discriminant Validity

| Construct   | CR           | AVE          | MSV   | ASV   | ECM          | TMK          | WE           | OC           | CHG          | TECH         |
|-------------|--------------|--------------|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>ECM</b>  | <b>0.859</b> | <b>0.505</b> | 0.399 | 0.257 | <b>0.711</b> |              |              |              |              |              |
| <b>TMK</b>  | <b>0.890</b> | <b>0.579</b> | 0.284 | 0.173 | 0.473        | <b>0.761</b> |              |              |              |              |
| <b>WE</b>   | <b>0.820</b> | <b>0.535</b> | 0.399 | 0.264 | 0.632        | 0.395        | <b>0.731</b> |              |              |              |
| <b>OC</b>   | <b>0.852</b> | <b>0.591</b> | 0.383 | 0.274 | 0.516        | 0.533        | 0.563        | <b>0.769</b> |              |              |
| <b>CHG</b>  | <b>0.862</b> | <b>0.555</b> | 0.383 | 0.224 | 0.414        | 0.344        | 0.431        | 0.619        | <b>0.745</b> |              |
| <b>TECH</b> | <b>0.888</b> | <b>0.571</b> | 0.262 | 0.190 | 0.475        | 0.290        | 0.511        | 0.345        | 0.512        | <b>0.755</b> |

Note. ECM=Employee Competency, TMK=Teamwork, WE=Work Experience, OC= Organizational Culture, CHG= Change Management and TECH= Technological Change

Results from Table 4.10 explained construct validity (CR), average variance extracted (AVE) and discriminant validity. Technological change with construct validity (CR) .888, AVE .571 and discriminant validity was at .755, working experience with construct validity (CR).820 AVE .532 and discriminant validity at .731 followed by teamwork with construct validity (CR) .890, AVE .579 and discriminant validity at .761.

As for Organizational Culture's construct validity (CR) was at .852 AVE .591 and discriminant validity at .769. The next Construct is change management with construct validity at .862, AVE .555 and discriminant validity at .745. The final construct is employee competency with Construct Validity at .859, AVE .505 and discriminant validity at .711.

#### 4.7 Potential Outlier

**Table 4.11:** Outlier

| <u>Observation number</u> | <u>Mahalanobis d-squared</u> | <u>p1</u> | <u>p2</u> |
|---------------------------|------------------------------|-----------|-----------|
| 135                       | 97.379                       | .000      | .000      |
| 55                        | 83.060                       | .000      | .000      |
| 129                       | 82.467                       | .000      | .000      |
| 47                        | 77.095                       | .000      | .000      |
| 189                       | 72.458                       | .000      | .000      |
| 71                        | 71.973                       | .000      | .000      |
| 122                       | 71.448                       | .000      | .000      |
| 27                        | 69.770                       | .000      | .000      |
| 149                       | 67.304                       | .000      | .000      |
| 128                       | 67.227                       | .000      | .000      |
| 154                       | 66.788                       | .000      | .000      |
| 120                       | 64.230                       | .000      | .000      |
| 182                       | 63.716                       | .000      | .000      |

In this study, there were 13 potential multivariate outliers remained there was no deletion. Originally, there were 191 respondents in this study. Fits index showed a better fit index therefore no deletion occurs.

Hair et al., (2012) recommended that the deletion of outliers will increase fits indexes result nonetheless at the risk of restraining generalizability. Thus, this study intended to remain this outlier in order to get a better result of the study.

#### **4.8 Measurement Model**

Confirmatory factor analysis in this study conducted accordingly and the result was measured by using model measurement that consisted of Good fit Index (GFI), Chi-square and degree of freedom (CMIN/DF), Root mean square error of approximation (RMSEA), Normated fit index (NFI) and Comparative fit index (CFI). The results for Measurement model showed that Good fit index was at 0.833 as proposed by Hair et al., (2012) which were considered as acceptable good fit.

As for Chi-square and Degree of freedom, the result showed that CMIN/DF was below 5.0 (Hair et al., 2012) with value of 1.655 at the significant value of .000. Root mean square error of approximation (RMSEA) was at 0.059 which was below 0.08 (Hair et al. 2012), Normated fit Index (NFI) was at 0.836 (Hair et al. 2012) and Comparative fit index (CFI) was at 0.927.

The result for Measurement model in this study was at acceptable level and meet measurement level. Figure 4.11 showed measurement model that was derived from hypotheses of the study. There were few items deleted due to low factor loading. In this study, employee competency construct consisted of 31 items only and were selected due to high factor loading.

Another 16 items were deleted due to low factor loading. According to Hair et al., (2012) who stated that low factor loading during confirmatory factor analysis would jeopardize the output of the study. Therefore, in this study 31 items remain out of 47, 16 were deleted. For technological change 3 constructs were deleted, construct for teamwork 4 were deleted, construct for work experience 2 were deleted, construct for culture 2 were deleted and construct for employee competency 4 were deleted.

The items aforementioned were deleted due to low factor loading. To support this decision, Hair et al., (2012) explained in his study that low factors loading can only be deleted after considering modification index is failed to improve absolute fit index, particularly for relative chi-square and root mean square approximate.

All the deletion items aforementioned has been modify using by deleting all modification indices (MI) that above 15.00. After considering that MI is no longer influence the absolute fit index. The decision to delete low loading item were considered, this item was deleted based on the recommendation by Hair et al., (2006)

On top of that, another issue that might influence on the deletion of the items in this study is due to social desirability bias. Social desirability bias is the “Bias phenomenon” that occurs when respondent tend to answer the statement randomly due to referring to the previous pattern of the statement (Hair et al., 2012).

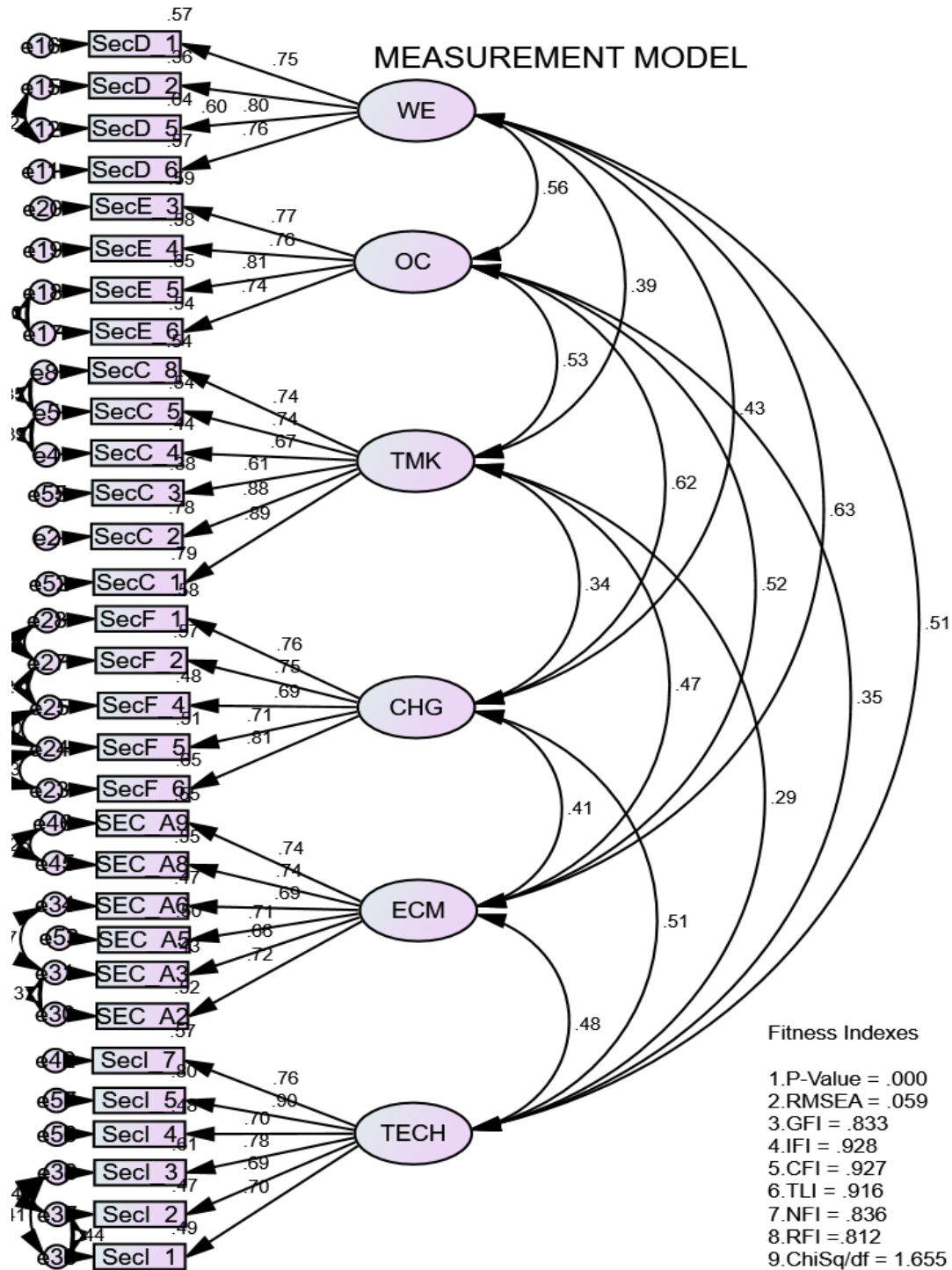


**Figure 4.1: Measurement Model**

Note. ECM=Employee Competency, TMK=Teamwork, WE=Work Experience, OC= Organizational Culture, CHG= Change Management and TECH= Technological Change

#### 4.9 Structural Model

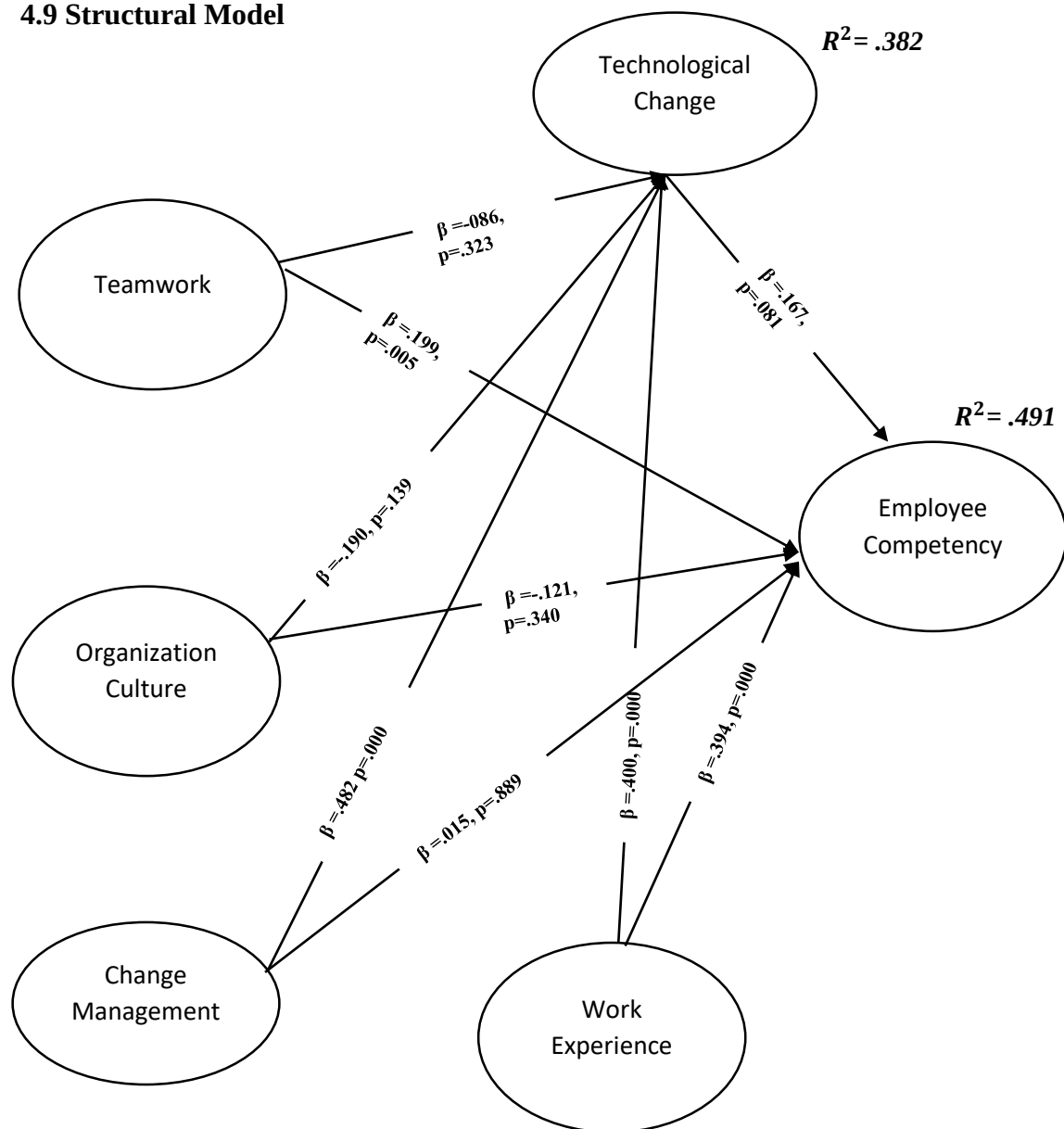


**Figure 4.2:** Structural Model

**Table 4.12:** Regression Estimate on Latent Construct

| <u>Constructs</u>                                                                           |      |                           | <u>Standard<br/>Regression<br/>Weight (<math>\beta</math>)</u> | <u>C.R.<br/>(t-value)</u> | <u>P</u> | <u>Alternate<br/>Hypothesis</u> |
|---------------------------------------------------------------------------------------------|------|---------------------------|----------------------------------------------------------------|---------------------------|----------|---------------------------------|
| Technology                                                                                  | <--- | Teamwork                  | .086                                                           | .988                      | .323     | H <sub>a</sub> 8<br>Rejected    |
| Technology                                                                                  | <--- | Work<br>Experience        | .400                                                           | 3.811                     | .000     | H <sub>a</sub> 9<br>Supported   |
| Technology                                                                                  | <--- | Organization<br>Culture   | -.190                                                          | -1.478                    | .139     | H <sub>a</sub> 10<br>Rejected   |
| Technology                                                                                  | <--- | Change<br>management      | .428                                                           | 3.800                     | .000     | H <sub>a</sub> 11<br>Supported  |
| Employee<br>competency                                                                      | <--- | Technology                | .167                                                           | 1.744                     | .081     | H <sub>a</sub> 12<br>Rejected   |
| <u>Direct Effect</u>                                                                        |      |                           | <u>Standard<br/>Regression<br/>Weight (<math>\beta</math>)</u> | <u>C.R.<br/>(t-value)</u> | <u>P</u> | <u>Alternate<br/>Hypothesis</u> |
| Employee<br>competency                                                                      | <--- | Teamwork                  | .199                                                           | 2.320                     | .020     | H <sub>a</sub> 13<br>Supported  |
| Employee<br>competency                                                                      | <--- | Change<br>management      | .015                                                           | .139                      | .889     | H <sub>a</sub> 14<br>Rejected   |
| Employee<br>competency                                                                      | <--- | Organizational<br>Culture | .121                                                           | .955                      | .340     | H <sub>a</sub> 15<br>Rejected   |
| Employee<br>competency                                                                      | <--- | Work<br>Experience        | .394                                                           | 3.504                     | .000     | H <sub>a</sub> 16<br>Supported  |
| <b>Squared Multiple Correlations:</b> Technology $R^2$ .382, Employee Competency $R^2$ .491 |      |                           |                                                                |                           |          |                                 |

**Table 4.13:** Fits Indexes

|                                                           |                            |
|-----------------------------------------------------------|----------------------------|
| CMIN/DF 5.0 < (Hair et.al,2012)                           | 1.655 (670.399 Chi-square) |
| p Value 0.00 < (Hair et.al,2012)                          | 0.000                      |
| RMSEA 0.8 < acceptable and 0.5 < Excellent (Hair et,2006) | 0.059                      |
| GFI >.90 (Hair et.al,2012) or less than 150 .8 >          | 0.833                      |
| CFI >.90 (Hair et.al,2012)                                | 0.927                      |
| TLI >.90 (Hair et.al,2012)                                | 0.916                      |
| NFI >.80 if sample more than 300 or less than 150         | 0.836                      |
| RFI >.80 if sample more than 300 or less than 150         | 0.812                      |
| IFI >.80 if sample more than 300 or less than 150         | 0.928                      |

#### 4.10 Result for Hypothesis Testing

Based on the result of regression analysis for indirect effect among the constructs, it showed that there was a weak positive effect on teamwork and technological change as mediating factor towards employee competency. Thus, alternate hypothesis 8 was rejected, with  $\beta$  coefficient = .086, t-value = .988 and significant value at  $p = .323$ . Result for alternate hypothesis 9 with  $\beta$  coefficient = .400, t-value = 3.811 and significant at  $p = .000$ . Therefore, alternate hypothesis 9 was supported. As for hypothesis 10, the result for  $\beta$  coefficient was at  $-.190$  and t-value =  $-1.478$  and significant at  $p = .139$  and the results reject alternate hypothesis 10. Alternate hypothesis 11 showed that  $\beta$  coefficient was at  $-.246$ , t-value =  $-3.917$  and significant value at  $p = .000$ . Therefore, alternate hypothesis was rejected. For alternate hypothesis 12, it showed that  $\beta$  coefficient was at  $-.278$ , t-value =  $-14.141$  and significant value at  $p = .000$ . Therefore, alternate hypothesis 12 is supported.

Direct effect from teamwork and employee competency was at  $\beta = .199$  and t-value was at  $2.320$ , and significant value at  $p = .020$ . Therefore, alternate hypothesis 13 is supported. As for alternate Hypothesis 14 on change management to employee competency, showed that  $\beta = .015$  and t-value was at  $-.139$  and significant value at  $p = .889$ , alternate hypothesis 14 is rejected.

Meanwhile for organizational culture to employee competency was at  $\beta = .121$  and t-value was at  $-.955$  and significant value at  $p = .340$ , thus alternate hypothesis 15 is rejected. The last hypothesis is alternate hypothesis 16 technological competency and employee competency. The finding showed that  $\beta = .167$  and t-value was at  $1.774$  and significant value at  $p = .081$ ,

Final fit indices for structural model showed that CMIN/Df was at 1.655 and chi-square at 670.399, p- value was at .000, RMSEA was at .059, GFI was at .833, CFI was at .927, TLI was at .916, NFI was at .836, RFI was at .812 and IFI was at .928. Squared Multiple Correlations for Technological change at was  $R^2.382$  which is large effect size and Employee Competency with  $R^2.491$  with large effect size.

#### 4.11 Path Diagram Structural Model

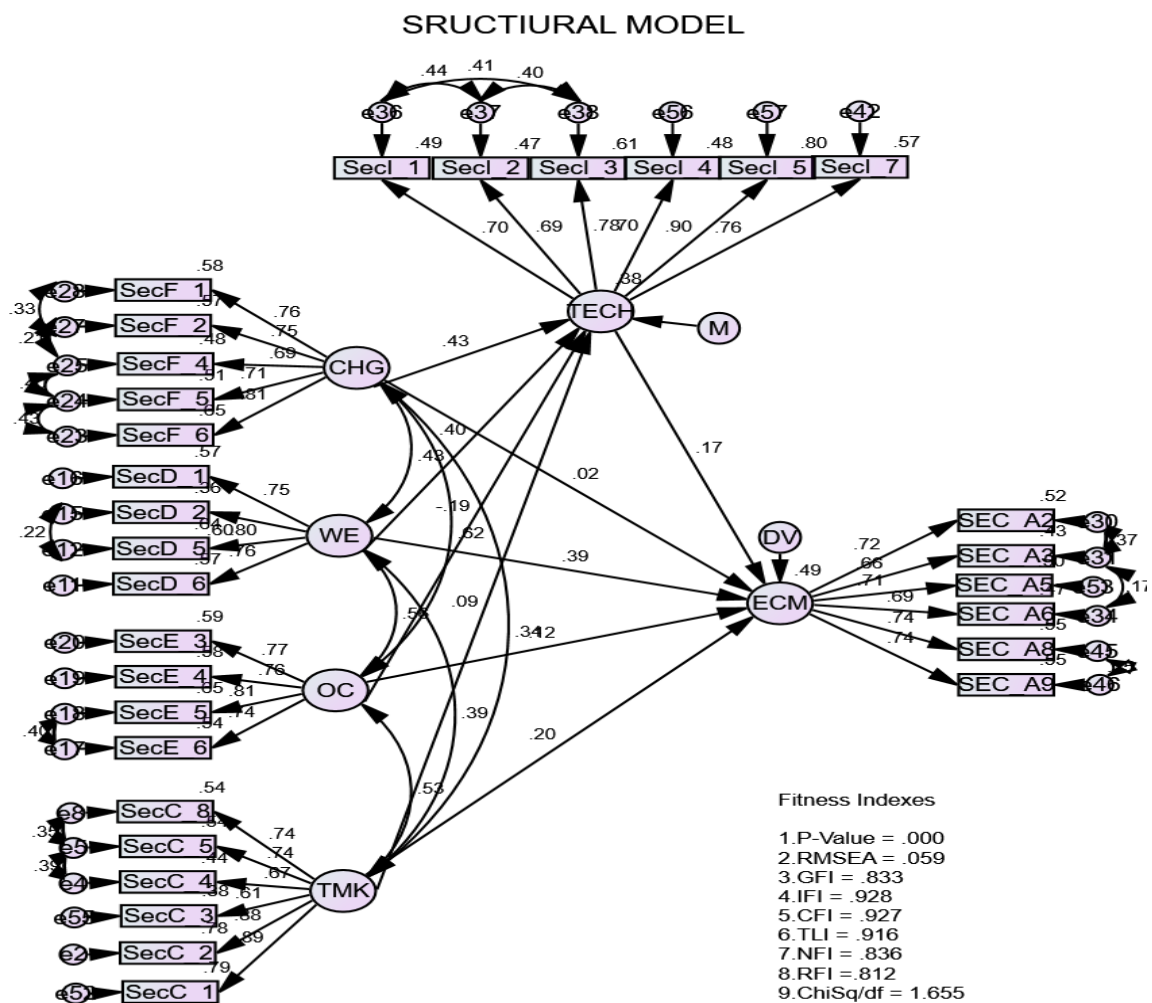


**Figure 4.3: Path Diagram Structural Model**

Note. ECM=Employee Competency, TMK=Teamwork, WE=Work Experience, OC= Organizational Culture, CHG= Change Management and TECH= Technological Change.

