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EDUCATION, SOCIAL SCIENCE, SUPPLY CHAIN,  
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## PREFACE

### **Proceedings of the of 2<sup>nd</sup> International Conference on Education, Social Science, Supply Chain, Engineering, Technology and Tourism (ESSET2021)**

It is my pleasure to welcome you to **of 2<sup>nd</sup> International Conference on Education, Social Science, Supply Chain, Engineering, Technology and Tourism (ESSET2021)**. **ESSET2021** aims to provide a platform for connecting academic scholars and industry practitioners world-wide to share the research findings from various disciplines and create a space for intellectual discussion, exploration and reflection of key issues that are shaping the world today. This is a great opportunity for delegates to expand knowledge, plan and implement innovative strategies, overcome barriers and move forward with the initiatives that benefit the community. There will be huge opportunities for networking, informed dialogues and collaborations.

Your participation in this conference and submission of research papers is greatly appreciated and on behalf of the Organizing Committee, I wish you all the safety and health and together we must strive to get over with the Covid-19 pandemic challenge as soon as possible. Our research works must endure despite these challenges to continue contributing to the body of knowledge from new research ideas, methods and problem resolutions.

Thank you.

**Dr. Safaie Mangir**  
**Conference Chairman**

## **ABSTRACT**

The objective of this conference is to provide a platform for scholars, intellectuals and professionals from various academic and industrial disciplines to share the research findings from various disciplines and create a space for intellectual discussion, exploration and reflection of key issues that are shaping the world today. The conference welcomes all authors from related fields of research to submit and/or present the research papers. All accepted papers will be published in the conference proceeding book with ISBN number. More importantly, the accepted papers will also be published in refereed journals indexed by Malaysia Citation Centre (MCC). Papers that have the merits for publication in high index journals will be selected for publication in SCOPUS-indexed journals.

The conference has attracted quite a number of participations especially in the Video Presentation category and accepted research papers from various research disciplines for publication in proceeding book and journals. All submitted papers were reviewed by the review committee and the corresponding acceptance notifications were emailed to the authors upon acceptance approval by the review committee. Subsequently all accepted papers will be published in conference proceeding book which is targeted to complete by middle of April 2021. All accepted papers correspondingly, will be published in June 2021 Issue of the refereed journals. The proceeding (with ISBN) will be provided in PDF format while the journal is online and the related online URL links will be provided via email upon successful journal publication of the papers.

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# A NOVEL FRAMEWORK ON WOMEN EMPOWERMENT IN ORGANIZATIONS AT MANAGERIAL LEVEL

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**Abstract:** *This paper presents a novel framework on Saudi women's empowerment in different organizations at the managerial level. Empowering women helps in the development of countries' economies at the macro level according to Saudi Vision 2030. As a result of a detailed literature review, certain indicators were obtained to assess women empowerment in Saudi organizations at a managerial level which are training, intergender communication, organizational culture, government support, and organizational policies in the context of women empowerment. The novel framework is designed from the above factors, which are explained in the paper in detail based on women empowerment as a dependent variable for further assessments. The novel framework will be subject to data collection, validation, and verification phases in the future.*

**Keywords:** Women Empowerment, Organizations, Managerial positions, Saudi Organization, Vision 2030.

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## 1. Introduction

The Vision 2030 of Saudi Arabia focuses on diversifying the economy and work heavily on women empowerment. This will transform the economy and eliminate the factor of gender-based discrimination. The vision can be implemented by giving employment chances to women and creating opportunities for women. This will increase the rate of employment level for women. The government in Saudi Arabia introduced numerous programs and opportunities for women to boost the economy by creating jobs for young Saudi female nationals. The program works on introducing favorable laws for women and by taking initiatives on improving access to financial matters which could empower women indirectly. When the 2030 vision was announced, the government started planning to increase projects on women empowerment which had a contribution to Saudi Arabia GDP by 20% to 35%. This plan was done through the development of human resources and offering support programs. Furthermore, the government has shown increasing interest in pursuing women's empowerment through more job facilitations and higher education to women. Thus, it pressurized the meaningful change in women empowerment at a higher level in the Kingdom (Dumato, 1999).

The advent of Vision 2030 is a great opportunity and challenge for Saudi Women. It brings various opportunities for Saudi women by pro-Saudi policies along with various challenges of personal training, inter-gender communications issues, and religious and political factors at the organizational level. Vision 2030 states about women empowerment as "Together we will continue building a better country, fulfilling our dream of prosperity and unlocking the talent, potential, and dedication of our young men and women". It is further states that Saudi Arabia will continue investing in education and training (which is a dimension of personal factors) so that Saudi Arabian young men and women are equipped for the jobs of the future. Saudi women are yet another great asset. According to Vision 2030, Saudi Arabia is determined to increase its women's participation in the workforce from 22% to 30% shortly (Kinninmont, 2016).