## 4.12 Mediation Test

### Mediation Test for Teamwork

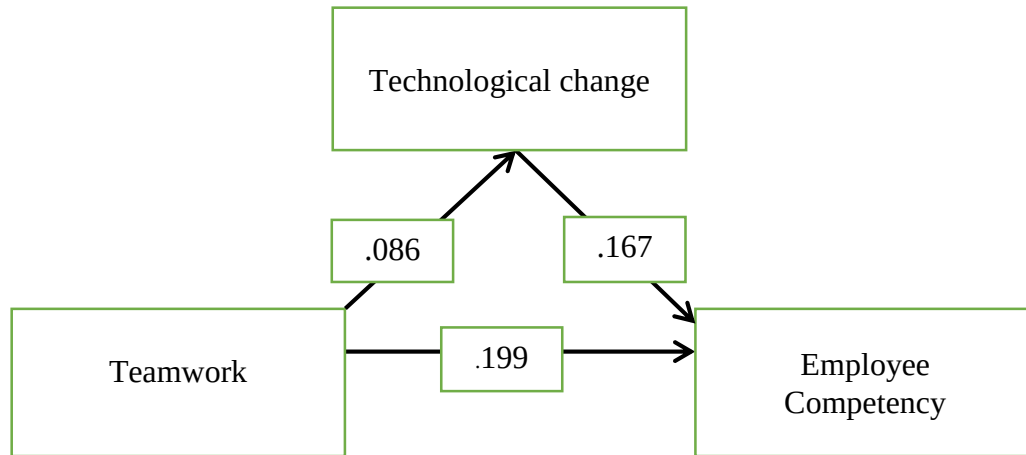


**Figure 4.4:** Mediation Test on Teamwork

The indirect effect =  $.086 \times .199 = 0.0171$ , the direct effect =  $.199$ , since from path teamwork to technological change is insignificant and technological change to employee competency is significant. Therefore, the findings for mediation test showed there was no mediation occurs.

**Table 4.14:** Mediation Test for Teamwork

|                          | Pathway                    | Estimate | S. E | C.R   | P-value | Result          |
|--------------------------|----------------------------|----------|------|-------|---------|-----------------|
| Y (Employee Competency)  | ← $X_1$ (Teamwork)         | .199     | .065 | 2.320 | .020    | Significant     |
| M (Technological Change) | ← $X_1$ (Teamwork)         | .086     | .091 | .988  | .323    | Not significant |
| Y (Employee Competency)  | ← M (Technological Change) | .167     | .092 | 1.774 | .081    | Not significant |

### Mediation Test for Work Experience

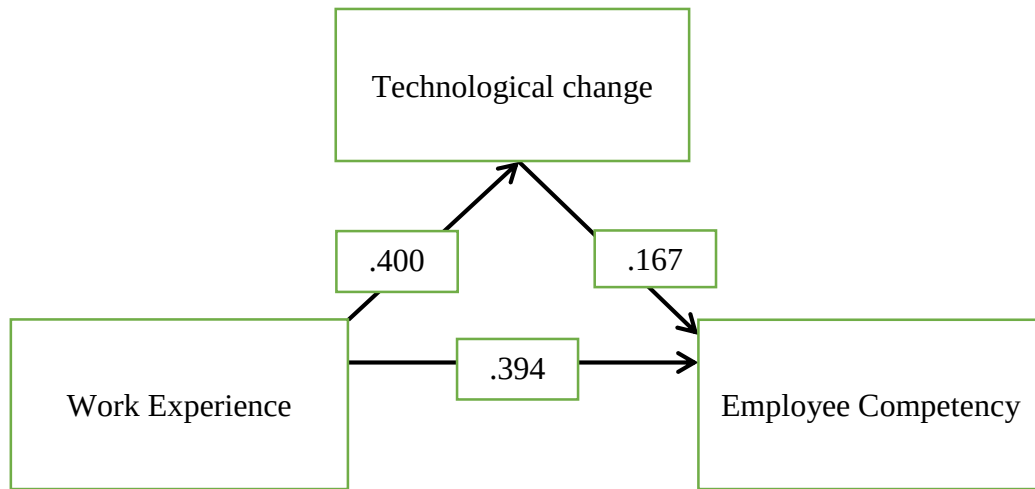


**Figure 4.5:** Mediation test on Work Experience

The indirect effect =  $.400 \times .167 = 0.0668$ , the direct effect =  $.394$ , since the path from teamwork to technological change is insignificant and technological change to employee competency is significant. Therefore, the findings for mediation test showed there was no mediation occurs.

**Table 4.15:** Mediation Test for Work Experience

|                          | <u>Pathway</u>                     | <u>Estimate</u> | <u>S. E</u> | <u>C.R</u> | <u>P-value</u> | <u>Result</u>   |
|--------------------------|------------------------------------|-----------------|-------------|------------|----------------|-----------------|
| Y (Employee Competency)  | ← X <sub>1</sub> (Work Experience) | .394            | .098        | 3.504      | .000           | Significant     |
| M (Technological Change) | ← X <sub>1</sub> (Work Experience) | .400            | .095        | 3.811      | .000           | Significant     |
| Y (Employee Competency)  | ← M(Technological Change)          | .167            | .092        | 1.774      | .081           | Not significant |

### Mediation Test for Organization Culture

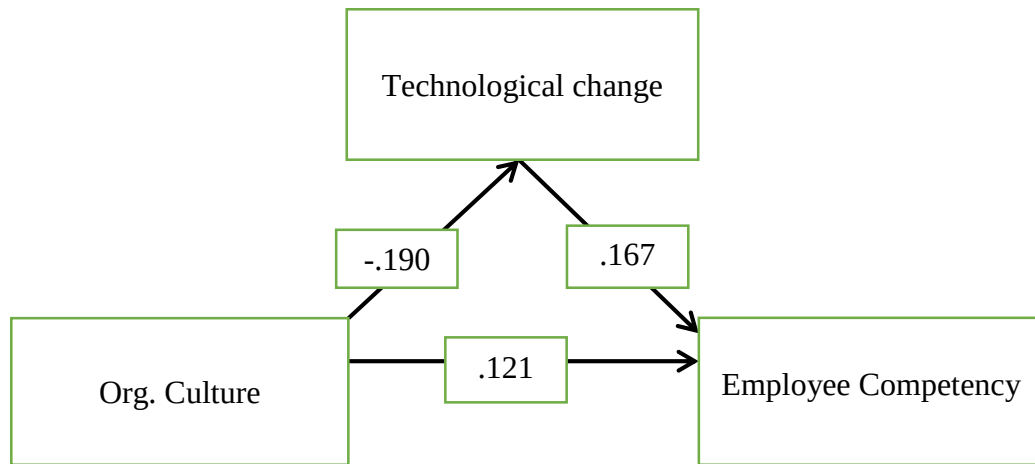


**Figure 4.6:** Mediation Test on Organizational Culture

The indirect effect =  $-.190 \times .167 = 0.0317$ , the direct effect =  $.121$ , since the path from teamwork to technological change is insignificant and technological change to employee competency is significant. Therefore, the findings for mediation test showed there was no mediation occurs

**Table 4.16:** Mediation Test for Organization Culture

|                            | Pathway                       | Estimate | S. E | C.R    | P-value | Result          |
|----------------------------|-------------------------------|----------|------|--------|---------|-----------------|
| Y (Employee Competency) ←  | X <sub>1</sub> (Org. Culture) | .121     | .103 | .955   | .340    | Not significant |
| M (Technological Change) ← | X <sub>1</sub> (Org. Culture) | -.190    | .109 | -1.478 | .139    | Not significant |
| Y (Employee Competency) ←  | M(Technological Change)       | .167     | .092 | 1.774  | .081    | Not significant |

### Mediation Test for Change Management

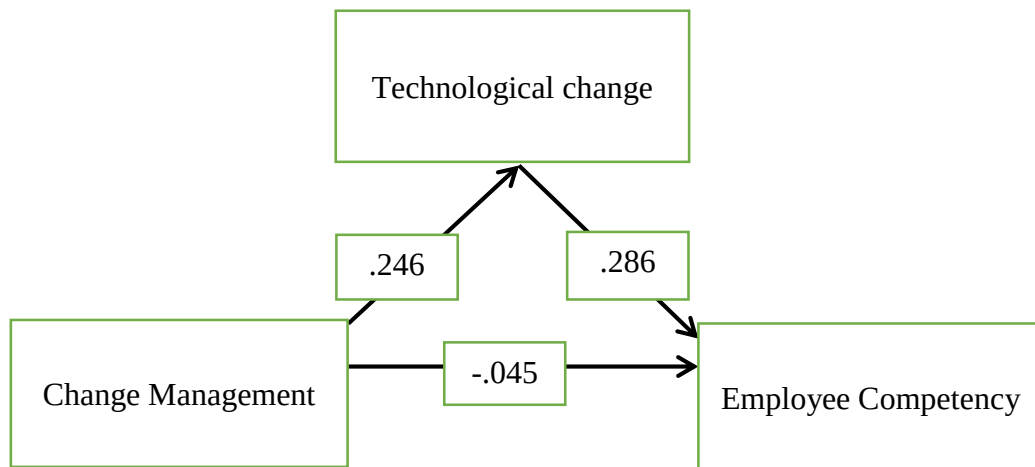


**Figure 4.7:** Mediation test on Change Management

The indirect effect =  $.246 \times .286 = 0.070$ , the direct effect =  $-.050$ , since the path from teamwork to technological change is insignificant and technological change to employee competency is significant. Therefore, the findings for mediation test showed there was no mediation occurs

**Table 4.17:** Mediation Test for Change Management

| <u>Pathway</u>           |                                  | <u>Estimate</u> | <u>S.E</u> | <u>C.R</u> | <u>P-value</u> | <u>Result</u>   |
|--------------------------|----------------------------------|-----------------|------------|------------|----------------|-----------------|
| Y (Employee Competency)  | ← X <sub>1</sub> (C. Management) | .015            | .086       | .139       | .889           | Not significant |
| M (Technological Change) | ← X <sub>1</sub> (C. Management) | .482            | .091       | 3.800      | .000           | Significant     |
| Y (Employee Competency)  | ← M (Technological Change)       | .167            | .092       | 1.774      | .081           | Not significant |

#### 4.13 Summary of Data Analysis for Quantitative method

**Table 4.18:** Summary of Data Analysis for Quantitative Method

| <u>Research Objectives</u>                                                           | <u>Research Question</u>                                                          | <u>Research Hypotheses</u>                                                            | <u>Analysis</u>     | <u>Hypothesis</u>         |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------|---------------------------|
| 1. To study the difference between gender toward employee competency.                | What is the difference between genders toward employee competency?                | There is a significant difference between genders toward employee competency          | T-test              | H <sub>a1</sub> Supported |
| 2. To study the difference between period of service towards employee competency.    | What is the difference between periods of service towards employee competency?    | There is a difference between period of service towards employee competency           | ANOVA               | H <sub>a2</sub> Rejected  |
| 3. To study the difference between age of the respondent towards employee competency | What is the difference between age of the respondent towards employee competency? | There is a difference between age of the respondent towards employee competency       | ANOVA               | H <sub>a3</sub> Rejected  |
| 4. To study the difference between levels of education towards employee competency.  | What is the difference between levels of education towards employee competency?   | There is a difference between levels of education towards employee competency.        | ANOVA               | H <sub>a4</sub> Rejected  |
| 5. To study the relationship between personality and employee competency             | What is the relationship between personality and employee competency              | There is a significant relationship between personality and employee competency       | Pearson Correlation | H <sub>a5</sub> Supported |
| 6. To study the relationship between Peer support and employee competency.           | What is the relationship between Peer support and employee competency.            | There is a significant relationship between Peer support and employee competency      | Pearson Correlation | H <sub>a6</sub> Supported |
| 7. To study the relationship between work life Balance and employee competency.      | What is the relationship between work life Balance and employee competency        | There is a significant relationship between work life Balance and employee competency | Pearson Correlation | H <sub>a7</sub> Rejected  |

**Table 4.18** continued

| <u>Research Objectives</u>                                                                                                         | <u>Research Question</u>                                                                                                      | <u>Research Hypotheses</u>                                                                                                           | <u>Analysis</u>           | <u>Hypothesis</u>           |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------|
| 8. To study the indirect effect of teamwork and technological change as mediating factor towards employee competency.              | What is the indirect effect of teamwork and technological change as mediating factor towards employee competency?             | There is a positive indirect effect of teamwork and technological change as mediating factor towards employee competency             | SEM (Regression analysis) | H <sub>a</sub> 8 Rejected   |
| 9. To study the indirect effect of Work experience and technological change as mediating factor towards employee competency.       | What is the indirect effect of Work experience and technological change as mediating factor towards employee competency?      | There is a positive indirect effect of Work experience and technological change as mediating factor towards employee competency      | SEM (Regression analysis) | H <sub>a</sub> 9 Supported  |
| 10. To study the indirect effect of Organization culture and technological change as mediating factor towards employee competency. | What is the indirect effect of Organization culture and technological change as mediating factor towards employee competency? | There is a positive indirect effect of Organization culture and technological change as mediating factor towards employee competency | SEM (Regression analysis) | H <sub>a</sub> 10 Rejected  |
| 11. To study the indirect effect of Change management and technological change as mediating factor towards employee competency.    | What is the effect indirect of Change management and technological change as mediating factor towards employee competency?    | There is a positive indirect effect of Change and technological change as mediating factor towards employee competency               | SEM (Regression analysis) | H <sub>a</sub> 11 Supported |

**Table 4.18** continued

|                                                                                  |                                                                              |                                                                                   |                           |                             |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------|-----------------------------|
| 12. To study the effect of technological change towards employee competency.     | What is the effect of technological change towards employee competency?      | There is a positive effect of technological change towards employee competency    | SEM (Regression analysis) | H <sub>a</sub> 12 Rejected  |
| 13. To the direct effect on Teamwork and employee competency                     | What is the direct effect on Teamwork and employee competency?               | The is a positive direct effect on Teamwork and employee competency               | SEM (Regression analysis) | H <sub>a</sub> 13 Supported |
| 14. To study the direct effect on Change Management and employee competency      | What is the direct effect on Change Management and employee competency?      | The is a positive direct effect on Change Management and employee competency      | SEM (Regression analysis) | H <sub>a</sub> 14 Rejected  |
| 15. To study the direct effect on Organizational Culture and employee competency | What is the direct effect on Organizational Culture and employee competency? | The is a positive direct effect on Organizational Culture and employee competency | SEM (Regression analysis) | H <sub>a</sub> 15 Rejected  |
| 16. To study the direct effect on Work Experience and employee competency        | To study the direct effect on Work Experience and employee competency        | The is a positive direct effect on Work Experience and employee competency        | SEM (Regression analysis) | H <sub>a</sub> 16 Supported |

#### 4.14 Qualitative Findings

Qualitative findings in this chapter are divided into 4 separate parts based on research objectives and research questions. All findings are displayed in the diagram.

**Table 4.19:** Demographic Profile of Informants for Qualitative method

| <u>Informant</u> | <u>Agency</u> | <u>Department</u> | <u>Years of Service</u> | <u>Marital Status</u> | <u>Education</u> | <u>Age</u>   | <u>Gender</u> |
|------------------|---------------|-------------------|-------------------------|-----------------------|------------------|--------------|---------------|
| P1               | Electricity   | Human Resource    | 24 years                | Married               | Master           | 50 years     | Female        |
| P2               | Electricity   | Human resource    | 25 years                | Married               | Bachelor Degree  | 50 years     | Female        |
| P3               | Electricity   | Human Resource    | 3 years                 | Married               | Degree           | 32 years     | Male          |
| P4               | Electrical    | Corporate shared  | 27 years                | Single mother         | Master           | 50 years     | Female        |
| P5               | Electrical    | Corporate shared  | 6 years                 | Single                | Master           | 31 years old | Female        |

Table 4.19 showed the demographic background of the informants. Table above consisted of 7 items on informant profile namely: Agency, department, years of service, marital status, education, age, and gender. There were total of 5 informants from Sarawak Energy Berhad. Informants are selected based on the criteria that were set in this study. There were 1 male and 4 female informants. There was restriction to get more than 5 informants due to gatekeeper approval thus this study only allowed to distribute to 5 informants. While for the case of Polytechnic Kuching, there was no feedback after due date was given due to work overload and restriction from the gate keeper from Polytechnic Kuching.

##### **Informant 1**

Informant 1 is from electrical industry who worked with human resource department with 24 years of working experience in this industry. She holds a master's degree

as her highest qualification. She satisfies the criteria of the study. She is 50 years old. She has been working in electronic industry for 25 years, and her area of expertise is in accounting. Informant 1 explained that a good leader needs favourable environment that can act as stimulator that will enhance a good teamwork. She also believes that external factors such as technological change affect competency and she believe only training can help her to become competent. Competency is a must for her. She also believed that employee who is not competent is due to being not willing to learn or adapt to better ways of doing job. She emphasizes training as a core element in developing employee competency. According to her, technology is important for her to perform her job.

### **Informant 2**

Informant 2 is also from electrical industry holding Bachelor degree as her highest qualification. She has been in the industry for 25 years. She is currently attached to human resource department. She believes that teamwork and unity make things work she also explained that good collaboration and teamwork will help to achieved target. She emphasises on improvement for the purpose of competency. Informant 2 considers that technology is important for informant 2 to do her daily duties and she also believes that technology change will affect individual performance and competency.

### **Informant 3**

Informant 3 is currently holding the position in human resource department. He has been working for 3 years. He is also a degree holder. According to informant 3, he emphasises on improvement and encouragement in order to employee competency. Informant 3 also explained that support management is significant to boost the level of employee competency in the long run.

Informant 3 treats competency is necessary for informant 3, without competency there will be no reason for organization to hire their respective candidate. Technology is also vital in performing his daily task. He also believes in technological change that affect competency regardless of field.

#### **Informant 4**

Informant 4 currently has served for almost 27 years and her highest qualification is a master's degree. Her area of expertise is in administration and currently attached with corporate shared service department. Informant 4 believes that competency is significant for her to do her daily duty. She also emphasises training as core component that can help employee to be competent in the future. Technology is vital for her work and also important for employee competency.

#### **Informant 5**

Informant 5 is attached with corporate shared department and in the service for almost 6 years. Her highest qualification is Master's degree. Informant 5 explained that teamwork, change management and organization culture is important for her competency. She also believed that technological change, employee motivation, and teamwork are the main factors that contribute toward employee competency.

#### 4.15 Internal Factors that Affect Employee Competency

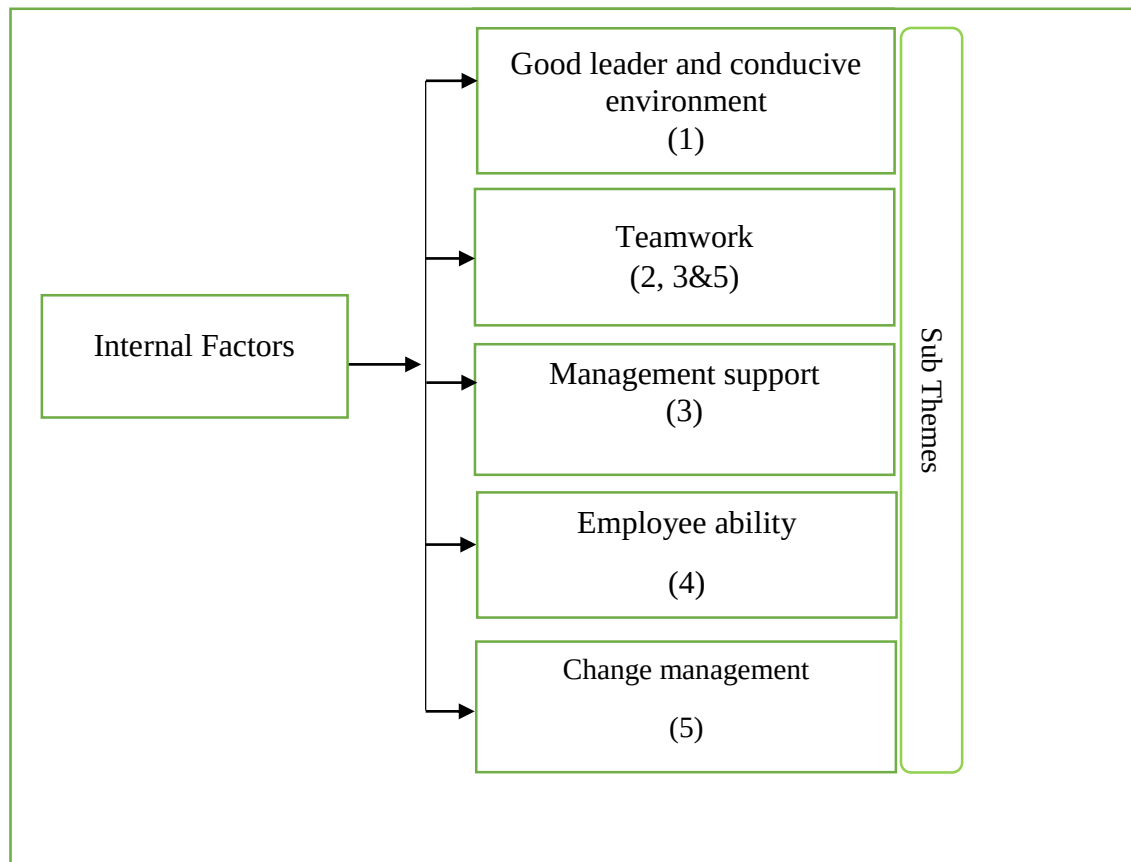


**Figure 4.8:** Internal Factors that Affect Employee Competency

In this study, informants were asked about internal factors that affect employee competency. Majority of the informant provide different answers, some of the respondent highlighting the necessary element that may become underpinning factors affecting competency. Informants also explained the need of internal factor and behaviour in order to achieve the desired competency level. There were many notions that were shared by respective informants in this study particularly on internal factors. Every sub component of internal factors that affect employee competency will be in discussed in depth in this study.

In this study, there are 5 sub themes found which are good leader and conducive environments, teamwork, management support, employee ability and change management. Informant 1 believes that good leader and conducive environment stimulate competency level. Informant 2, 3 and 4 believed that teamwork can help employee to develop and affect competency. Teamwork helps employee gain experience and learn from other team members in order to develop competency. Informant 3 shared that management support is crucial for employee competency.

According to informant 1, good leader and conducive environments stimulate competency levels (sub theme 1). Thus, it is significant for competency development. Informant 1 has this to share

*“A good leader and a conducive environment will encourage employees to build up their competency by giving them the opportunities to do so”*

(1)

Informants 2, 3 and 5 stated another factor that contributes toward employee competency is teamwork (sub theme 2). Informant 2, 3 and 5 shared that

*“Yes. It takes teamwork and unity to make things work. It takes a good collaboration to achieve target or KPIS”*

(2)

*“Employee need their team and management support to encourage them to improve and gain a new skills”*

(3)

*Yes, definitely. Teamwork is very crucial for everyone. Without teamwork, cooperation level will be very low*

(5)

On top of that, informant 3 also stated that management support is important for competency development (Sub theme 3).

*“....management support to encourage them to improve and gain a new skills”*

(3)

On the other hand, informant 4 believes stated that competency is belong to employee ability (Sub theme 4). Informant 4 stated that.

*“No. Competency is employee's ability and knowledge to do their work”*

(4)

Informant 5 stated the following statement on change management as the factor that affect employee competency (sub theme 5).

*“Change management and organizational culture will also effect employee competency because organization culture will definitely related to employee motivation. It's related to one and another”*

(5)

#### 4.16 Main Factors that affect employee competency

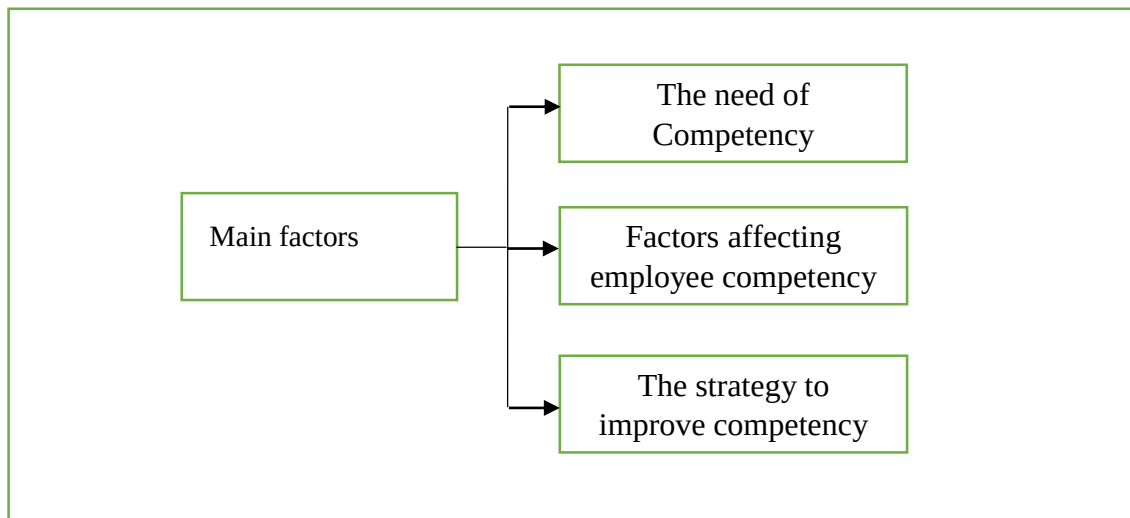


**Figure 4.9:** Summary of Main Factors that Affect Employee Competency

This part are divided into three questions, the first question asked about the need of competency, second question about main factor that affecting employee competency and the

third question was about strategy to improve competency. Figure 4.9 indicated summary of main factors that affect employee competency.

#### 4.16.1 The Need of Competency

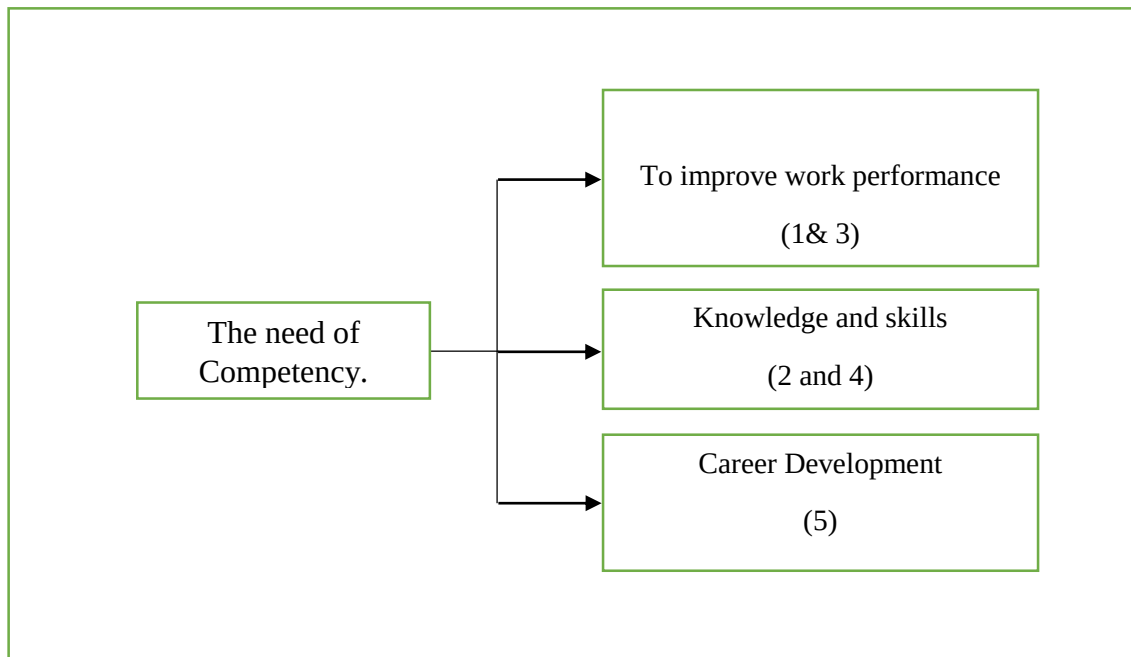


**Figure 4.10:** The Need of Competency

Figure 4.10 indicated the 3 sub themes, to improve work performance and knowledge and skills.

Informant 1 and 3 shared that the need of competency helps them to improve work performance.

*“It help employee to improve work performance in the future”*

(1)

*“Yes. It can improved my job gravity”*

(3)

Informant 2 and 4 stated that competency will help them to improve knowledge and skills and has the following statement to share:

*“Yes. Competence in terms of knowledge and skills essential to manage effectively and efficiently”*

(2)

*“Yes. Without competency I would not be able to do my work. Competency is the knowledge I used to do my work. For example, I must have knowledge to handle my staff or I must have knowledge to know the procedure on how to handle tender process”*

(4)

Informant 5 on the other hand explained that competency is a must for career development

Informant 5 shared

*“For some reason yes. But in other division, it is not a must. Because we are not technical staff. Different with technical staff they must have competency for the purpose of career development”*

(5)

#### 4.16.2 Main Factors Affecting Employee Competency

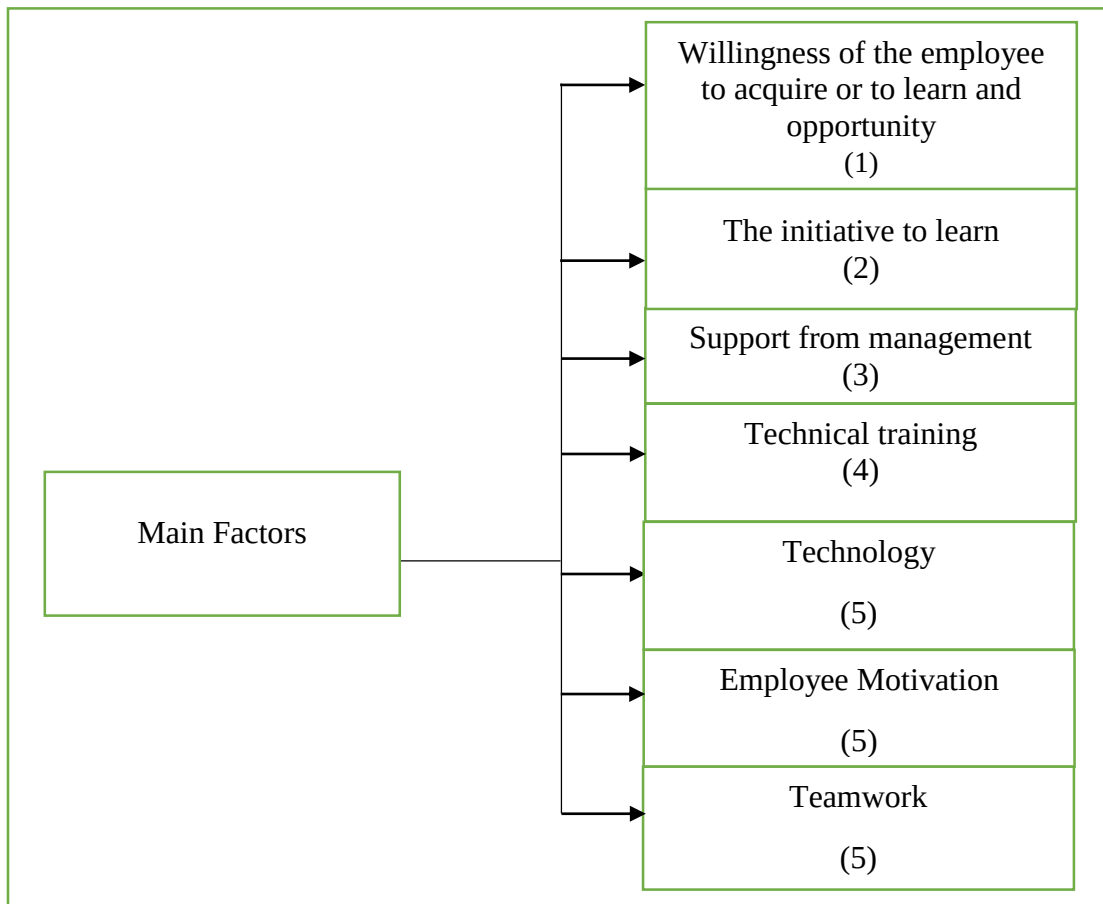


**Figure 4.11:** Main Factors Affecting Employee Competency

Figure 4.11 showed the 7 themes, Willingness of the employee to acquire or to learn and opportunity, the will or initiative to improve, support from management, technical training, technology, employee motivation and teamwork. Informant 1 stated that, the main factors that affect employee competency are willingness of the employee to acquire or to learn. She shared the following statement:

*“Willingness of the employee to acquire/ learn, Opportunities”*

(1)

On the other hand, informant 2 shared that the initiative to learn is important for self-worth.

*“The will/ initiative to improve and increase self-worth”*

(2)

Informant 3 stated that support from management is a crucial factor that affect employee competency.

*“Support from the management is the most important factors because management have to provide time and course for the employee to gain new skills”*

(3)

Informant 4 revealed that technical training is the main factor that affect employee competency.

*“The main factors are they have to undergo training on certain competency related to their expertise. For example, if you are a technician you must undergo technical competency. Without technical competency the technician are not allowed to handle related to electricity”*

(4)

Informant 5 shared that technology, employee motivation and teamwork are the main factors that affect employee competency.

*“Technology – as explained before this, it is job requirement on day to day, employee motivation- how he/she doing his or her job, teamwork among them”*

(5)

#### 4.16.3 Strategy to Improve Competency

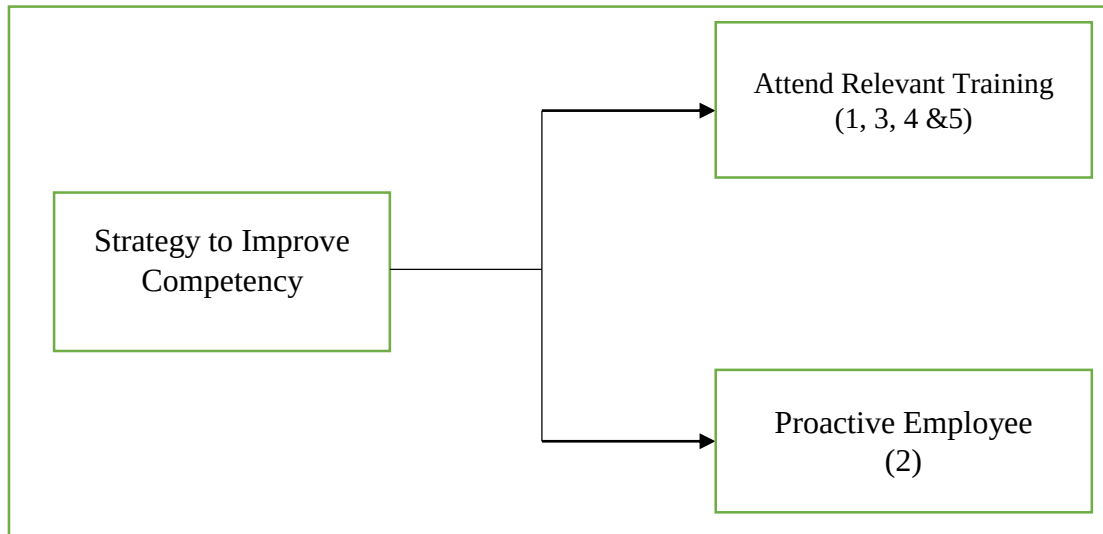


**Figure 4.12:** Strategies to Improve Competency

The third sub question shown in figure 4.12 in this study consisted of 2 themes: undergo relevant training and proactive ways to improve competency. Informants 1, 3, 4 and 5 agreed that relevant training and attending course will help to improve employee competency.

*“To undergo relevant training (course, workshops, on-the-job), assessment, examination, interview”*

(1)

*“Attend course and training”*

(3)

*“Send the employee to attend courses related to their work. Put into practice the course that they have attended”*

(4)

*“Attend training and development, Motivation from one self”*

(5)

Meanwhile for informant 2 stated that,

*“Always be proactive in thinking of ways to improve”*

(2)

#### 4.17 Incompetency and Year of Service

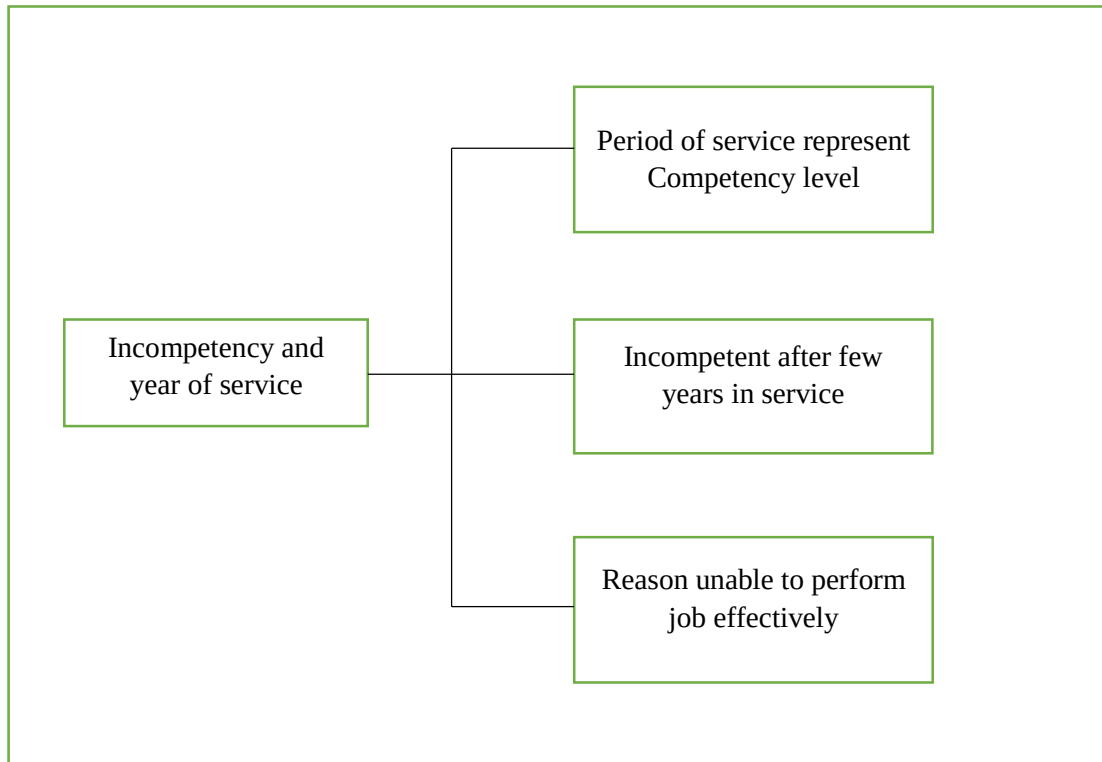


**Figure 4.13:** Summary on Incompetency and Year of Service

Figure 4.13 showed the third part of qualitative findings which are divided into three sub questions. All sub-questions reflect the third research question. First question was asked about how the period of service represent employee competency based from total years of working experience. Second question asked about why some employee remains incompetent after working for few years while the third question was asking about under what circumstances employee become unable to perform.

#### 4.17.1 Period of Service Represent Employee Competency

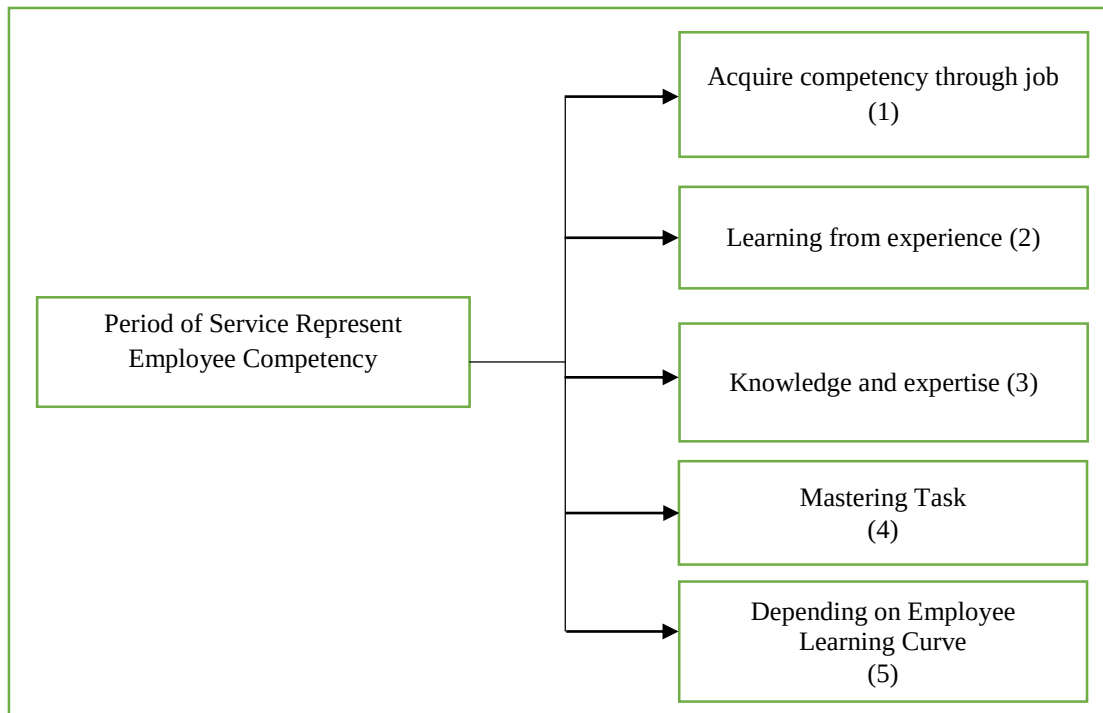


**Figure 4.14:** Period of Service Represent Employee Competency

Figure 4.14 indicated 5 themes which are: Acquire competency through job, learning from experience and knowledge and experience.

Informant 1 believe that period of service does represent employee competency through job perform over period of time thus years of service is significant for employee competency.

Informant 1 shared:

*“Yes to certain extent as a person can acquire competency through doing on the job”*

(1)

Informant 2 on the other hand stated that years of service is important for learning

*“Yes. You learn as you go along, the years of service increase, you learn more things along the way”*

(2)

Informant 3 stated that knowledge and expertise is gain through period of service.

*“Yes, employee gain knowledge and experience throughout their strike and they expert in their field”*

(3)

Informant 4 believed that period of service influence task mastering.

*“Yes. The longer they work doing the same job they might master the task. But if they do different task later on then they will learn another level of competency”*

(4)

Meanwhile informant 5 explained that period of service does not influence competency it is depending on employee learning curve.

*“Not necessarily. Certain people grows faster and certain grows slower. The employee competency level depend so much on employee learning curve. Besides other factors listed before also effect employee competency”*

(5)

#### 4.17.2 Incompetent after Few Years in Service

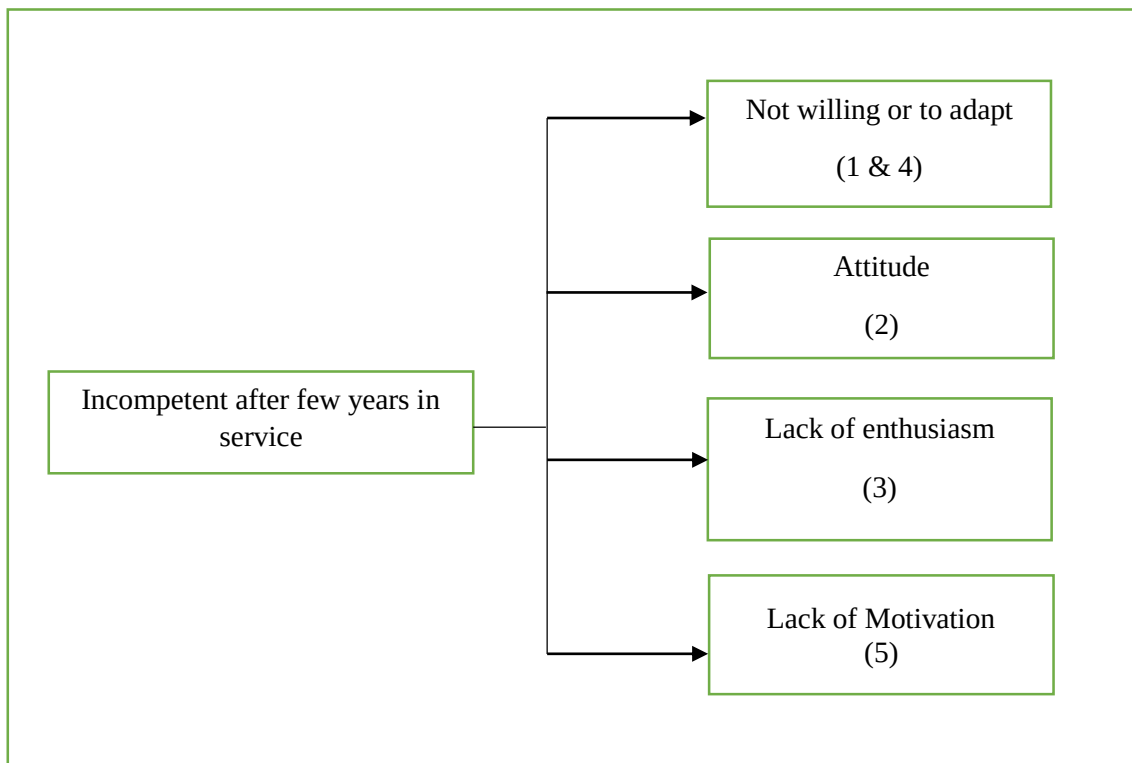


**Figure 4.15:** Incompetent after Few Years in Service

This section depicted by figure 4.15 showed namely 4 themes: not willing or to adapt, attitude and lack of enthusiasm. Informants 1, 2, and 3 mentioned that, attitude and enthusiasm are two vital stimuli that help employee to be competent and also could be the factors that may lead to low level of competency.

According to informant 1 and 2, the main factor that contribute toward incompetent of the employee is not willing to learn or adapt.