Research showed that women played an important role in the upholding of nations. Women in Saudi Arabia are struggling to get success in society at the organizational level (Rajeshwari, 2015). Saudi women are still facing problems and challenges in the workplace and in their communities, which is the main hindrance in their empowerment. The government of Saudi Arabia has taken various measures to empower Saudi women with dignity and respect through Vision 2030 and various educational and vocational policies as they are playing an important role in the contribution of family and nation-building. Research also showed that women face different problems and the different situations at their workplace at various public or private organizations. It can be in the form of gender discrimination at the workplace, it can be in decision making at the managerial level or even grass root level. It can be in wages, termination, promotion, hiring process, leaves, and benefits, etc. (Natalie & Katie, 2013).

According to Narayanan (2016), it is indeed true that women face a lot of challenges at organizational level before they get empowered. A lot of organizational political tricks are involved in her workplace and this has caused high turnover among the female staff (Narayanan, 2016). Besides this, women dis-empowerment has negative implications on broader economic development and based on the World Health Organization (WHO), gender inequality has a direct and indirect cost to the nation (Narayanan, 2016).

This study is significant for women in Saudi Arabia by assessing the impact of women's empowerment on women's performance and success in their daily life. It also enables various women to solve a real-world problem of women empowerment. Furthermore, government and policymakers need to facilitate the entity of women empowerment in public organizations. To achieve this goal, they should move away from centralized gender base culture towards open policies that are favorable for women, where women empowerment can take a leading role in economic development through job creation and competitiveness. Moreover, the paper contributes to the understanding of the work challenges and barriers of Saudi women in the workforce. The study will also provide an approved guideline and suggestion to concerned ministries of Saudi Arabia and policies implementing agencies to achieve Saudi Women empowerment under Vision 2030 (Kinninmont, 2016).

Various key term definitions were obtained from literature to design novel framework. These key terms are discussed as below.

## 1.2 Definitions of the Key Terms

In the context of the present study, the key terms that are extensively implied in literature are defined in Table 1.1.

**Table 1.1: Definitions of Key Terms**

<b>Term</b>	<b>Definition</b>
Women empowerment	Women Empowerment is a process to make the women financially independent, educated, progressive, and enjoying a good social status (Morley, 1993).
Governmental support	The government provides support to women empowerment in the form of grants, through access to expert advice, information, and services (Brody, DeMarco & Lovrich, 2002).
Organizational Culture	Organizational culture is a characteristic and tangible personality that originated inside every organization. Organizational culture differentiates the extraordinarily successful companies from all the rest (Morcos, 2018).
Training	Training involves improving the effectiveness of organizations and the individuals and teams within them. It is also known as resources development, instructional design, human development and knowledge management (Aguinis & Kraiger, 2009).
Inter-gender communication	Inter-gender communication is how two people of different sex communicate and/or act around each other (Mohindra & Azhar, 2012).
Organizational Policies	Organizations have also implemented policies around sexual harassment to reduce occurrences and avoid legal liability Organizations have also implemented policies around sexual harassment to reduce occurrences and avoid legal liability Organizations have also implemented policies around sexual harassment to reduce occurrences and avoid legal liability Organizations have also implemented policies around sexual harassment to reduce occurrences and avoid legal liability Organizations have also implemented policies around sexual harassment to reduce occurrences and avoid legal liability A course or method of action is selected, usually by an organization to avoid any kind of legal liability in the organization (Jacobson & Eaton, 2018).

The article is organized as Literature Review, Methodology, Proposed Framework, Conclusion followed by the reference.



## **2. Literature Review**

This article discusses the impact of the various factors on women empowerment in Saudi Arabia concerning relational, environmental, and interpersonal factors.

Saudi Arabia, officially named the Kingdom of Saudi Arabia, is a sovereign country in the Middle East. With a population exceeding 220 million people, it is the sixth most populous country with an area covering 796,095 km<sup>2</sup> (307,374 sq. mi). It is the 36th largest country in the world in terms of area. Saudi Arabia is a desert country that runs over 8,000 square miles with popular cities such as Medina, Jeddah, Makah, Riyadh, and Dhahran. The country is a kingdom, led by the royal family of Al Saud with a council of ministers. The country's existing state is attributed to its deep rootedness in tribal and religious history. Back in the mid-1990s, most of the Arab nations had enormously low literacy levels. According to statistics by UNESCO (1995), the uneducated lot in Arabic countries constituted between one-fifth and one-half of the total nation's population (Mazawi, 2002). The level of illiteracy according to (Mazawi, 2002) is more common among females, particularly in rural regions.

### **2.1 Women Empowerment**

According to (Morley, 1993), training and consultancy with women managers in the Education and Health sectors, focus on the deconstruction of external factors that disempowered women managers in the workplace, and the extent to which these interact with women's internalized narratives. The author further posed questions about women manager's ' relationship to the transition from welfare to market values in the public sector in the UK. He further evaluates the empowerment of women in management in the context of understanding the complex relationships between institutional, personal, and interpersonal barriers to women's leadership.