*“Not willing to learn or adapt to better ways of doing the job”*

(1)

*“In my opinion, it depends on individual. Some employees are willing to learn and some are reluctant to change”*

(4)

Informant 2 stated that incompetent employee is due to poor attitude

*“Attitude. Without positive attitude, people might be complacent and refuse to learn and take up challenges”*

(2)

Meanwhile informant 3 mentioned that lack of enthusiasm is the main factor that contribute toward incompetency. He also shared the following statement.

*“They lack of enthusiasm to gain a new skills to improve themselves”*

(3)

Informant 5 believed that employee motivation plays important role to determine employee competency.

*“Some of them lack of motivation to do the job. Some feel that is no need to think about their competency. If they stuck for how many years at one level (their motivation very low)”*

(5)

#### 4.17.3 Reasons for Being Unable to Perform Job Effectively

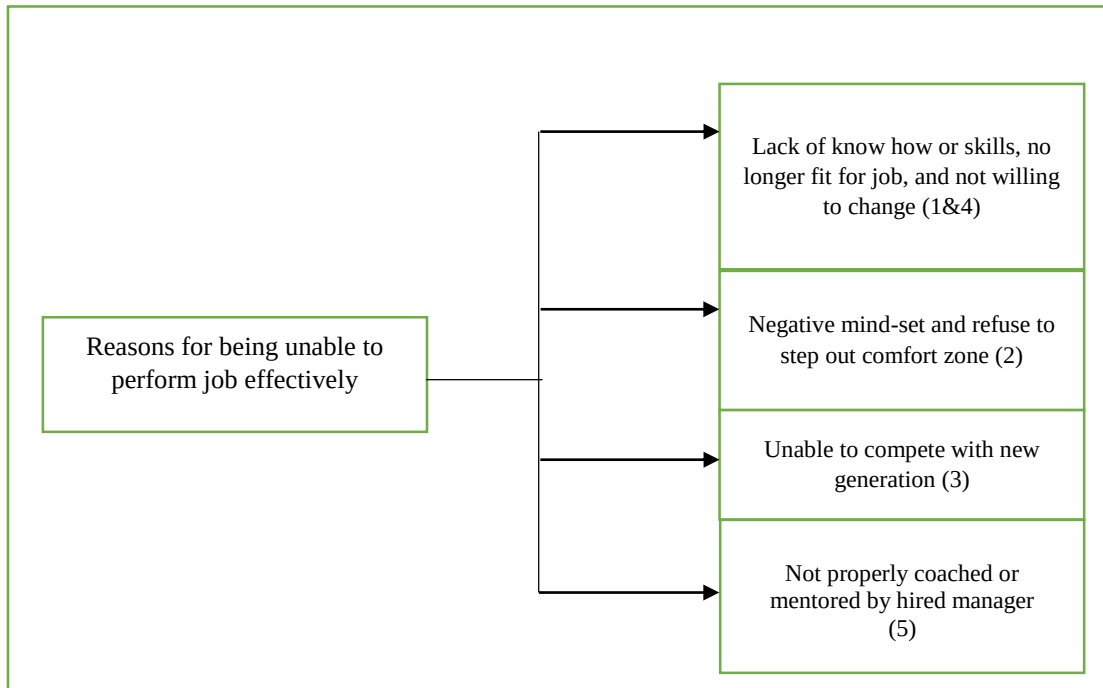


**Figure 4.16:** Reasons for Being Unable to Perform Job Effectively

Figure 4.16 showed 4 themes comprising of lack of know how or skills, no longer fit for job, and not willing to change, negative mind-set and refuse to step out comfort zone ,unable to compete with new generation and not properly coached or mentored by hired manager.

Informant 1 and 4 believed that lack of know how or skill is the main factors that hinder employee to perform job effectively. She shared the following statement.

*“Lack of know-how/ skills, no longer fit to do the job and not willing to change”*  
(1)

*“Some employee's unable to perform due to many factors such as: not competent, laziness, sickness, unwilling to adapt to new environment, unwilling to do new task”*

(4)

Informant 2 on the other hand, mentioned that negative mind set and refusing to step out from comfort zone is the main factors that cause incompetency

*“When the employee always have a mind-set of being a victim of circumstance and always think negative and refuse to step out of comfort zone”*  
(2)

Informant 3 shared another factor that may cause why employee unable to perform their work. He share the following statement

*“They unable to compete with the new generation which is more knowledgeable and they become less enthusiastic to do their job”*  
(3)

Meanwhile informant 5 stated that coaching or mentoring by the hired manager is the cause why employee is incompetent.

*“In some circumstance, staff unable to perform because of small problem of standard operation procedure. It is not they don’t want to do, but in some cases they are not being coached and mentored by the superior and hired manager”*  
(5)

#### 4.18 Technological Change that Affect Employee Competency

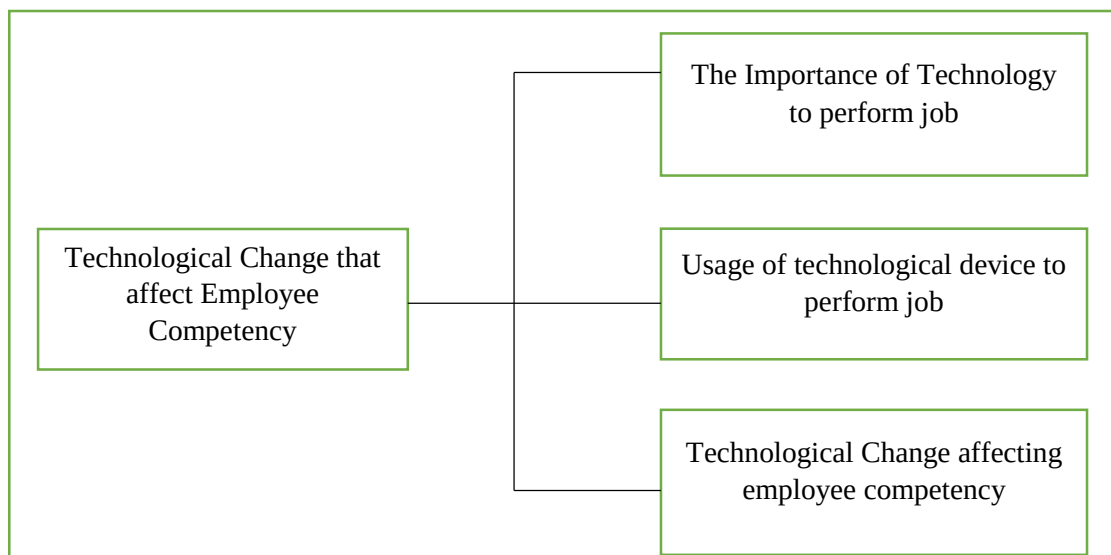


**Figure 4.17:** Summary on Technological Change that Affects Employee Competency

Figure 4.17 indicated the fourth part for qualitative findings which are divided into 3 sub questions, first question asked about the important of technological change to perform job. The second question was about how frequent informant use technological device to perform their job and finally the third question was asking about how technological change affecting employee competency.

**4.18.1 The Importance of Technology to Perform Job**

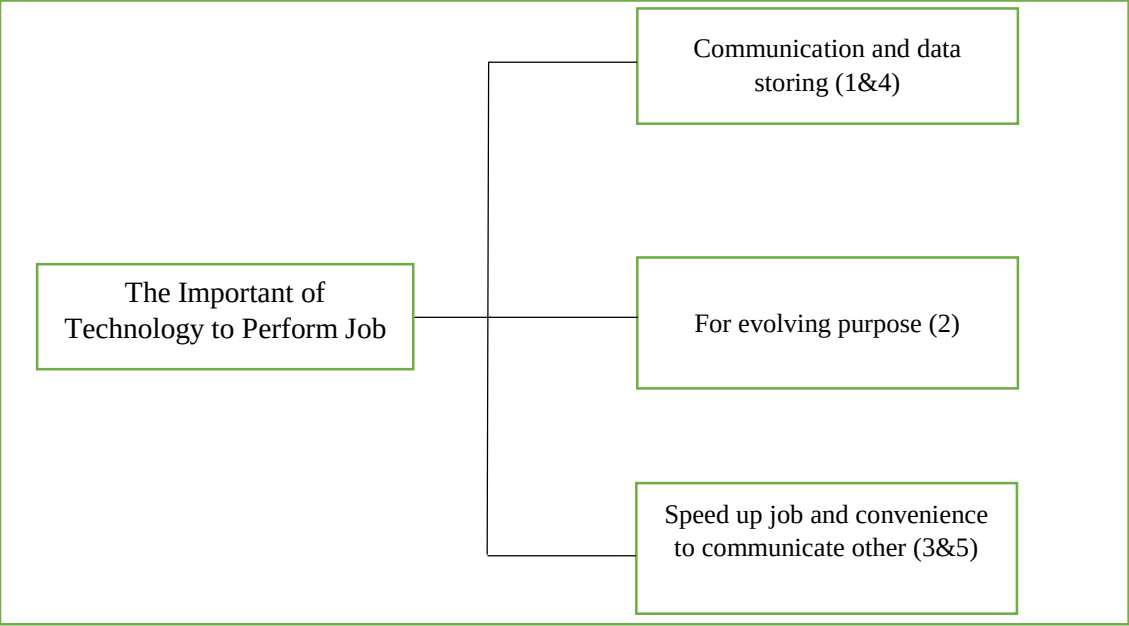


**Figure 4.18:** The Importance of Technology to Perform Job

Figure 4.18 showed 3 themes comprising of technology as a communication and data storing, for evolving purpose and to speed up job and convenience to communicate with other.

Informant 1 and 4 shared that technology help to communicate and to store data

*”Communication – email, contact, data storage and analysis”*  
(1)

*“Yes. Technology such as email are important because I need to do correspondence. Hand phones with new application such as WhatsApp enable to communicate with colleagues in a group and many more”*

(4)

Informant 2 on the other hand shared that technology is significant for evolving purpose

*“Yes, things evolve and move so fast, so without optimizing the technology we will be left behind and lost the opportunities that come in our way”*

(2)

Meanwhile informant 3 and 5 mentioned that technology help to speed up job and convenience for communication

*“Yes, it can speed up my jobs, easier to communicate with others”*

(3)

*“Of course it’s important. Most of my daily job involves around technology such as SAP access, our attendance system and other system that requires online/ access”*

(5)

#### 4.18.2 Usage of Technological Device to Perform Job

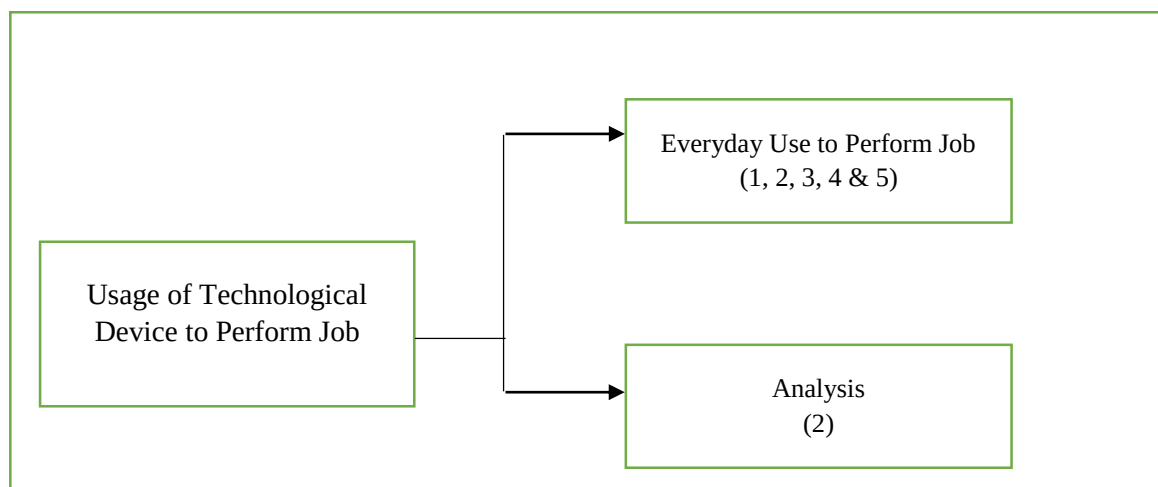


**Figure 4.19:** Usage of Technological Device to Perform Job

Informant 1, 2 and 3 shared that they are using technological device and technological application in their daily task.

Informant 1

*“Everyday”*

(1)

Informant 2

*“Every day and constantly use the technology”*

(2)

Informant 3

*“Every time”*

(3)

Informant 4

*“Everyday. Email for correspondence. Hand phone to deal with colleagues and vendors”*

(4)

Informant 5

*“Daily”*

(5)

On top of that informant 2 also mentioned that she used technology device for the purpose of doing analysis.

*“Every day and constantly use the technology to do reporting and analysis”*

(2)

#### 4.18.3 Technological Change Affecting Employee Competency

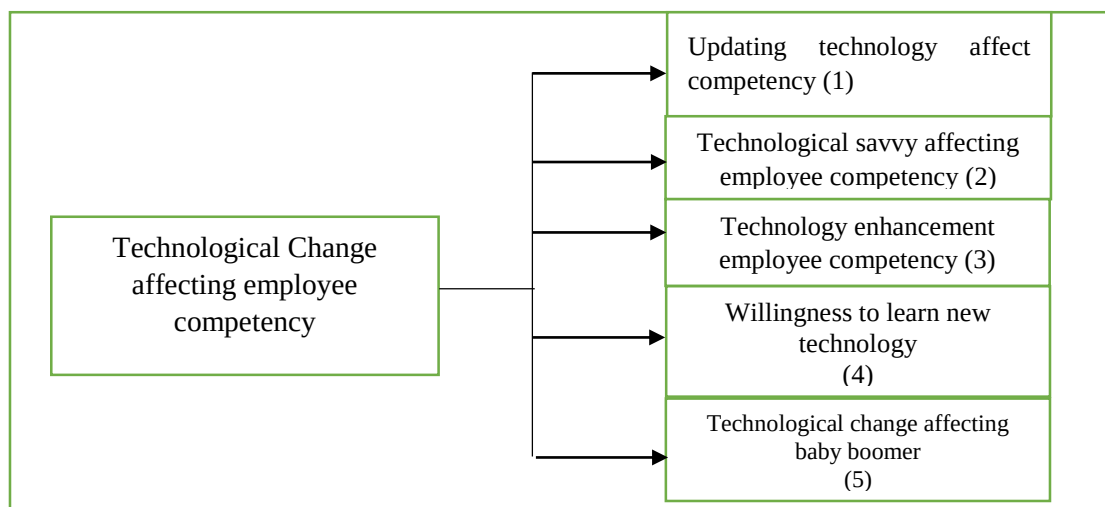


**Figure 4.20:** Technological Change Affecting Employee Competencies

The 5 themes shown in the figure 4.20 on technological change affecting employees' competency include: updating technology affect competency, technological savvy affecting employee competency and technology enhance employee competency.

Informant 1 shared that the main factors that affecting employee competency is updating technology.

*“Employees need to keep abreast with technological change to be better equipped in performing their jobs”*

(1)

On the other hand, informant 2 mentioned that technological savvy is the main factor that affecting employee competency.

*“Yes. If the employee is technologically savvy, then it is an advantage to him/ her as we are constantly demand the employee to beat the deadline”*

(2)

Informant 3 shared that technology enhance employee competency level

*“Technology will boost up employee competency by helping them to do more and become more knowledgeable in their area”*

(3)

Informant 4 believed that individual willingness to learn new technology is affecting employee competency

*“It depends on individual. If employees willing to learn new technology they gain new competency. For those who are unwilling to learn their level of competency might be low”*

(4)

Informant 5 shared that technological change affect baby boomer generation

*“For some reason yes example: - baby boomer, generation. Most of them difficult to cope with the technological change. This will affect their competency”*

(5)

#### **4.19 Summary**

In summary, this chapter consisted of two parts, quantitative finding and qualitative findings. Quantitative finding in this study were analysed by using five different method of quantitative data analysis, which are T- test, ANOVA, Pearson correlation and structural equation modelling for confirmatory factor analysis and finally the regression analysis. Qualitative finding in this chapter were gathered from respective informants and presented in concept maps form after identification of theme and coding. The following chapter discuss the main findings in relation to the literature gathered. It also relates the implications, brief summary of the research, recommendations and finally the conclusion section.

## **CHAPTER 5**

### **DISCUSSION, IMPLICATIONS, SUMMARY, RECOMMENDATIONS AND CONCLUSION**

#### **5.0 Introduction**

This chapter discusses the main quantitative and qualitative findings in detail as they are linked based from the seminal studies conducted in international, Asian and local context. Discussion will start with quantitative section and followed by the qualitative section. Second part of this chapter is summary of the overall study. Third section in this chapter covers implications and recommendations including direction for future study. A conclusion closes this chapter.

#### **5.1 Discussion**

The discussion consisted of two sections, first explaining quantitative findings and then followed by qualitative findings. There were 16 hypothesis tested by using different analysis and the final part is the development of model based on selected variables. The qualitative section is discussed on main factors that contribute towards employee competency, factors on why some employees are still incompetent after working for several years and discussing on technological change that contributed towards employee competency.

#### **5.2 Genders and Employee Competency**

Based from the finding on hypothesis 1 ( $H_{\alpha 1}$ ) it indicated that there was a significant difference in employee competency based on gender. The finding showed that there was a difference on employee competency between male and female respondents. This is due to

the equality of knowledge, work experience and skills possessed by the employee. Krefting's (2003) study explained about gender stereotypes which are ideological and prescriptive rather than simply descriptive of their influence on academic employment processes. This is unlikely to diminish simply with the passage of time or accumulating evidence on women's capabilities. Previous studies view inequality in term of gender competency when performing the job. Currently study provides results which are consistent to that previous study due to the gender different. Krefting (2003) also explained that "women remain on the margin trying to prove they have the skills to 'play the game at all' while men realistically presume support and focus on strategizing reputation" the difference was based on the needs. Current study showed that both gender are aiming at the different competency level in order to secure their career development.

### **5.3 Period of Service and Employee Competency**

Finding for employee competency based on the period of service and showed that there is no difference. Previous study done by McCampbell, Jongpipitporn, Umar, Ungaree, (1999) on seniority based promotion in Thailand revealed that length of service, seniority of the employee and promotion provide a negative impact on the performance of the organization. Findings for current study also found that there was no significant difference in employee competency based on the period of service. This phenomenon occurs due to employee period of service which cannot be used to measure the difference in employee competency. Qualitative finding indicated that period of service is measure based from 5 criteria or five sub themes detected. Acquire competency through job, learning through experience, knowledge and expertise, mastering task and depending on employee learning curve. There are three main themes which are found in this study namely period of service

represent employee competency incompetent after few years in service and reason unable to perform job effectively. Current study has confirmed that similar finding from the previous study done by McCampbell, Jongpipitporn, Umar, Ungaree, (1999) also supported that employee competency cannot be measured based on period of service. Period of service may not include a necessary working experience and qualification in order to perform the task. Thus, this factor need to be considered when measuring the difference based on period of service.

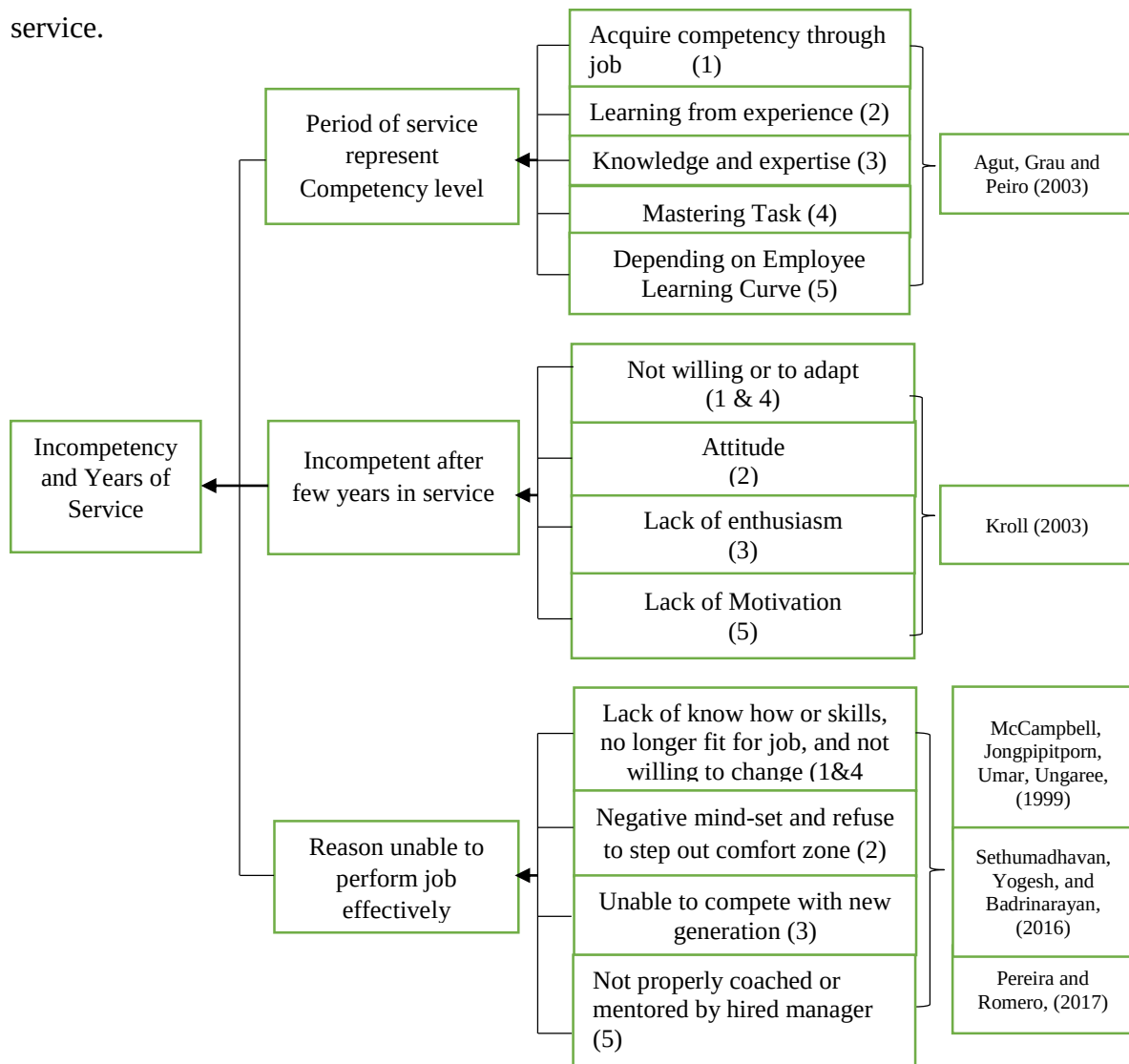


**Figure 5.1:** Incompetency and Year of service

Informant 5 explained that period of service does not influence competency it is depending on employee learning curve.

*“Not necessarily. Certain people grows faster and certain grows slower. The employee competency level depend so much on employee learning curve. Besides other factors listed before also effect employee competency”*

To support this findings a study done by Agut, Grau and Peiro (2003) in western context revealed that individual factor such as education level, age, period of service and job tenure reflect employee competency. Some of the variables are not positive correlate due to low education and lack of experience even employee are in the industry for few years. Although employees work in the industry for few years, employee still need acknowledgement in term of performance and productivity.

Few research done to measure how period of service reflect employee competency. Based from quantitative finding and qualitative findings, it clearly showed that period of service is not the best component in order to measure employee competency or competency tracking. The best way to measure competency is by evaluating individual productivity and performance (Agut, Grau and Peiro, 2003).

A recent study done by Sethumadhavan, Yogesh, and Badrinarayan, (2016) in India context supporting the study done by Agut, Grau and Peiro (2003). In Sethumadhavan, Yogesh, and Badrinarayan, (2016) explained that there were 6 elements that are significant in 21<sup>st</sup> century namely: analytic skills, self-management, relationship management, goal and action management, self-awareness and social awareness. This is due to the demand of industrial 4.0 particularly addressing competency profiling. Of course many scholars debating on this issue. Today's work requirement is significantly effecting the current

employee competency. Working experience and period of service are significant to determine task proficiency. However, if new technology introduce in the organization environment, does the period of service are still relevant in this case. This could be seen as opportunity or threat based on demographic factors such as which age group interested to learn and adapt. Motivation factor in this case is vital to determine if the individual willing to adapt to the changes or refuse to adapt due to the status quo or still in the comfort zone. To support this statement study done by Pereira and Romero, (2017) in Spanish context on digital competency and industrial 4.0 revealed that many developed country facing on low digital competency is due to old generation unable to cope with the current need today's industrial revolution (Pereira & Romero, 2017). The questions arise here is that, how the senior employee who serve does more than 20 years aligned his period of service with industrial 4.0? New competencies are develop based on the current requirement of the market this was mentioned by. Therefore new study on digital competency suggested that individual and organization are required to transform their competencies. This mean old competency and previous period of service may not be relevant in this case due to the need of digital competency, digital leadership, and digital management (Pereira & Romero, 2017). This is related to qualitative themes aforementioned, incompetency after serving a decade in the organization.

Old competency and old period of service maybe relevant for motivation and soft skills. However, to meet new competencies particularly alignment with the need of the market such revolution on industrial 4.0. Old competency need to be modify and alter suitable with the current need. In 21<sup>st</sup> competency profiling should be based on the industrial need and government initiative, thus it is important for practitioner to take note that

traditional way of doing competency may not be relevant today. This study a little bit portray a glimpse of what is happening in the field of human resource

#### **5.4 Age and Employee Competency**

Study done by Kroll (2003) in Germany on the challenge of age and competency structure in industry for innovations and human resource policy revealed that as the age increase the health of the employee decline due to aging factor that restrict older employees from performing in their job effectively. Kroll (2003) also indicated that age of the employee determine the level of competency depending on the nature of the job. Current study provides different findings which showed that there was no significant difference in employee competency based on age. Different finding from the previous study revealed that different age levels will define different levels of competency. Age of employee will determine how much exposure to the job knowledge, skills and abilities are needed.

#### **5.5 Levels of Education and Employee competency**

Education level is vital in order to define proficiency of the employee when performing job, unlike age and period of service, education levels is important as a basic requirement for recruitment and selection process. Current study revealed that there was no significant difference in employee competency based on different levels of education. Study done by Akkermans, Brenninkmeijer, Seth, and Schaufeli (2013) indicated that “Young employees with lower educational levels reported fewer job resources (autonomy and social support), more physical demands, less dedication, more emotional exhaustion, and poorer health and performance compared with the highly educated group. Differences were also found between educational groups in the relationships in the Job demand resource model, most notably a reciprocal association between dedication and performance, and between

emotional exhaustion and performance in the group with lower levels of education”. The present findings showed the same pattern with previous study. Differences in education levels determine different levels of cognitive abilities and different levels of competency and performance. Education is important for understanding nature of job and task.

## **5.6 Personality and Employee Competency**

Employee personality is significant in order to align with the nature of job. It also affects the level of employee competency based on the way how individual perceived and perform the job based on the ability to align with individual personal traits. Study by Jung (1921) personality test measures individual preferences for dealing with and relating to people, processing information, making decisions and matching individual personality and task. Personality element in this study is important to match up with an employer's requirements.

Current study showed that there was a strong positive relationship between personality and employee competency. Another study done by Day and Silverman (1989) indicated that personality is important in order to stimulate job performance and competency if it is carefully matched with the appropriate occupation and organization. Study in European context done by Scheepers, Lombarts, Aken, Heineman and Arah (2014) also provide the same pattern of result which indicated that personality traits have different both positive and negative effects on different aspects of performance and competency. Employee personality needs to be aligned to the job design and therefore the output of this alignment will increase competency level. Current study provides the finding which highlights the necessary element that can be used to measure employee competency based on employee personality.

This showed that personality and employee is important in order to shape employee competency. To support this finding a study done by Nirachon and Faridahwati (2011) in Asian context showed findings which indicated that personality have positive correlation towards employee competency. Based from the findings from two different approaches of quantitative and qualitative, it can be concluded that there were highly positive correlation and consistent finding from both perspective and personality is significant in order to measure employee competency.

### **5.7 Peer Support and Employee Competency**

Based from the findings of this study, it showed that there was a significant relationship which was strong positive relationship between peer support and employee competency. In support of the findings for current study, a study done by Goldwasser, (2001) also indicated that majority of workplace learning takes place outside the classroom in an informal setting among employee and their peers. Another study done by Wu and Rocheleau (as cited in Holly & Paula, 2002) also stated that significant percentage of an individual learning comes from assistance by co-workers and other informal sources. Study done by Sykes (2015) explain that being able to use the employee support more effectively than employees who have less peer advice ties because of which will have limited access to information from peers. Peer support is important to help employee shape their competency level by learning from people around them. Previous scholars also agree that peer support act as agents of learning that help to improve employee performance.

## **5.8 Work Life Balance and Employee Competency**

The findings of the present study showed that there was no significant correlation which between work life balance and employee competency. Work life balance is vital in order to ensure employee balance both social, family life and work demand. Current result has shown that work life balance element did not act as stimulus for employee competency. The study done by David, Eugenia and Juan (2012) indicated that study on work life balance can be used to identify tangible benefits such as reduction of absenteeism, lower stress levels, higher levels of productivity, competency, performance and improved quality of life, and satisfaction and commitment among employees. This previous study also found there was positive correlation on work performance and competency. Current study provides different result due to the nature of the industry that emphasis on employee work life balance and therefore very little issue on work life balance that is found in this study.

Another supporting study done by Lourenco, Sander and Souza (2014) also stated that due to commitment, individual dedicated their life to their work and always seek for improvement and development for their competency although to balance work and life is not as easy as what employee believed. However, work life balance element will also contribute towards employee competency level although there was no correlation are found in this study.

## **5.9 Indirect Effect on Teamwork and Technological Change as Mediating Factor towards Employee Competency**

Teamwork is vital in order for individual to learn, to adapt with the changes and to measure the competency levels. Current study provides insight on how teamwork plays important role in adapting the changes of technology and also affecting employee

competency. Based on the current study finding, there was no positive indirect effect on teamwork and technological change as mediating factor towards employee competency. Teamwork provides a direct effect instead of indirect effect on support system for individual to adapt with the changes particularly in technological change. If employees are unable to adapt due to lack of support from their team and guide for the team members it will also affect the overall performance of the team and individual competency.

Study done by Olupeliyawa, Hughes, and Balasooriya (2009) also indicated that team training is essential as direct effect, especially from a perspective of improving inter-professional collaboration, safety and adaptability. This is parallel with the finding of the current study. The context of adaptability here is addressing to the changes that may reflex performance and competency. To support this finding, a study done by Salas, Rosen, Burke and Goodwin (2009) indicated that to achieve higher degree of competency and adaptability to technological change, practitioners or higher authority in the organization should consider team training and team building as the essence to achieve higher degree of team competencies. Technological changes can be considered as opportunity for individual to learn new skills in the team and it also could be the threat for employee performance and competency.

Success of teamwork and quality of individual competency comes from team learning, team adaptability to the changes and stress Blanco, Echaluze, Penalvo and Conde (2015). Working in the team helps individual to develop technical and non-technical competency that help individual to adapt with the changes that comes from organizational, technological changes and change management.

### **5.10 Indirect Effect of Work Experience and Technological Change as Mediating Factor towards Employee Competency**

Study in India done by Rajesh, Suresh and Deshmukh (2008) indicated that introduction of new technology and identification of market changes is most important because they are significantly correlated with subjective performance, objective performance, and overall competitiveness at specified levels of significance. It is undeniable that working experience is vital in order to determine employee competency and performance. Current study provides positive effect of work experience and technological change as mediator factor toward employee competency. Study by Rosen and Lara-Ruiz, (2015) revealed that there was a significant difference based on working experience level and adaptability towards technological change. Rosen and Lara-Ruiz, (2015) also stated in their study that baby boomer may have less technological competency compared to generation X and Y.

The difference in terms of technological proficiency and adaptation is due to nature of the industries and motivation factors. Employee may have different work experiences, however the adaptation on technological change and linking to previous work experience towards technological change is the biggest threat for some generation (Rosen and Lara-Ruiz, 2015). This phenomenon is happening due to career mobility from non-technological industry to technological industry.

### **5.11 Indirect Effect of Organizational Culture and Technological Change as Mediating Factor towards Employee Competency**

The finding in the present study showed that there was no positive indirect effect between organizational culture and technological change as mediating factor towards employee competency. Culture and daily practices in organization should support any type of changes that occur regardless whether changes are external or internal. This study provides insight on how employee perceived organization culture as one of the factors that help employee to stimulate the competency level when they are exposed to technological change at work place. A study done by Martins and Coetzee (2007) explained the nature on how organizational culture influence employee personality, competency and leadership directly but not indirectly. Competency in this context is competency in adapting technological change. Organization culture should align with the change and provide values and belief to the employee in order to support technological change.

### **5.12 Indirect Effect of Change Management and Technological Change as Mediating Factor towards Employee Competency**

Changes are sometime important for organizations in order to compete in the global market, surviving in businesses particularly in the 21<sup>st</sup> century are challenges for every organization. Therefore organization needs to adopt and change the practices and system that may reflect or affect employee competency and overall performance of the organization. Current study found that change management provide a positive indirect effect to technological change as mediating factor towards employee competency. In six particular areas as proposed in Maria and Klass, (2007) they also stated that in order to overcome changes the alteration of new behaviour is a must for every single employee in order to

reinforce employee competency through training and development. Maria and Klass, (2007) also indicated that changes in technology will affect management process and employee performance. Another study done by Kansal and Chandani, (2014) on “Effective Management of Change during Merger and Acquisition”, indicated that poor change management may effect organizational performance, human resource function and employee performance. Therefore, changes in management or department need to be align with the changes in technology particularly in system and working tools that employee and organization use to produce the output.

### **5.13 The Effect on Technological Change and Employee Competency**

Technology is important in our daily life. Technology helps improve our way of living and also in performing our job effectively. However to some extent technology could be a threat and can also provide an opportunity for development and competency. In this study, the findings indicated that there were no significant positive effects of technological change and employee competency. In Rajesh, Suresh and Deshmukh (2008) study among small medium enterprise in India, found that high correlation between introduction of new technology and competency. Employee competency should align with the changes and should be able to adapt with the change particularly the changes that involved tools in performing task.

Another study done by Karanja (2015) mainly assesses the effects of technological change and how it affects employee performance. Karanja (2015) explained that technological change variable that has changed the most and influenced employee performance positively is technology. The pattern of findings from previous studies is inconsistent with the current study, this happen due to different need of technology some

perceived it as necessary to get job done. Adaptation and introduction of new technology should align with the interest and current employee competency. Organization should provide related training in order to align the changes in technology and employee competency.

Contrary findings from previous study is due to technological emerging and readiness of the current sample to adapt and perceived this changes. The emergence of technological changes in selected industries in this study may not experience significant changes. This happen due to readiness of the industries to adapt with the changes and aligned with government initiatives (Sarawak Civil Service, 2018).

Although Sarawak State Government emphasis on digital government and digital transformation, there are many lacunae that hinder most of industrial players to adapt with this changes such as technological infrastructure, digital culture, digital competencies and digital leadership (Sarawak Civil Service, 2018).

This study make its own stand based on the findings and study done by on industrial 4.0 explained the readiness of the organization to face with technological changes and technological disruption this statement was explained in Pereira and Romero (2017) study on the implication of the industry 4.0 in European context.

Pereira and Romero (2017) study explained the emergence and readiness of technological changes disrupt the structure of the human resource process and employee competency this is due to the introduction of internet of things (IOT), digital manufacturing, artificial intelligent, big data and cloud computing. These elements affecting organization culture ad employee performance. In Sarawak context the emergence of technological change is still at the preliminary level therefore not many organization experience

technological change due to lack in technological infrastructure (Sarawak Civil Service, 2018).

Meanwhile for qualitative finding, it showed that there were five themes explaining how technological change affect employee competency which include:- Competency is the requirement for technological change, Technological change is affecting functional group, Technological change affect Employee competency in any field, Business Requirement and Competition and Technological change provide effective way to perform job.

Without doubt that technology is affecting us in many ways either we are at home or at workplace. This study found that technological change is not only for organization improvement purposes it is also as job requirement for every single individual in organization. This finding is supported by a study done by Gunes, Gokcek and Bacanak (2010) in Turkish context revealed a similar finding which showed that technological change affect teacher competency.

In Gunes, Gokcek and Bacanak (2010) study it is found that many teachers are not competent when dealing with data base. However, they are considered competent when dealing with the basic of using computer operation skills. Gunes, Gokcek and Bacanak (2010) also argued that most teachers (53%) did not regard themselves competent. This result is parallel with the results of many studies e.g., (Seferolu, Akboyok & Bulut, 2008; Akkoyunlu & Orhan, 2003 as cited in Gunes, Gokcek & Bacanak, 2010).

As for Basic Technology Competency for Educators Inventory evaluations of teachers, no significant difference was found based on their gender. However, similar studies e.g.. (Tekinaslan, 2008; Akkoyunlu & Orhan, 2003; Kocasaraç, 2003; Ulu & Ozan, 2010, as cited in Gunes, Gokcek & Bacanak, 2010) indicated that there was a significant relation

between gender and the use of basic technology in favour of male teachers. Similar to qualitative finding, it was found that technological change is not only affecting the way how employee produce the end output, it also affects business function as overall and affect employee competency level.

Based from quantitative and qualitative findings, technological change provided effective ways of doing work and provide a greater impact on individual competency level. Technological competency is 21<sup>st</sup> century requirement. Those who are not competent may be having difficulty to keep up with the fast pace of global market and demand.

The qualitative findings on technological change that affect employee competency is shown in Figure 5.2.

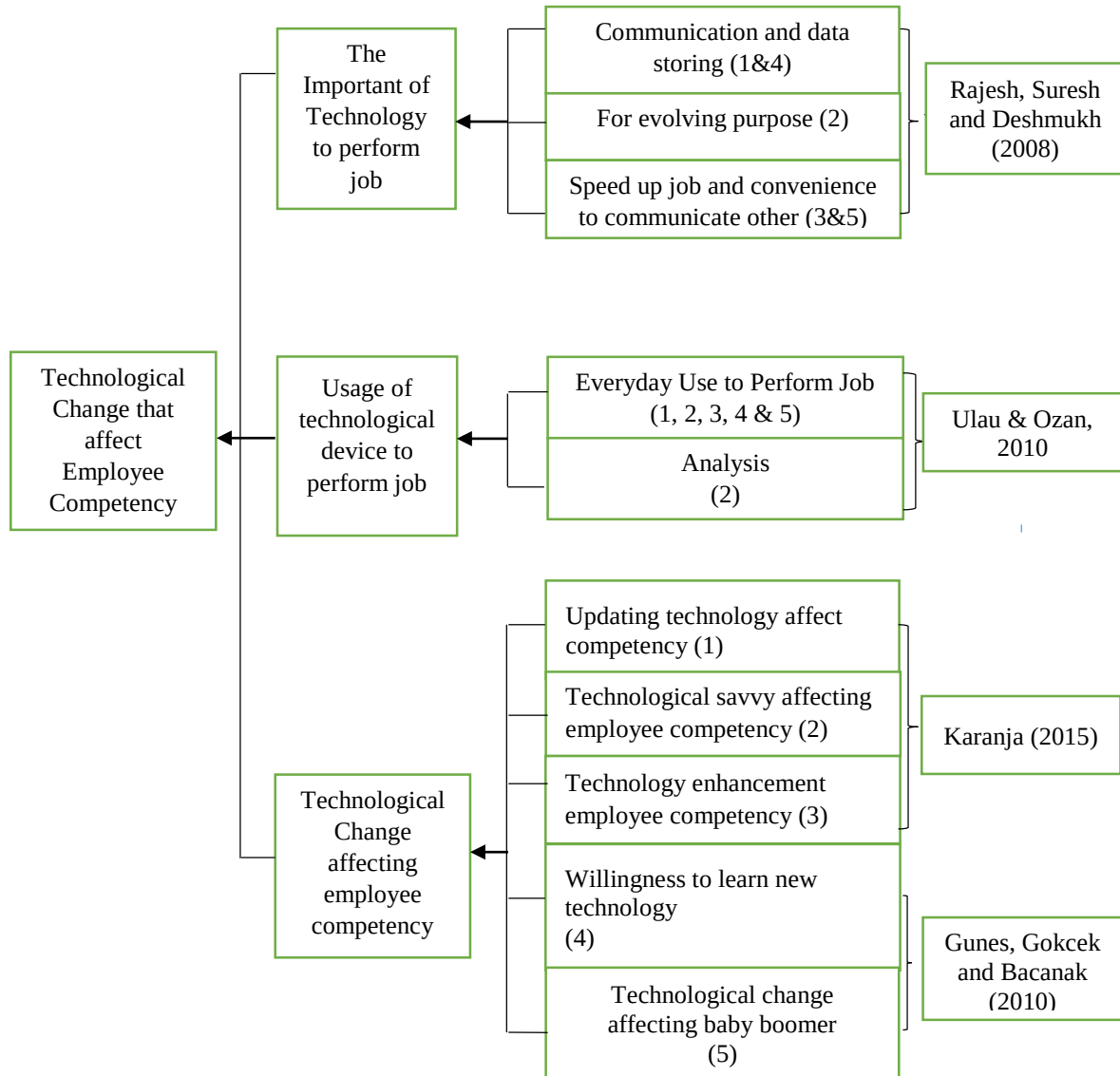


**Figure 5.2:** Technological Change Affect Employee Competency

### **5.13.1 Role of Technological Change as Mediator**

Without doubt technological changes is a factor that disrupt many organization in the world. Not only the organization structure as a whole but also the human capital aspect (Pereira & Romero, 2017). The role of technological change as mediator in this study is significant in order to portray the actual condition of technological emergence that affect employee competencies in Sarawak context. The findings on mediating test showed there was no mediation occurs amongst all the selected constructs in this study. However, there were significant direct effect toward teamwork and work experience. This findings showed that technological change is not a mediating factors, however, technological change as a dynamic element that influence the employee competency (Pereira & Romero, 2017). Although the role of technological change as mediator is not proven in the quantitative findings, Technological change factor is still significant to be included in the research framework as one of the dynamic factors that affect employee competency. This is due to the emergence of industrial revolution 4.0, technological change that will become major force to disrupt organizational capacity in-term of digital competency and also relevant for future study to refer this study as a benchmark from previous study (Pereira & Romero, 2017). Thus it is significantly relevant for this study although the findings provide no mediation occurred.

#### 5.14 Direct Effects on Teamwork and Employee Competency

Current study findings showed that there was a positive direct effect of teamwork and employee competency. Good teamwork among team members will shape employee competency and develop mutual understanding among members. Olupeliyawa, Hughes, and Balasooriya (2009) stated that good teamwork will develop employee performance and competencies, however, poor teamwork will result in poor development on employee competency and performance among the member.

Finding from qualitative study showed that one of the internal main factors that effect employee competency is teamwork. Based on informant 2, 3 and 5 who stated that:

*“Yes. It takes teamwork and unity to make things work. It takes a good collaboration to achieve target or KPIS”*

(2)

*“Employee need their team and management support to encourage them to improve and gain a new skills”*

(3)

*Yes, definitely. Teamwork is very crucial for everyone. Without teamwork, cooperation level will be very low*

(5)

Teamwork help employee to learn and gain experience from the other members. A study done by Salas, Rosen, Burke, & Goodwin (2009) stated that team training will benefit the member of the team in order to sharpen their soft skills, communication skill, decision making skill, attitude, leadership skills and knowledge. Therefore, the effect of teamwork either good team work or poor teamwork will affect the performance and competency of employee and the whole team.

### **5.15 Direct Effect on Change Management and Employee Competency**

The present study found that there was no positive direct effect on change management and employee competency. Change in management may not affect the level of employee competency and organization performance directly it may influence them indirectly. This happened due to restructuring of management style, system, downsizing or resizing and adaptation of new technology in the organization. Maria and Klass, (2007) stated in their study that organization should provide clear guidelines of methodologies for linking competencies to goals, for clarifying what is desirable, for conducting competency-based evaluation when dealing with change management. This is important for employee and organization in order to align with the changes in management, system and practices. Change management occur when there is a need for organization to move forward and gain high productivity in the future (Kansal & Chandani, 2014). In order to achieve high productivity, organization should emphasis on human factor particularly on employee competency. Employee competency should meet the changes that was made by the management and new behaviour should match to the changing system

### **5.16 Direct Effects on Organizational Culture and Employee Competency**

Another study done by Shahzad (2014) on “Impact of organizational culture on employees’ job performance” revealed that there was a positive relationship between organizational culture and employee’s job performance at software houses in Pakistan. This is inconsistent with the finding for current study, where it is found that there was no direct positive effect on organizational culture and employee competency. Culture plays a significant role in explaining the norm, social control system, tradition, belief and shared

vision among the member of the organization (You, Church, Zikic, 2004) culture influence employee based on the norm of the organization not directly influence the employee. A study done by Schein (2010) explained that organization culture is the most difficult organizational attribute to change. It can be a stimulus that shape individual belief and behaviour in organization. This study found that organization culture does affect employee competency directly based on social system and belief that existed in the organization.

### **5.17 Direct Effect on Work Experience and Employee Competency**

The present study found that there was significant direct effect of work experience and employee competency. There are many ongoing debate regarding work experience and competency. A study done by Avolio, Waldman and McDaniel (1990) stated that experience can become a predictor rather than age towards employee performance. However, a study done by Rosen and Lara-Ruiz (2015) revealed that there was a significance difference between generation Baby boomer and generation X based on work experience, belief, attitude and technological proficiency. This occur because the difference in term of generation in performing the task. Living in this 21<sup>st</sup> century with adaptability on technological change, efficiency and productivity are significant in order to align experience and competency.

Another study done by Dougherty and Gelder (2015) argued that Minimum qualifications, which act as a primary screening device for applicants and hiring agencies, are based in part on assumptions of the value of education and experience. However, Dougherty and Gelder (2015) also stated that the consideration for experience need to be analysed based on core industry. If employee comes from different industry applying the job that was not related to the job employee may have an issue to align and utilize previous

work experience. Working experience does influence employee competency based on the knowledge and learning that the employee undergo in their working life

### 5.18 Main Factors that Contribute towards Employee Competency

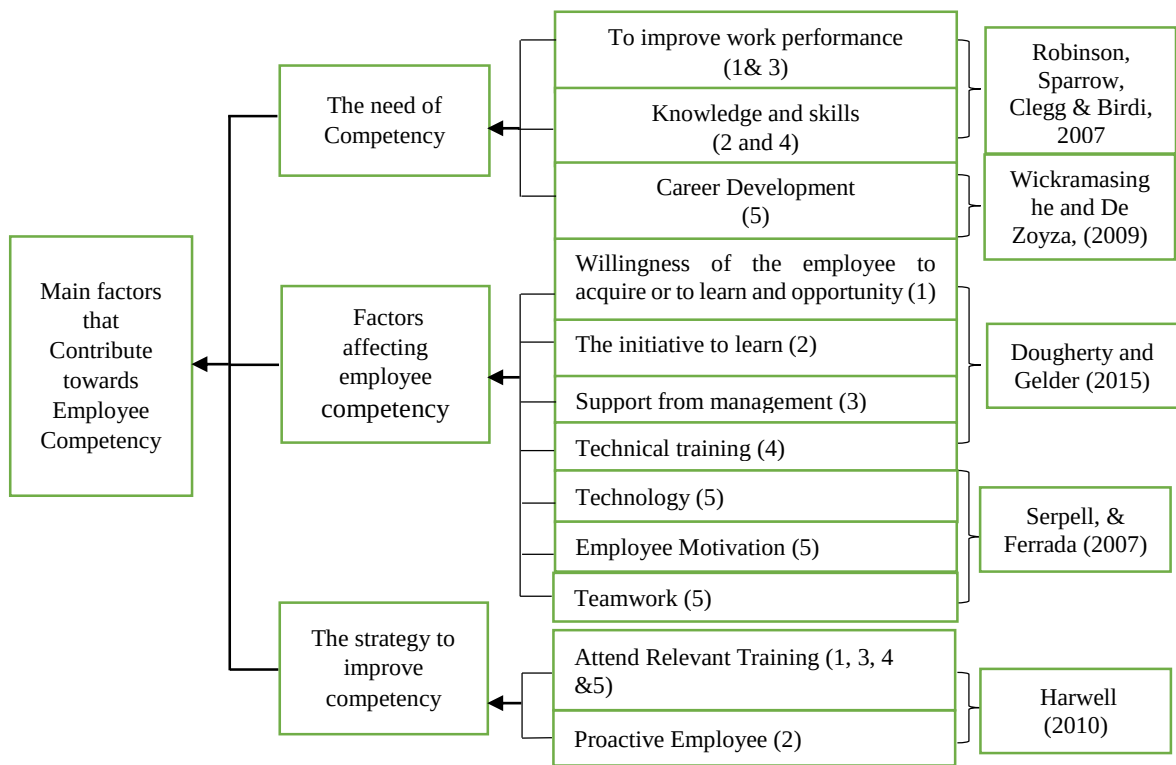


**Figure 5.3:** Main Factors that Contribute towards Employee Competency

This study also found the main factors that contribute towards employee competency, are three namely need of competency, factors affecting employee competency and strategy to improve competency. Based on this study there are three sub themes under the need of competency that emphasis on improving work performance, knowledge and skills and career development. To support the sub themes aforementioned, a study done by Robinson, Sparrow, Clegg and Birdi (2007) revealed that the benefits associated with competency usage include increased employee productivity, reduced training costs, and reduced staff

turnover. This is vital for organization in order to analyse critical elements in competency by evaluating employee competency through productivity. Another study done by Wickramasinghe and De Zoyza, (2009) stated that the importance of competencies from value and skill clusters than knowledge cluster across all functional areas. Based on the statement above it showed that not only knowledge is important the cluster where it can be divided into clusters such as skills and non-technical knowledge. As far as the need of competency is concerned, acknowledgement and experience is significant in order to ensure individual gain recognition on their competency. Study done by Dougherty and Gelder (2015) stated that Minimum qualifications, which act as a primary screening device for applicants and hiring agencies, are based in part on assumptions of the value of education and experience, this is important for individual to ensure that their work experience and education is acknowledge by their respective organization and align with the need of the organization interest.

There were seven themes on factors affecting employees competency found in this study which are comprising willingness of the employee to acquire or to learn and opportunity, initiative to learn, support from management, technical training, technology, employee motivation and teamwork. Technical training plays an important role for existing employee and new employee. Related technical training could shape individual competency and understanding the nature of work effectively. According to Harwell (2010) capabilities depend on mental and physical aptitude, training, experience and education. The tools used for a specific job helps an individual to maximize the skills in order to increase his or her job performance. Therefore, elements such as training, motivation and behaviour are vital in order to shape employee competency in the long run. Design of the technical training should be related to the task given so that employee could align motivation, cognitive ability and

develop specific skills that are required to perform the task. If employee are prone towards resistance to change practitioners should provide employee support system that could help them improve understanding toward change and align with the interest of the employee in order to achieve the desired competency.

To improve competency, 2 themes are found namely: attend relevant training and being proactive employee. To improve individual competency, practitioners or organization should view competency as an improvement process that may affect system and overall performance in the organization. A study done by Robinson, Sparrow, Clegg & Birdi, 2007 indicated that the use of competencies serve to enhance an organisation's performance and therefore yields a competitive advantage. In order to improve organization performance organization should consider human factor as the main element for achieving greater competencies. Relevant training is important in order to improve competency. A critical analysis should be done by respective practitioners in order to ensure related training is given to potential employee. A study done by Serpell, & Ferrada (2007) stated that relevant training help organization to see the real outcome from employee and money that was invested per employee. Relevant training improve current competency by adding necessary element and developing new skills, learning new knowledge and use current abilities to enhance performance. Proactive employee is important to ensure employee motivate themselves to learn and adapt the needs of competency in their daily duty.

The factors detected and mentioned above are significant in order to understand employee competency. Therefore, every practitioners and organization should consider these factors as stimulus contributing towards the increase or the decrease of employee competency.

### 5.19 Competency Level

**Table 5.1:** Competency Level

| No | Competency Items       | Competency Level    | Critical<br>Ratio | P-value | $\beta$ |
|----|------------------------|---------------------|-------------------|---------|---------|
| 1. | Teamwork               | Moderate competency | 2.320             | .020    | .119    |
| 2. | Change management      | Weak competency     | .139              | .889    | .015    |
| 3. | Organizational culture | Weak competency     | .955              | .340    | .121    |
| 4. | Work experience        | Moderate competency | 3.504             | .000    | .394    |
| 5. | Technological Change   | Weak competency     | 1.744             | .081    | .167    |

Based on the table 5.1 above, it showed that there were 5 competencies were assessed in this study. This study only displays the competency level based on overall competency due to some restriction and approval given with term and condition provides by the respective organization. Before going brief explanation on competency level, the scale of competency measurement should be explained based on statistical approach (Hair et al., 2012). This study adopts structural equation modelling in order to evaluate current competency level for the sample selected. The used of critical ratio is to determine the standard distribution for high and low level of the construct. Low level of construct should be below 1.94 while moderate above 2.000 to 3.000, and high level is above 5.000 with supported p-value below 0.05 as confirmatory level. Both critical ratio and p-value should meet its requirement that was proposed by (Hair et al., 2012).

Thus, this study describing 5 core competencies based on study objectives. The first competency item is teamwork with critical-ratio 2.320, and p-value .020. It showed that competency level for teamwork is at moderate level (above 2.000). The findings showed that teamwork competency need to be improved. As for change management the competency level revealed that there was a low or weak competency with .139 below 1.940 C. R and p-

value more than 0.05. It shows that the organization need to pay attention on this competency item in order to ensure the employees are able to cope with change management. The readiness of the employee to cope with the change management is important for organization to perform better in the future. Competency result for organization culture also revealed low competency with critical ratio .955 which is below 1.940 critical value proposed by Hair et al., (2012) and p-value above 0.05. The findings showed low organization culture competency in term of adaptation, shared core value and norm.

Competency level for work experience showed that employees in the organizations has moderate competency level with critical ration 3.504 which is above 1.940 and p-value is at the level of 0.000. Most of the employees possessed match and suitable experience in order to carry out their duty. However, there will be many areas of improvement that the employee need to improve for example learning new digital skill and digital leadership. Technological change competency shows low competency level with 1.744 critical ratio which is below 1.940 and p-value more than 0.05. Most of the employees in the respective organizations are still not competency in-term of adaptation on technological tools and changing system. This area of competency is vital for employee and organization in order to ensure technological competency meet the industrial 4.0 requirement (Pereira & Romero, 2017).

In a nutshell, the competency result showed that employees and organization need to improve the competency level. The findings portray various lacunae in competency domains. Individual and organization need to improve and scrutinize the competency gap that suit with the industrial need. This study provides the insight on how the related factors influence employee competency based on industrial requirement.

## **5.20 Implications of the Study**

This study has of two implications: Theoretical implications and practical implications. Theoretical implication is explained on how model development in this study provides implications from the perspective of theoretical use or model use in the field of human resource development and in academic setting. Practical implication on the other hand explains on how the contribution of this study could provide the impact towards practice of competency measurement and competency development.

### **5.20.1 Theoretical Implication**

Theory and model are significant in order to ensure that any implication of the model development toward the field of study and the impact of the model or theory in the related field. Contribution on epistemology and reflection on ontological perspective are crucial in order to point out how much the impact and influence of the model developed in this study has.

Implication on the model development is important because it provides a better insight towards the factors related to competency profiling before competency profiling process takes place. The impact in this study has shown that competency cannot be analysed only based on personality, technical and non-technical factors, it must be based on internal and external factors particularly assessment on the wave or need in today's market.

### **5.20.2 Boyatzis Model of Competency and Current model**

Based on Boyatzis model of competency (Boyatzis, 2008) it showed that there were 3 main domains covered in Boyatzis model namely: - individual, job demand and organizational environmental. Boyatzis model only provide three main factors that affecting competency based on the individual, job demand and organizational requirement. However, Boyatzis model does not consider the revolution of competency profiling based on the Industrial need and the emergence of technological change that disrupting the functions of the organization, individual competency, and human resource function and organization performance. Thus, this study expanding Boyatzis model and adding few domains that relevant for industrial 4.0. Few vital domains are change management, teamwork, organizational culture, work experience, and technological change. It's shown that all the new domains (change management, teamwork, organizational culture, work experience and technological changes) provide significant direct and indirect effect towards employee competency. Boyatzis model drive this study in order to expand current study model based on current situation that is happening in organizational setting. The implication of Boyatzis model is seen as a proven factor that affecting employee competency in the Asian context (Boyatzis, 2008).

### **5.20.3 Model Implication**

The model implication in this study provides significant implication and contribution to the industry, state, practitioners, and academia. Current model based on the need of industrial 4.0 revolution on human capital and competency (Pereira & Romero, 2017). Unlike theoretical gaps that was mentioned in chapter 1, where the previous studies provide the model that only assessing the internal factors that might be obsolete for today's

industrial requirement especially addressing on industrial revolution 4.0. Current model closer the theoretical gaps by providing the competency model that assessing internal (teamwork, organizational culture, work experience and change management) and external factors (technological change) that are needed in today's market. Especially the alignment on industrial 4.0 requirement which are change management and technological change factors. These two factors are the domains in the current model of this study.

The model also could help practitioners to perform competency profiling based on the current of the industrial such as digital competency, change management that that related to technological change and digital transformation. The main implication here is the contribution to the human resource and human development in term of competency profiling domains that is needed by the industry based on current need which is “overcoming the industrial revolution 4.0” (Pereira & Romero, 2017). Current model might change on how practitioners and industry view competency profiling and assessment based on the need of today's market. This might also changing the perspective or overview on competency in 21<sup>st</sup> century particularly align with the industrial 4.0 revolution. The current competency model correlated to the agendas of State Government of Sarawak where the initiative are digital economy, digital transformation plan, digital government, and digital competency. It will guide Sarawak State Government to perform digital competency based on its transformation agenda.

The philosophical value behind this model are the essence of knowledge in competency, practicality based on industrial need, model insinuation. Philosophical value in this study provide the insight on competency assessment knowledge, practicality and model profiling based on dynamic factors that disrupt the whole business in the organization. The

use of knowledge from the model can help to enhance what is the proper evaluation system that should be proposed and made in the future. Furthermore, it is also important for future study to develop another competency model that can be used to assess current competency need based from the demand and current need.

The contribution of the knowledge in this study is the adoption of the knowledge based on the model and finding in this study that can be translate into the practice in the organization. The contribution of the knowledge provides the understanding of the issues on competency profiling and competency assessment based on the current situation. The adaptation of this knowledge benefits individual, policy maker and organization in order to understand “what is matter” in todays practice particularly addressing on the competency issue.

#### **5.20.4 Practical Implication**

The practical implications on the other hand address the impact of this study on the practice of competency profiling in organizations. The implications here are improving current profiling assessment before actual competency profiling takes place, and to hone practitioners’ knowledge on what is the most eloquent or dynamic factors that act as under pinning factors for competency profiling process.

As far as this study is concerned, the result has confirmed that the most significant elements before conducting competency profiling are personality, peer support, work life balance, teamwork, organizational culture, change management, technological change and demography factors. This means that the mentioned elements above are necessary in pre-assessment of employee competencies. Therefore, this study could forecast the relevant positive implications such as improving competency process in organizational setting,

improving policy and related action plan regarding human resource practices mainly on competency and also could help local authorities to review this study as the necessary element in order to achieve high competency worker (high skill worker)

### **5.21 Research Summary**

The objective of this study was to investigate competency profiling soliciting factors affecting employee competency and employee profiling in selected industries in Kuching, Sarawak. In this study, there were five chapters which cover vital element in designing this study.

Chapter one consists of introduction, background of the study, problem statement, objective, research questions, research hypothesis, conceptual framework, significance of the study, limitations of the study and definitions of terms. Each of these elements has its own significance towards this study. The background of the study consists of a brief discussion of the background issues.

Chapter two relates the issues and argument from the previous study. Issues of this study will be touched on topics related which were with regards to the changing trend on the competency profiling in Malaysia context. The next part of the study covered the theories that were engaged in this study which were relevant in explaining the study. In addition, the third part of this chapter two explained the review of the previous study's findings and the chapter ends with a short the summary.

Chapter three discussed the methodologies used in this research. The aspects included research design, population and sample of the research, research instrument, pilot test, validity and reliability, data collection and data analysis procedures. It ended with a short summary. Data in this study were gathered through distributed questionnaires to two

industries which were Sarawak Energy Berhad and Polytechnic Kuching, Sarawak. Person analysis was used to perform the relationship among variables, T-test was used to test different among genders and ANOVA was used to test the different with more than two variables and the last test was structural equation modeling was used for model measurement and regression analysis.

Chapter four discussed the findings of the information from the distribution survey questionnaire. Data analyses were made based on the purpose of the study. In this study, respondent demography background was described based on gender, age group, education level and period of service. T test and ANOVA was used to analyse the different between demography variables. Pearson correlation matrix was used to analyse the relationship between personality, peer support and work life balance. Meanwhile, for model development structural equation modeling was used in order to provide a robust test for model development, there are few stages are involved Confirmatory factor analysis, measurement model and Regression analysis which consisted of identification of significant path and mediation test.

Chapter five discussed the quantitative and qualitative findings in relation to past research, implications of the study, and recommendations of the study and overall conclusion.

## **5.22 Recommendation for Future Study**

This study propose future research to be in quasi- experimental and longitudinal study in order to understand the soliciting factors that may contribute towards employee competency. By adopting quasi experimental and longitudinal study a researcher may develop relevant model and understand in depth on the issue of employee competency. On top of that, this study also proposed future study to include technical and non-technical competency as dependent variable in order to measure effectively employee competency. Recommendation for individual are improving digital competency, culture, change management and technological adoption. These elements are significant for individual or employee to ensure that they can compete and, in their work, based on the need for today job demand. This was mentioned by Pereira and Romero (2017) study conducted in Spain pertaining to the digital competency. As for policy maker, policy should be aligned with the need of new area of competencies requirement based on industrial need. Policy should be based on the assessment of digital competency, digital leadership, change management, Internet of things evaluation and process competency. Old policy might be obsolete and may not suitable for current need in order to boost the performance of organization. Last but not least, recommendation for education sectors is to drill in the research on competency profiling based on industrial 4.0, digital transformation, digital government, technological change and digital leadership.

Competency is a must for every employee, organization and even management system. Therefore, this study proposed future study not only restricted into internal factors as contributing factors toward competency.

### 5.23 Conclusion

In conclusion, this study indicated that all soliciting factors are vital in order to trigger employee competency level. Quantitative finding showed that the soliciting factors such as personality, peer support showed strong positive relationship on employee competency. As for teamwork, and work experience showed significant positive direct toward technological change as mediation factor on employee competency.

There was a significant difference between male and female as far as employee competency is concerned. However, result from ANOVA indicated that age and levels of education showed there was no significant difference on employee competency. On the other hand, period of service showed there was no significance different toward employee competency.

Qualitative findings indicated that internal factors affecting employee competency such as good leader and favourable environment, teamwork, management support employee ability and change management. Meanwhile, technological change did not affecting employee competency due to the different demand and force from internal and external factors.

Internal and external factors are the most dynamic factors that can trigger the levels of employee competency. This study has shown that the related factors are vital in order to understand employee competency profiling in Malaysia context.

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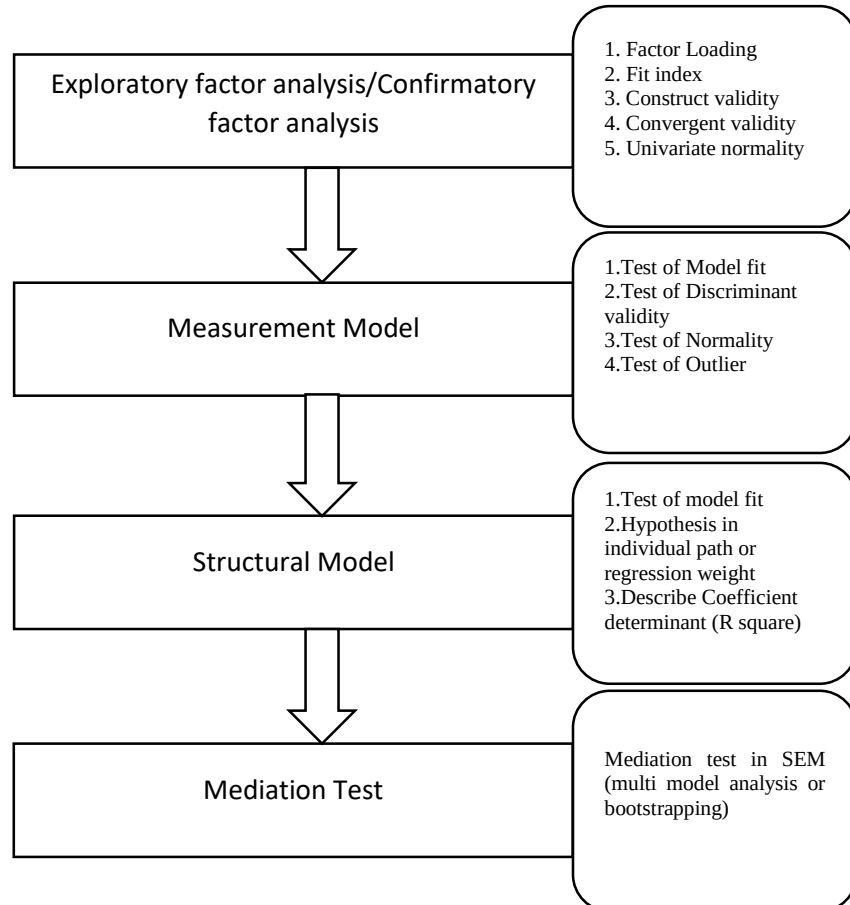
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## APPENDICES

### Appendix 1

#### Structural Equation Modeling Process



## Appendix 2



# QUESTIONNAIRE

### **“COMPETENCY PROFILING: FACTORS RELATING TO EMPLOYEE COMPETENCY AND THE ROLE OF TECHNOLOGICAL CHANGE AS MEDIATING FACTOR IN SELECTED AGENCIES IN KUCHING, SARAWAK.”**

Dear Sir/Madam/Miss,

The objective of this survey is to investigate **“COMPETENCY PROFILING: FACTORS RELATING TO EMPLOYEE COMPETENCY AND THE ROLE OF TECHNOLOGICAL CHANGE AS MEDIATING FACTOR IN SELECTED AGENCIES IN KUCHING, SARAWAK”**. The information obtained from this survey will be kept confidential and will solely be used for academic purposes. This questionnaire consists of 10 parts: Part A (individual competency), Part B (Personality), Part C (Teamwork), Part D (Working Experience), Part E (Organizational Culture), Part F (Change Management), Part G (Peer Support), Part H (Work life balance), Part I (Technological change) and Part J (Demography).

Please read the statements carefully before you answer them. You are required to answer ALL statements in the questionnaire. If there is any doubt, feel free to contact me.  
Thank you

Nadri Aetis Heromi Bin Basmawi  
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94300 Kota Samarahan, Sarawak.  
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Phone number: 01129985082

### Appendix 3

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#### Informed Consent Form

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Faculty of Cognitive Sciences and Human Development

Universiti Malaysia Sarawak

**Research Project:**

**“COMPETENCY PROFILING: FACTORS RELATING TO EMPLOYEE  
COMPETENCY AND THE ROLE OF TECHNOLOGICAL CHANGE AS  
MEDIATING FACTOR IN SELECTED AGENCIES IN KUCHING, SARAWAK.”**

**Researcher's Name:** Nadri Aetis Heromi Bin Basmawi.

1. I understand that participation in this study is voluntary, the data provided will be treated with confidentiality and I can withdraw at any time I wish
  
2. This survey may require less than 30 to 40 minutes to complete

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix 4

### Section A : Individual Competency.

Please circle the number that best describe your degree of agreement on each statement below. The response options range from:

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

| <i>I am competent because...</i> |                                                           |   |   |   |   |   |
|----------------------------------|-----------------------------------------------------------|---|---|---|---|---|
| 1                                | I could use my knowledge to perform current task.         | 1 | 2 | 3 | 4 | 5 |
| 2                                | My communication skill is my strength.                    | 1 | 2 | 3 | 4 | 5 |
| 3                                | I could use my skills to teach other employees.           | 1 | 2 | 3 | 4 | 5 |
| 4                                | My skill is acknowledged by the management.               | 1 | 2 | 3 | 4 | 5 |
| 5                                | My leadership skill is my strength.                       | 1 | 2 | 3 | 4 | 5 |
| 6                                | I have the ability to adapt to the changes.               | 1 | 2 | 3 | 4 | 5 |
| 7                                | I have the ability to influence others.                   | 1 | 2 | 3 | 4 | 5 |
| 8                                | I have the ability to cope with stress.                   | 1 | 2 | 3 | 4 | 5 |
| 9                                | I have the ability to deal with difficult situation.      | 1 | 2 | 3 | 4 | 5 |
| 10                               | My ability helps to improve organizational effectiveness. | 1 | 2 | 3 | 4 | 5 |

Adapted from : Tovey (1994). Competency assessment: a strategic approach–part II. *Executive development*, 7(1), 16-19.

## Appendix 5

### Section B: Personality

Please circle the number that best describe your degree of agreement on each statement below. The response options range from:

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

| <i>I am competent because...</i> |                                                         |   |   |   |     |
|----------------------------------|---------------------------------------------------------|---|---|---|-----|
| 1                                | I get to know people quickly.                           | 1 | 2 | 3 | 4 5 |
| 2                                | I like to be surrounded by people.                      | 1 | 2 | 3 | 4 5 |
| 3                                | I could influence people around me.                     | 1 | 2 | 3 | 4 5 |
| 4                                | I always keep myself busy.                              | 1 | 2 | 3 | 4 5 |
| 5                                | I always believe people have good intention on me.      | 1 | 2 | 3 | 4 5 |
| 6                                | I always behave straightforward.                        | 1 | 2 | 3 | 4 5 |
| 7                                | I always make people around me feel welcome.            | 1 | 2 | 3 | 4 5 |
| 8                                | I have strong imagination to solve a problem.           | 1 | 2 | 3 | 4 5 |
| 9                                | I always generate original solution to solve a problem. | 1 | 2 | 3 | 4 5 |
| 10                               | I always prefer change in my life.                      | 1 | 2 | 3 | 4 5 |
| 11                               | I take a risk to achieve change.                        | 1 | 2 | 3 | 4 5 |
| 12                               | I always try new way to perform my job                  | 1 | 2 | 3 | 4 5 |
| 13                               | I always get things done efficiently.                   | 1 | 2 | 3 | 4 5 |
| 14                               | I do things according to a plan.                        | 1 | 2 | 3 | 4 5 |
| 15                               | I always emphasis high standards for my job .           | 1 | 2 | 3 | 4 5 |
| 16                               | I get down to work quickly.                             | 1 | 2 | 3 | 4 5 |
| 17                               | I have fewer worries than most people around me.        | 1 | 2 | 3 | 4 5 |
| 18                               | I am positive about my future.                          | 1 | 2 | 3 | 4 5 |
| 19                               | I am confident in dealing with unfamiliar surroundings. | 1 | 2 | 3 | 4 5 |
| 20                               | I can cope with problem effectively.                    | 1 | 2 | 3 | 4 5 |

Adapted From: John (2003). Work Personality.Retrieved From  
[www.myskillsprofile.com/Reports/b5fq\\_sample\\_report.pdf](http://www.myskillsprofile.com/Reports/b5fq_sample_report.pdf)

## Appendix 6

### Section C:Teamwork

Please circle the number that best describe your degree of agreement on each statement

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

below. The response options range from:

| <i>I am competent because...</i> |                                                                                          |   |   |   |   |   |
|----------------------------------|------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1                                | My team help me to improve my confident level.                                           | 1 | 2 | 3 | 4 | 5 |
| 2                                | My team member helps me to understand my task better in order to perform my current job. | 1 | 2 | 3 | 4 | 5 |
| 3                                | Team performance is based on my performance.                                             | 1 | 2 | 3 | 4 | 5 |
| 4                                | I prefer to learn new skills and knowledge from team member.                             | 1 | 2 | 3 | 4 | 5 |
| 5                                | Working in team help me to gain new ideas.                                               | 1 | 2 | 3 | 4 | 5 |
| 6                                | I could lead my team effectively.                                                        | 1 | 2 | 3 | 4 | 5 |
| 7                                | I learn to make effective decision making skill in the team.                             | 1 | 2 | 3 | 4 | 5 |
| 8                                | Working in team help me to learn on how to manage things effectively.                    | 1 | 2 | 3 | 4 | 5 |
| 9                                | My skill is required by team member in order to complete the task.                       | 1 | 2 | 3 | 4 | 5 |
| 10                               | My ability is significant in achieving team objectives.                                  | 1 | 2 | 3 | 4 | 5 |

Adapted From: Charles (2001), "Team competencies", Team Performance Management: An International Journal, Vol. 7 Iss 7/8 pp. 117 - 122

## Appendix 7

### Section D: Working Experience.

Please circle the number that best describe your degree of agreement on each statement below. The response options range from:

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

| <i>I am competent because...</i> |                                                                             |   |   |   |   |   |
|----------------------------------|-----------------------------------------------------------------------------|---|---|---|---|---|
| 1                                | My previous working experience helps me to adapt with new environment.      | 1 | 2 | 3 | 4 | 5 |
| 2                                | I have enough working experience in order to complete my current task.      | 1 | 2 | 3 | 4 | 5 |
| 3                                | I believe my working experience is significant for organization performance | 1 | 2 | 3 | 4 | 5 |
| 4                                | My competency is based on my working experience.                            | 1 | 2 | 3 | 4 | 5 |
| 5                                | I have experience in dealing with conflict.                                 | 1 | 2 | 3 | 4 | 5 |
| 6                                | I have earned related experience in this organization.                      | 1 | 2 | 3 | 4 | 5 |

Adapted From: Avolio, Waldman, & McDaniel (1990). Age and work performance in non managerial jobs: The effects of experience and occupational type. *Academy of Management Journal*, 33(2), 407-422.

## Appendix 8

### Section E: Organizational Culture.

Please circle the number that best describe your degree of agreement on each statement below. The response options range from:

|                      |          |         |       |                |
|----------------------|----------|---------|-------|----------------|
| Strongly<br>Disagree | Disagree | Neutral | Agree | Strongly Agree |
| 1                    | 2        | 3       | 4     | 5              |

| <i>I am competent if...</i> |                                                                                     |   |   |   |   |   |
|-----------------------------|-------------------------------------------------------------------------------------|---|---|---|---|---|
| 1                           | Working culture at my workplace help me to perform better.                          | 1 | 2 | 3 | 4 | 5 |
| 2                           | The norm in this organization benefit me.                                           | 1 | 2 | 3 | 4 | 5 |
| 3                           | The core values in my organization is align with my knowledge, skills and abilities | 1 | 2 | 3 | 4 | 5 |
| 4                           | The organizational culture does not affect my work life balance.                    | 1 | 2 | 3 | 4 | 5 |
| 5                           | The organizational cultures provide positive effect on my behaviour at work place.  | 1 | 2 | 3 | 4 | 5 |
| 6                           | The organization culture could help in term of career development.                  | 1 | 2 | 3 | 4 | 5 |

Adapted from: Siew Kim Jean & Lee Kelvin Yu (2004), "Corporate culture and organizational performance", Journal of Managerial Psychology, Vol. 19 Iss 4 pp. 340 – 359

## Appendix 9

### Section F: Change Management.

Please circle the number that best describe your degree of agreement on each statement below. The response options range from:

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

| <i>I am competent because...</i> |                                                                                            |   |   |   |   |   |
|----------------------------------|--------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1                                | Strategic change in my organization provides positive effect on my current competency.     | 1 | 2 | 3 | 4 | 5 |
| 2                                | Change management is significant for me in order to learn new skills.                      | 1 | 2 | 3 | 4 | 5 |
| 3                                | I perceived change management as opportunity to adapt new Strategy.                        | 1 | 2 | 3 | 4 | 5 |
| 4                                | Change management help me to be more competent.                                            | 1 | 2 | 3 | 4 | 5 |
| 5                                | Change management is not a burden for me but a challenge for me to improve my performance. | 1 | 2 | 3 | 4 | 5 |
| 6                                | Change management is necessary for me to update my knowledge.                              | 1 | 2 | 3 | 4 | 5 |

Adapted From: Omer & Fu (2012). The Impact of Information Technology on Human Resource Practices and Competencies.

## Appendix 10

### Section G: Peer support.

Please circle the number that best describe your degree of agreement on each statement

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

below. The response options range from:

| <i>I am competent if...</i> |                                                                        |   |   |   |   |   |
|-----------------------------|------------------------------------------------------------------------|---|---|---|---|---|
| 1                           | My peers help me to learn new skills.                                  | 1 | 2 | 3 | 4 | 5 |
| 2                           | Transfer knowledge from peers helps me to perform my task effectively. | 1 | 2 | 3 | 4 | 5 |
| 3                           | My peers help me to adapt with change management.                      | 1 | 2 | 3 | 4 | 5 |
| 4                           | My peers understand my responsibility.                                 | 1 | 2 | 3 | 4 | 5 |
| 5                           | My peer as my support system                                           | 1 | 2 | 3 | 4 | 5 |
| 6                           | My peers help me with on the job training.                             | 1 | 2 | 3 | 4 | 5 |

Adapted From: Holly & Paula (2002), "Building reference strengths through peer training", Reference Services Review, Vol. 30 Iss 4 pp. 349 - 354

## Appendix 11

### Section H: Work Life Balance.

Please circle the number that best describe your degree of agreement on each statement below. The response options range from:

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

| <i><b>I am Competent if ...</b></i> |                                                         |   |   |   |   |   |
|-------------------------------------|---------------------------------------------------------|---|---|---|---|---|
| 1                                   | I can spend most of my time with my family and friends. | 1 | 2 | 3 | 4 | 5 |
| 2                                   | I can work flexible working hour.                       | 1 | 2 | 3 | 4 | 5 |
| 3                                   | I can do my task at home.                               | 1 | 2 | 3 | 4 | 5 |
| 4                                   | I have enough time for social activities.               | 1 | 2 | 3 | 4 | 5 |
| 5                                   | I have a freedom to complete my task.                   | 1 | 2 | 3 | 4 | 5 |
| 6                                   | I have enough time for personal activities.             | 1 | 2 | 3 | 4 | 5 |
| 7                                   | I work from 9 am to 5 pm every day.                     | 1 | 2 | 3 | 4 | 5 |
| 8                                   | I have less conflict at workplace.                      | 1 | 2 | 3 | 4 | 5 |

Adapted from: Carlson, Kacmar, Wayne, & Grzywacz, (2006). Measuring the positive side of the work–family interface: Development and validation of a work–family enrichment scale. *Journal of Vocational Behavior*, 68(1), 131-164.

## Appendix 12

### Section I: Technological Change.

Please circle the number that best describe your degree of agreement on each statement below. The response options range from:

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|----------------|
| 1                 | 2        | 3       | 4     | 5              |

| <i>I am competent if...</i> |                                                                                    |   |   |   |   |   |
|-----------------------------|------------------------------------------------------------------------------------|---|---|---|---|---|
| 1                           | I could adapt any technological changes in my organization.                        | 1 | 2 | 3 | 4 | 5 |
| 2                           | I can use technology very well.                                                    | 1 | 2 | 3 | 4 | 5 |
| 3                           | Through technological change I can improve my skills.                              | 1 | 2 | 3 | 4 | 5 |
| 4                           | Technology is necessary for me to perform my job.                                  | 1 | 2 | 3 | 4 | 5 |
| 5                           | The impact of technological change helps me to be more competent.                  | 1 | 2 | 3 | 4 | 5 |
| 6                           | The change of system information is not burdening me.                              | 1 | 2 | 3 | 4 | 5 |
| 7                           | The implementation of new technology provides positive effect on my job knowledge. | 1 | 2 | 3 | 4 | 5 |
| 8                           | I keep updating my knowledge in using technological tools.                         | 1 | 2 | 3 | 4 | 5 |
| 9                           | The organization provide me a training regarding new technological tools           | 1 | 2 | 3 | 4 | 5 |

Adapted From: Omer & Fu (2012). The Impact of Information Technology on Human Resource Practices and Competencies.

## Appendix 13

### Section J: Demographic Information

(Please tick / in the bracket or write in the space that applies to you.)

#### 1. Gender:

Male ( )

Female ( )

#### 2. Period of service:

<1 year ( )

1 year – 5 years ( )

6 year – 10 years ( )

>10 years ( )

#### 3. Age:

20 years and below ( )

21 years – 30 years ( )

31 years – 40 years ( )

40 years and above ( )

#### 4. Level of Academic Qualification:

LCE/SRP/PMR ( )

MCE/SPM/SPMV ( )

STPM/DIPLOMA ( )

DEGREE ( )

Others:..... (Please specify)

## Appendix 14



### **Qualitative Research Instrument Open- ended Questionnaire.**

#### **“COMPETENCY PROFILING: FACTORS RELATING TO EMPLOYEE COMPETENCY AND THE ROLE OF TECHNOLOGICAL CHANGE AS MEDIATING FACTOR IN SELECTED AGENCIES IN KUCHING, SARAWAK.”**

Dear Sir/Madam/Miss,

The objective of this interview is to explore **“COMPETENCY PROFILING: FACTORS RELATING TO EMPLOYEE COMPETENCY AND THE ROLE OF TECHNOLOGICAL CHANGE AS MEDIATING FACTOR IN SELECTED AGENCIES IN KUCHING, SARAWAK.”** The information obtained from this interview will be kept confidential and will solely be used for academic purposes. This research instrument consists of the letter of consent, an appointment sheet and the open- ended questionnaire. I am seeking your consent to be an informant for this study. The survey may take 45 to 50 minutes of your time. However, a follow-up on open- ended questionnaire will be conducted. All information gathered will be kept confidential and will not be used for any other purpose other than for this study. It is important that you answer these questions honestly. Thank you for your time. If you have any question, please ask or contact me at: 01129985082 or n8ry\_@hotmail.com.

Nadri Aetis Heromi Bin Basmawi  
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## Appendix 15

### CONSENT LETTER.

**“COMPETENCY PROFILING: FACTORS RELATING TO EMPLOYEE  
COMPETENCY AND THE ROLE OF TECHNOLOGICAL CHANGE AS  
MEDIATING FACTOR IN SELECTED AGENCIES IN KUCHING, SARAWAK”**

I agree to participate in a research conducted by Nadri Aetis Heromi Bin Basmawi, a Master student from the Faculty of Cognitive Sciences and Human Development (FCSHD) of Universiti Malaysia Sarawak (UNIMAS). I understand that this student is supervised by a lecturer, Associate Professor Dr. Hasbee Hj Usop, as partial requirement for Master By research entitled “ **Competency Profiling: Factors Relating Employee Competency and The Role of Technological Change as Mediating Factor in Selected agencies in Kuching, Sarawak.**”

**(A) Procedures**

- The survey may take up 45 to 50 minutes.
- The follow-up of open ended questionnaire will be answer in written form.

**(B) Risks/Discomforts**

- I understand that there is only minimal risk and possible of emotional discomfort when answering some questions.

**(C) Confidentiality**

- I understand that all information provided will remain confidential and will only be reported as individual data with no identifying information to preserve my anonymity. I am also aware that all data will be kept confidential and only those directly involved with the study will have access to them.

**(D) Participation**

- I am aware that participation in this study is voluntary. Therefore, I have the right to withdraw at any time or refuse to answer any question as a result of the inconvenience or disturbance that the study may cause.

**(E) Inquiries**

- I understand that if I have further inquiries relating to this study, I may contact Nadri Aetis Heromi Bin Basmawi (01129985082) and email at n8ry\_@hotmail.com.
- I have read, understood, and received a copy of the above consent and it is my own desire to participate in this study. My signature below indicates that I agree to participate in this study as an informant.

Signature of the Informant  
Date:

Signature of the Researcher  
Date

## **Appendix 16**

### **Part A. General Question**

#### Warm up questions

1. How long have you been working in this organization?

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2. What is your area of expertise?

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3. Is your area of expertise similar to what you are doing at work?

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4. Can you please describe your job?

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## Appendix 17

### Situational Questions.

#### **Research Question 1: Internal Factors that affect Employee Competency**

1. In your opinion, does internal factor such as teamwork, peers support Change management and organizational culture effect employee competency? Please explain.

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#### **Research Questions 2: Main Factors that affect employee competency.**

1. Is competency a must for your job? Why?

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2. In your opinion, what are the main factors that affect employee competency? Name them and explain.

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## Appendix 18

3. Briefly explain what can be done to be a competent employee?

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### Research Questions 3: Incompetency and year of service.

1. In your opinion, does employee period of service represent employee competency level? Why?

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2. In your opinion, why do some employee remain incompetent after working for few years?

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3. In your opinion, under what circumstances would employee become unable to perform? Please explain.

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## Appendix 19

### Research Questions 4: Technological change that affect employee competency.

1. Is technology important in your job? Please explain.

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2. How often do you use technology device at your workplace in order to perform your job? Please explain.

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3. In your opinion, is the issue of technological change affecting employee competency? Please explain.

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## Appendix 20

**Part B: Demography Information:** Complete the following demography profile item

|                          |  |
|--------------------------|--|
| <b>Department</b>        |  |
| <b>Gender</b>            |  |
| <b>Marital Status</b>    |  |
| <b>Highest Education</b> |  |
| <b>Age</b>               |  |
| <b>Ethnicity</b>         |  |
| <b>Religion</b>          |  |
| <b>Year of service</b>   |  |

If there are any suggestions or comments, kindly use the space provided below.

Thank you for your cooperation and participation in this study.

## Appendix 21

Informant 1

### Part A: General Question

#### Warm Up Questions

1. How long have you been working in this organization?  
24 years
2. What is your area of expertise?  
Finance
3. Is your area of expertise similar to what you are doing at work?  
No
4. Can you please describe your job?  
HR business partner for power generation

#### Situational Questions

##### **Research Question 1: Internal Factor that affect Employee Competency**

1. In your opinion, does internal factor such as teamwork, peers support Change management and organizational culture effect employee competency? Please explain.  
A good leader and a conducive environment will encourage employees to build up their competency by giving them the opportunities to do so

##### **Research Question 2: Main Factor that affect Employee Competency**

1. Is Competency a must for your job? Why?  
Yes
2. In your Opinion, what are the main factor that affect employee competency? Name them and explain.  
1. Willingness of the employee to acquire/ learn  
2. Opportunities
3. Briefly explain what can be done to be a competent employee?  
To undergo relevant training (course, workshops, on-the-job), assessment, examination, interview

### Research Question 3: Incompetency and year of service

1. In your opinion, does employee period of service represent employee competency level?  
Yes to certain extent as a person can acquire competency through doing on the job
2. In your opinion, why do some employee remain incompetent after working for few years?  
Not willing to learn or adapt to better ways of doing the job
3. In your opinion, under what circumstances would employee become unable to perform? Please explain.  
Lack of know-how/ skills  
No longer fit to do the job  
Not willing to change

### Research Question 4: Technology change that affect Employee Competency

1. Is technology important in your job? Please explain.  
Yes  
1. Communication – email, contact  
2. Data storage and analysis
2. How often do you use technology device at your workplace in order to perform your job? Please explain.  
Everyday
3. In your opinion, is the issue of technology change affecting employee competency? Please explain.  
Employees need to keep abreast with technological change to be better equipped in performing their jobs

**Part B: Demography Information:** Complete the following demography profile item

|                          |                |
|--------------------------|----------------|
| <b>Department</b>        | Human Resource |
| <b>Gender</b>            | Female         |
| <b>Marital Status</b>    | Married        |
| <b>Highest Education</b> | Master's       |
| <b>Age</b>               |                |
| <b>Ethnicity</b>         | Chinese        |
| <b>Religion</b>          | Christian      |
| <b>Year of service</b>   | 24             |

### **Part A: General Question**

#### Warm Up Questions

1. How long have you been working in this organization?  
25 years
2. What is your area of expertise?  
Financial Planning Modes & HR
3. Is your area of expertise similar to what you are doing at work?  
No
4. Can you please describe your job?  
HR

#### Situational Questions

##### **Research Question 1: Internal Factor that affect Employee Competency**

1. In your opinion, does internal factor such as teamwork, peers support Change management and organizational culture effect employee competency? Please explain.  
Yes. It takes teamwork and unity to make things work. It takes a good collaboration to achieve target or KPIS.

##### **Research Question 2: Main Factor that affect Employee Competency**

1. Is Competency a must for your job? Why?  
Yes. Competence in terms of knowledge and skills essential to manage effectively and efficiently.
2. In your Opinion, what are the main factor that affect employee competency? Name them and explain.  
The will/ initiative to improve and increase self-worth.
3. Briefly explain what can be done to be a competent employee?  
Always be proactive in thinking of ways to improve

### Research Question 3: Incompetency and year of service

1. In your opinion, does employee period of service represent employee competency level?  
Yes. You learn as you go along, the years of service increase, you learn more thingd along the way
2. In your opinion, why do some employee remain incompetent after working for few years?  
Attitude. Without positive attitude, people might be complacent and refuse to learn and take up challenges.
3. In your opinion, under what circumstances would employee become unable to perform? Please explain.  
When the employee always have a mind-set of being a victim of circumstance and always think negative and refuse to step out of comfort zone

### Research Question 4: Technology change that affect Employee Competency

1. Is technology important in your job? Please explain.  
Yes, things evolve and move so fast, so without optimizing the technology we will be left behind and lost the opportunities that come in our way
2. How often do you use technology device at your workplace in order to perform your job? Please explain.  
Every day and constantly use the technology to do reporting and analysis
3. In your opinion, is the issue of technology change affecting employee competency? Please explain.  
Yes. If the employee is technologically savvy, then it is an advantage to him/ her as we are constantly demand the employee to beat the deadline.

**Part B: Demography Information:** Complete the following demography profile item

|                          |                   |
|--------------------------|-------------------|
| <b>Department</b>        | HR                |
| <b>Gender</b>            | Female            |
| <b>Marital Status</b>    | Married           |
| <b>Highest Education</b> | Bachelor's Degree |
| <b>Age</b>               | 50                |
| <b>Ethnicity</b>         | Malay             |
| <b>Religion</b>          | Islam             |
| <b>Year of service</b>   | 25                |

Informant 3

**Part A: General Question**

Warm Up Questions

1. How long have you been working in this organization?  
3 years
2. What is your area of expertise?  
Admin
3. Is your area of expertise similar to what you are doing at work?  
Yes
4. Can you please describe your job?  
Support unit for HR process

Situational Questions

**Research Question 1: Internal Factor that affect Employee Competency**

1. In your opinion, does internal factor such as teamwork, peers support Change management and organizational culture effect employee competency? Please explain.  
Employee need their team and management support to encourage them to improve and gain a new skills

**Research Question 2: Main Factor that affect Employee Competency**

1. Is Competency a must for your job? Why?  
Yes. It can improved my job gravity
2. In your Opinion, what are the main factor that affect employee competency? Name them and explain.  
Support from the management is the most important factors because management have to provide time and course for the employee to gain new skills
3. Briefly explain what can be done to be a competent employee?  
Attend course and training

### Research Question 3: Incompetency and year of service

1. In your opinion, does employee period of service represent employee competency level?  
Yes, employee gain knowledge and experience throughout their strike and they expert in their field
2. In your opinion, why do some employee remain incompetent after working for few years?  
They lack of enthusiasm to gain a new skills to improve themselves
3. In your opinion, under what circumstances would employee become unable to perform? Please explain.  
They unable to compete with the new generation which is more knowledgeable and they become less enthusiastic to do their job

### Research Question 4: Technology change that affect Employee Competency

1. Is technology important in your job? Please explain.  
Yes  
1. It can speed up my jobs  
2. Easier to communicate with others
2. How often do you use technology device at your workplace in order to perform your job? Please explain.  
Every time
3. In your opinion, is the issue of technology change affecting employee competency? Please explain.  
Technology will boost up employee competency by helping them to do more and become more knowledgeable in their area

**Part B: Demography Information:** Complete the following demography profile item

|                          |                |
|--------------------------|----------------|
| <b>Department</b>        | Human Resource |
| <b>Gender</b>            | Male           |
| <b>Marital Status</b>    | Married        |
| <b>Highest Education</b> | Degree         |
| <b>Age</b>               | 32             |
| <b>Ethnicity</b>         | Malay          |
| <b>Religion</b>          | Islam          |
| <b>Year of service</b>   | 3              |

### **Part A: General Question**

#### Warm Up Questions

1. How long have you been working in this organization?  
I have been working for the company for 27 years
2. What is your area of expertise?  
My area of expertise is in administration
3. Is your area of expertise similar to what you are doing at work?  
Yes
4. Can you please describe your job?  
My job consist of correspondence via letters and emails and doing paper work.

#### Situational Questions

##### **Research Question 1: Internal Factor that affect Employee Competency**

1. In your opinion, does internal factor such as teamwork, peers support Change management and organizational culture effect employee competency? Please explain.  
No. Competency is employee's ability and knowledge to do their work.

##### **Research Question 2: Main Factor that affect Employee Competency**

1. Is Competency a must for your job? Why?  
Yes. Without competency I would not be able to do my work. Competency is the knowledge I used to do my work. For example, I must have knowledge to handle my staff or I must have knowledge to know the procedure on how to handle tender process
2. In your Opinion, what are the main factor that affect employee competency? Name them and explain.  
The main factors are they have to undergo training on certain competency related to their expertise. For example, if you are a technician you must undergo technical competency. Without technical competency the technician are not allowed to handle related to electricity.
3. Briefly explain what can be done to be a competent employee?

Send the employee to attend courses related to their work. Put into practice the course that they have attended.

**Research Question 3: Incompetency and year of service**

1. In your opinion, does employee period of service represent employee competency level?

Yes. The longer they work doing the same job they might master the task. But if they do different task later on then they will learn another level of competency.

2. In your opinion, why do some employee remain incompetent after working for few years?

In my opinion, it depends on individual. Some employees are willing to learn and some are reluctant to change.

3. In your opinion, under what circumstances would employee become unable to perform? Please explain.

Some employee's unable to perform due to many factors such as: not competent, laziness, sickness, unwilling to adapt to new environment, unwilling to do new task.

**Research Question 4: Technology change that affect Employee Competency**

1. Is technology important in your job? Please explain.

Yes. Technology such as email are important because I need to do correspondence. Hand phones with new application such as WhatsApp enable to communicate with colleagues in a group and many more.

2. How often do you use technology device at your workplace in order to perform your job? Please explain.

Everyday. Email for correspondence. Hand phone to deal with colleagues and vendors.

3. In your opinion, is the issue of technology change affecting employee competency? Please explain.

It depends on individual. If employees willing to learn new technology they gain new competency. For those who are unwilling to learn their level of competency might be low.

**Part B: Demography Information:** Complete the following demography profile item

|                          |                    |
|--------------------------|--------------------|
| <b>Department</b>        | Corporation Shared |
| <b>Gender</b>            | Female             |
| <b>Marital Status</b>    | Single Mother      |
| <b>Highest Education</b> | Bachelor/Master    |
| <b>Age</b>               | 50 Years old       |
| <b>Ethnicity</b>         | Bidayuh            |
| <b>Religion</b>          | Christian          |
| <b>Year of service</b>   | 27 Years           |

### **Part A: General Question**

#### Warm Up Questions

1. How long have you been working in this organization?  
December 2011 (Coming to 6 years)
2. What is your area of expertise?  
HRD
3. Is your area of expertise similar to what you are doing at work?  
Not similar. But previously yes. When I was reporting to HR Department. Now I am with another department.
4. Can you please describe your job?  
I am doing corporate administration work. Basically dealing with internal stakeholders, the staff and also external stakeholder (Supplier). I am dealing with operational administration –telco provide payment, tender-safety shoes, security uniform and so on)

#### Situational Questions

##### **Research Question 1: Internal Factor that affect Employee Competency**

1. In your opinion, does internal factor such as teamwork, peers support Change management and organizational culture effect employee competency? Please explain.  
Yes, definitely. Teamwork is very crucial for everyone. Without teamwork, cooperation level will be very low. Poor support on the other hand is important for employee motivation to do work (daily job). Change management and organizational culture will also effect employee competency because organization culture will definitely related to employee motivation. It's related to one and another.

##### **Research Question 2: Main Factor that affect Employee Competency**

1. Is Competency a must for your job? Why?  
For some reason yes. But in other division, it is not a must. Because we are not technical staff. Different with technical staff they must have competency for the purpose of career development.

2. In your Opinion, what are the main factor that affect employee competency? Name them and explain.
  - Technology – as explained before this, it is job requirement on day to day
  - Employee motivation- how he/she doing his or her job
  - Teamwork among them
  
3. Briefly explain what can be done to be a competent employee?
  - Attend training and development
  - Motivation from one self
  -

### **Research Question 3: Incompetency and year of service**

1. In your opinion, does employee period of service represent employee competency level?  
Not necessarily. Certain people grows faster and certain grows slower. The employee competency level depend so much on employee learning curve. Besides other factors listed before also effect employee competency.
  
2. In your opinion, why do some employee remain incompetent after working for few years?  
Some of them lack of motivation to do the job. Some feel that is no need to think about their competency. If they stuck for how many years at one level (their motivation very low)
  
3. In your opinion, under what circumstances would employee become unable to perform? Please explain.  
In some circumstance, staff unable to perform because of small problem of standard operation procedure. It is not they don't want to do, but in some cases they are not being coached and mentored by the superior and hired manager.

### **Research Question 4: Technology change that affect Employee Competency**

1. Is technology important in your job? Please explain.  
Of course it's important. Most of my daily job involves around technology such as SAP access, our attendance system and other system that requires online/ access.
  
2. How often do you use technology device at your workplace in order to perform your job? Please explain.  
Daily
  
3. In your opinion, is the issue of technology change affecting employee competency? Please explain.

For some reason yes example: - baby boomer, generation. Most of them difficult to cope with the technological change. This will affect their competency

**Part B: Demography Information:** Complete the following demography profile item

|                          |                          |
|--------------------------|--------------------------|
| <b>Department</b>        | Corporate Shared Service |
| <b>Gender</b>            | Female                   |
| <b>Marital Status</b>    | Single                   |
| <b>Highest Education</b> | Master                   |
| <b>Age</b>               | 31 years old             |
| <b>Ethnicity</b>         | Malay                    |
| <b>Religion</b>          | Islam                    |
| <b>Year of service</b>   | 6 years.                 |

## Matrix of Analysis

| Research Objective                                                           | Informants                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|                                                                              | 1                                                                                                                                                                                                                                                                                                                                 | 2                                                                                                                                                                                                                                                                                                                                                                   | 3                                                                                                                                                                                                                                                                                                                                                                       | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1. To determine the internal factors that affect employee competency.        | Q1. Internal factors that affect employee competency<br>Answer: "A good leader and a conducive environment will encourage employees to build up their competency by giving them the opportunities to do so"                                                                                                                       | Q1. Internal factors that affect employee competency<br>Answer: "Yes. It takes teamwork and unity to make things work. It takes a good collaboration to achieve target or KPIS"                                                                                                                                                                                     | Q1. Internal factors that affect employee competency<br>Answer: "Employee need their team and management support to encourage them to improve and gain a new skills"                                                                                                                                                                                                    | Q1. Internal factors that affect employee competency<br>Answer: "No. Competency is employee's ability and knowledge to do their work"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Q1. Internal factors that affect employee competency<br>Answer: "Yes, definitely. Teamwork is very crucial for everyone. Without teamwork, cooperation level will be very low. Poor support on the other hand is important for employee motivation to do work (daily job). Change management and organizational culture will also effect employee competency because organization culture will definitely related to employee motivation. It's related to one and another"                                                                                                   |
| 2. To determine the main factors that contribute towards employee competency | Q1. The need of competency<br>Answer: "Yes"<br>Q2. Factor affecting employee competency<br>Answer:<br>1. Willingness of the employee to acquire/ learn<br>2. Opportunities<br>Q3 The strategy to Improve competency<br>Answer: "To undergo relevant training (course, workshops, on-the-job), assessment, examination, interview" | Q1. The need of competency<br>Answer: "Yes. Competence in terms of knowledge and skills essential to manage effectively and efficiently"<br>Q2. Factor affecting employee competency<br>Answer: "The will/ initiative to improve and increase self-worth"<br>Q3: The strategy to Improve competency<br>Answer: "Always be proactive in thinking of ways to improve" | Q1. The need of competency<br>Answer: "Yes. It can improved my job gravity"<br>Q2. Factor affecting employee competency<br>Answer: "Support from the management is the most important factors because management have to provide time and course for the employee to gain new skills"<br>Q3: The strategy to Improve competency<br>Answer: "Attend course and training" | Q1. The need of competency<br>Answer: "Yes. Without competency I would not be able to do my work. Competency is the knowledge I used to do my work. For example, I must have knowledge to handle my staff or I must have knowledge to know the procedure on how to handle tender process"<br>Q2. Factor affecting employee competency<br>Answer: "The main factors are they have to undergo training on certain competency related to their expertise. For example, if you are a technician you must undergo technical competency. Without technical competency the technician are not allowed to handle related to electricity"<br>Q3: The strategy to Improve competency | Q1. The need of competency<br>Answer: "For some reason yes. But in other division, it is not a must. Because we are not technical staff. Different with technical staff they must have competency for the purpose of career development"<br>Q2. Factor affecting employee competency<br>Answer: "Technology – as explained before this, it is job requirement on day to day ,Employee motivation how he/she doing his or her job, Teamwork among them"<br>Q3: The strategy to Improve competency<br>Answer:<br>-Attend training and development<br>-Motivation from one self |

|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Answer: “Send the employee to attend courses related to their work. Put into practice the course that they have attended”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Research Objective                                                                                  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3. To determine the factors on why some employees are still incompetent after working for few years | <p>Q1. Period of service represent competency levels<br/>Answer: “Yes to certain extent as a person can acquire competency through doing on the job”</p> <p>Q2. Incompetent after few years in service<br/>Answer: “Not willing to learn or adapt to better ways of doing the job”</p> <p>Q3: Reason unable to perform job effectively<br/>Answer: “Lack of know-how/ skills, No longer fit to do the job and Not willing to change”</p> | <p>Q1. Period of service represent competency levels<br/>Answer: Yes. You learn as you go along, the years of service increase, you learn more thing along the way</p> <p>Q2. Incompetent after few years in service<br/>Answer: “Attitude. Without positive attitude, people might be complacent and refuse to learn and take up challenges”</p> <p>Q3: Reason unable to perform job effectively<br/>Answer: “When the employee always have a mind-set of being a victim of circumstance and always think negative and refuse to step out of comfort zone”</p> | <p>Q1. Period of service represent competency levels<br/>Answer: “Yes, employee gain knowledge and experience throughout their strike and they expert in their field”</p> <p>Q2. Incompetent after few years in service<br/>Answer: “They lack of enthusiasm to gain a new skills to improve themselves”</p> <p>Q3: Reason unable to perform job effectively<br/>Answer: “They unable to compete with the new generation which is more knowledgeable and they become less enthusiastic to do their job”</p> | <p>Q1. Period of service represent competency levels<br/>Answer: “Yes. The longer they work doing the same job they might master the task. But if they do different task later on then they will learn another level of competency”</p> <p>Q2. Incompetent after few years in service<br/>Answer: “In my opinion, it depends on individual. Some employees are willing to learn and some are reluctant to change”</p> <p>Q3: Reason unable to perform job effectively<br/>Answer: “Some employee's unable to perform due to many factors such as: not competent, laziness, sickness, unwilling to adapt to new environment, unwilling to do new task”</p> | <p>Q1. Period of service represent competency levels<br/>Answer: “Not necessarily. Certain people grows faster and certain grows slower. The employee competency level depend so much on employee learning curve. Besides other factors listed before also effect employee competency”</p> <p>Q2. Incompetent after few years in service<br/>Answer: “Some of them lack of motivation to do the job. Some feel that is no need to think about their competency. If they stuck for how many years at one level (their motivation very low)”</p> <p>Q3: Reason unable to perform job effectively<br/>Answer: “In some circumstance, staff unable to perform because of small problem of standard operation procedure. It is not they don't want to do, but in some cases they are not being coached and mentored by the superior and hired manager”</p> |
| 4. To determine whether technological change contribute                                             | <p>Q1. The Importance of Technology to perform job<br/>Answer: “Yes<br/>1. Communication – email, contact</p>                                                                                                                                                                                                                                                                                                                            | <p>Q1. The Importance of Technology to perform job<br/>Answer: “Yes, things evolve and move so fast, so without</p>                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>Q1. The Importance of Technology to perform job<br/>Answer: “Yes<br/>1. It can speed up my jobs</p>                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Q1. The Importance of Technology to perform job<br/>Answer: “Yes. Technology such as email are important</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>Q1. The Importance of Technology to perform job<br/>Answer: “Of course it's important. Most of my daily job</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                             |                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| towards employee competency | <p>2. <i>Data storage and analysis</i>”</p> <p>Q2. Usage of technological device to perform job</p> <p>Answer: “Every day”</p> <p>Q3: Technological Change affecting employee competency</p> <p>Answer: “Employees need to keep abreast with technological change to be better equipped in performing their jobs”</p> | <p><i>optimizing the technology we will be left behind and lost the opportunities that come in our way</i>”</p> <p>Q2. Usage of technological device to perform job</p> <p>Answer: “Every day and constantly use the technology to do reporting and analysis”</p> <p>Q3: Technological Change affecting employee competency</p> <p>Answer: “Yes. If the employee is technologically savvy, then it is an advantage to him/ her as we are constantly demand the employee to beat the deadline”</p> | <p>2. <i>Easier to communicate with others</i>”</p> <p>Q2. Usage of technological device to perform job</p> <p>Answer: “Every time”</p> <p>Q3: Technological Change affecting employee competency</p> <p>Answer: “Technology will boost up employee competency by helping them to do more and become more knowledgeable in their area”</p> | <p><i>because I need to do correspondence. Hand phones with new application such as WhatsApp enable to communicate with colleagues in a group and many more</i>”</p> <p>Q2. Usage of technological device to perform job</p> <p>Answer: “Every day. Email for correspondence. Hand phone to deal with colleagues and vendors”</p> <p>Q3: Technological Change affecting employee competency</p> <p>Answer: “It depends on individual. If employees willing to learn new technology they gain new competency. For those who are unwilling to learn their level of competency might be low”</p> | <p><i>involves around technology such as SAP access, our attendance system and other system that requires online/ access</i>”</p> <p>Q2. Usage of technological device to perform job</p> <p>Answer: “Daily”</p> <p>Q3: Technological Change affecting employee competency</p> <p>Answer: “For some reason yes example: - baby boomer, generation. Most of them difficult to cope with the technological change. This will affect their competency”</p> |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

UNIMAS/NC-16.02/04-05 Jld. IV ( 01 )

25 January 2017

Dr. Mak Met  
Vice President  
People and Leadership Department  
Sarawak Energy Berhad  
Menara Sarawak Energy  
No. 1, The Isthmus  
93050 Kuching,  
Sarawak, Malaysia.

Dear Sir / Madam

**Permission to Conduct Research in the Fulfillment of Postgraduate Degree**

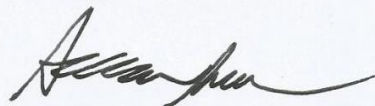
With reference to the above matter, I would like to request permission for the following student from the Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak, to conduct a survey and a series of interviews at the state ministries, departments, statutory agencies, local authorities, district and resident offices.

|                      |   |                                                                                    |
|----------------------|---|------------------------------------------------------------------------------------|
| Student name         | : | Nadri Aetis Heromi Bin Basmawi                                                     |
| Student Number       | : | 15020075                                                                           |
| Program              | : | MSc by Research (Organizational Development)                                       |
| Research title       | : | Factors Relating to Employee Competency in Selected Industries in Kuching, Sarawak |
| Research phases      | : | Actual Research                                                                    |
| Principle supervisor | : | Assoc. Prof Dr Hasbee Haji Usop                                                    |
| Telephone            | : | 082-581017 / 013-8155235                                                           |
| Fax                  | : | 082-581567                                                                         |
| Email                | : | uhasbee@unimas.my                                                                  |

His research is purely for academic purpose and all information will be kept secure and treated as strictly confidential. The support and cooperation given by your organization for the success of this research is highly appreciated.

Thank you.

Sincerely,



Abang Ekhsan Abang Othman  
Dean



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UNIMAS/NC-16.02/04-05 Jld. III ( 38 )

29 November 2016

Dr. Abdul Rahim Bin Ahmad  
Pengarah,  
Pusat Penyelidikan Dan Inovasi Politeknik,  
Jabatan Pendidikan Politeknik  
Kementerian Pendidikan Tinggi,  
Galeria PJH, Aras 3, Jalan P4W,  
Persiaran Perdana Presint 4, 62100 Putrajaya

Dear Sir / Madam

**Permission to Conduct Research in the Fulfillment of Postgraduate Degree**

With reference to the above matter, I would like to request permission for the following student from the Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak, to conduct a survey and a series of interviews at the state ministries, departments, statutory agencies, local authorities, district and resident offices.

|                      |   |                                                                                  |
|----------------------|---|----------------------------------------------------------------------------------|
| Student name         | : | Nadri Aetis Heromi Bin Basmawi                                                   |
| Student Number       | : | 15020075                                                                         |
| Program              | : | MSc by Research (Organizational Development)                                     |
| Research title       | : | Factors Relating to Employee Competency in Selected Agencies in Kuching, Sarawak |
| Research phases      | : | Actual Research                                                                  |
| Principle supervisor | : | Assoc. Prof Dr Hasbee Haji Usop                                                  |
| Telephone            | : | 082-581017 / 013-8155235                                                         |
| Fax                  | : | 082-581567                                                                       |
| Email                | : | uhasbee@unimas.my                                                                |

His research is purely for academic purpose and all information will be kept secure and treated as strictly confidential. The support and cooperation given by your organization for the success of this research is highly appreciated.

Thank you.

Sincerely,

Abang Ekhsan Abang Othman  
Dean





PUSAT PENYELIDIKAN DAN INOVASI POLITEKNIK  
JABATAN PENDIDIKAN POLITEKNIK  
KEMENTERIAN PENDIDIKAN TINGGI  
Galeria PJH, Aras 3, Jalan P4W  
Persiaran Perdana Presint 4, 62100 Putrajaya  
Tel : 03-88919228 Fax : 03-88919322  
Laman Web : <http://politeknik.gov.my>

**POLITEKNIK**  
Jabatan Pengajian Politeknik

Ruj. Kami : KPT/JPP/PPP/700-1 Jld. 5( 19 )  
Tarikh : 7 Disember 2016

**NADRI AETIS HEROMI BIN BASMAWI**

Fakulti Sains Kognitif Dan Pembangunan Manusia  
Universiti Malaysia Sarawak  
94300 Kota Samarahan Sarawak

Tuan,

**KEBENARAN MENJALANKAN PENYELIDIKAN BERTAJUK “FACTORS  
RELATING TO EMPLOYEE COMPETENCY IN SELECTED AGENCIES IN  
KUCHING, SARAWAK”**

Saya dengan hormatnya merujuk perkara di atas.

2. Sukacita dimaklumkan bahawa pihak kami tiada halangan untuk memberi kebenaran kepada tuan untuk menjalankan kebenaran penyelidikan bertajuk “**Factors Relating To Employee Competency In Selected Agencies In Kuching, Sarawak**” seperti yang dijelaskan dalam cadangan penyelidikan yang disertakan.

3. Kebenaran pengumpulan data hanya diberikan kepada penama dalam surat ini sahaja. Pihak ketiga tidak dibenarkan untuk mengumpul data bagi pihak penama. Sekiranya terdapat ketidakpatuhan, kebenaran ini terbatal dengan sendirinya.

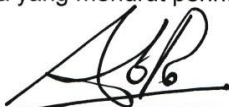
4. Sebarang pertanyaan lanjut berkenaan kajian penyelidikan yang akan dijalankan, sila hubungi Ketua Unit Penyelidikan Politeknik yang berkenaan untuk melancarkan lagi pelaksanaan kajian.

5. Untuk peringatan, tuan hendaklah mengemukakan senaskah laporan akhir kajian tersebut ke Pusat Penyelidikan dan Inovasi Politeknik (PPIP), Jabatan Pendidikan Politeknik. Dimaklumkan juga bahawa tuan, adalah diminta mendapatkan kebenaran terlebih dahulu daripada PPIP sekiranya sebahagian atau sepenuhnya dapatan penyelidikan tersebut hendak dibentangkan di mana-mana persidangan atau seminar, atau untuk pengumuman di media massa.

Sekian untuk makluman dan tindakan seterusnya, terima kasih.

**“BERKHIDMAT UNTUK NEGARA”**

Saya yang menurut perintah,



**(DR. ABDUL RAHIM BIN AHMAD)**

Pengarah

Pusat Penyelidikan dan Inovasi Politeknik

Jabatan Pendidikan Politeknik

s.k:

1. Pengarah

Politeknik Kuching Sarawak



Our Ref: Letter/Unimas/MM/PNSL/dskbi

24 February 2017

Mr. Nadri Aetis Heromi Bin Basmawi  
Faculty of Cognitive Science and Human Development  
Universiti Malaysia Sarawak  
94300 Kota Samarahan, Sarawak.

People and Leadership Department  
Sarawak Energy Berhad  
Menara Sarawak Energy  
No. 1, The Isthmus  
93050 Kuching, Sarawak.

Dear Sir,

**APPROVAL TO CONDUCT RESEARCH WORK AT SARAWAK ENERGY BERHAD**

We refer to the letter (ref: UNIMAS/NC-16.02/04-05 Jld. IV (01)) dated 25<sup>th</sup> January 2017, on your request to conduct a survey entitled '**Factors Relating to Employee Competency in Selected Industries in Kuching, Sarawak**' at Sarawak Energy.

We hereby approved of the request and hope that all information gathered are solely use for academic purpose and shall be kept secure and treated as confidential.

Upon completion of your survey, it would be great if a copy of your findings could also be extended to Sarawak Energy Berhad for our reference.

We wish you all the best in completing your research work.

Thank you.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Petehi".

**Petehi bin Hipli**  
for Vice President  
People and Leadership Development  
Sarawak Energy Berhad.

Sarawak Energy Berhad (007199-D)  
Menara Sarawak Energy,  
No. 1, The Isthmus, 93050 Kuching,  
Sarawak, Malaysia

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