After thorough literature review the study was fixed with two underline theories that thoroughly explain the research framework developed for the study. Two theories are as follows: (i) Theory of Planned Behavior (TPB) and (ii) Theory of Empowerment (TE).

### **2.2 Theory of Planned Behaviour (TPB)**

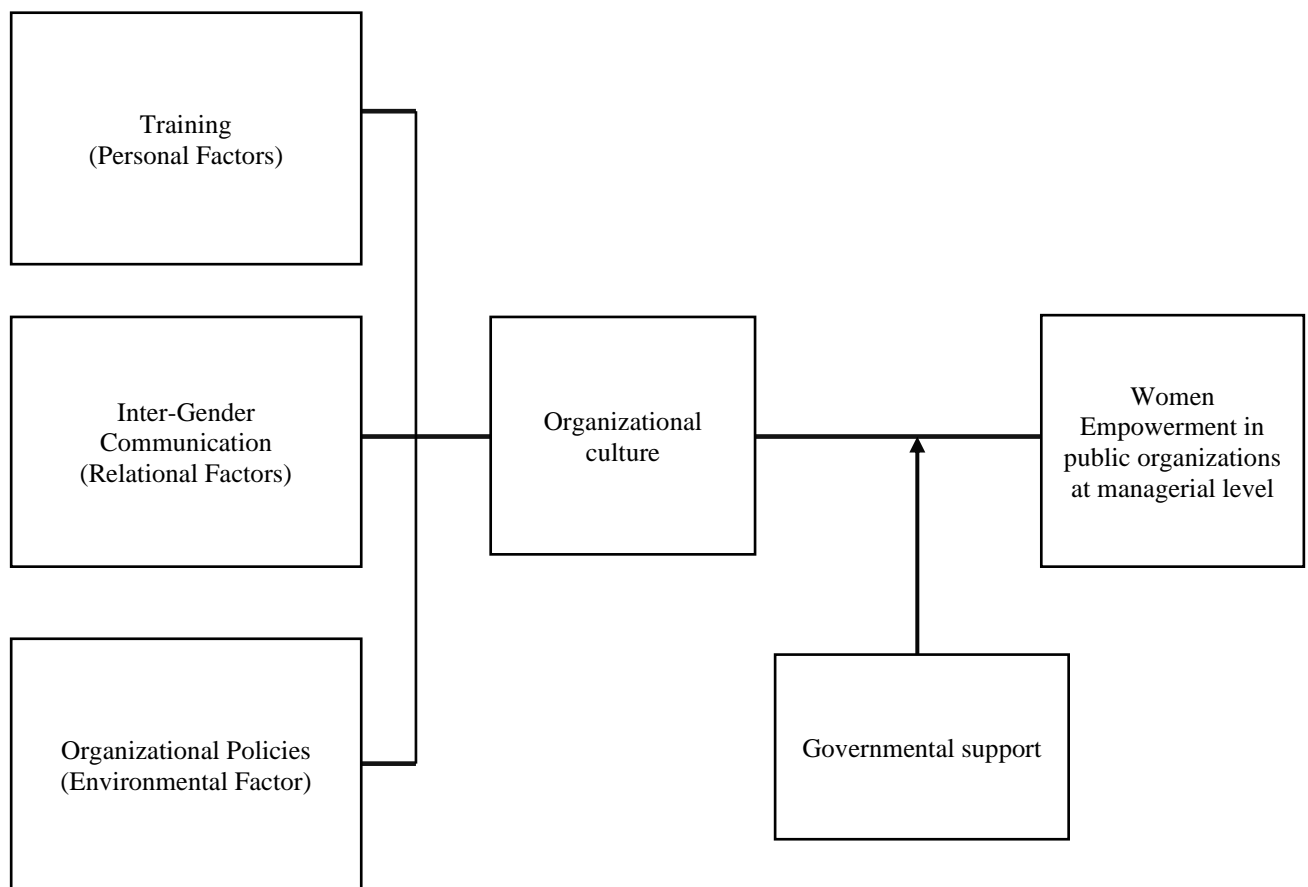
This thesis adopts the theory of planned behavior as propounded by (Ajzen, 1991, 2002). The theory of planned behavior explains how intention is influenced by three factors, which are: attitudes, subjective norms, and perceived behavioral controls. The theory of behavior is affecting the performance and success of Saudi Women in the various context of personal, relational, and environmental factors. In the research, we will be testing various hypotheses based on this theory in future work.

### **2.3 Theory of Empowerment (TE)**

Empowerment is a process of transition from a state of powerlessness to a state of relative control over one's life, destiny, and environment. The People Empowering People (PEP) program uses the definition of empowerment to connect research, theory, and practice. It is a process that fosters power in people for use in their own lives, their communities, and in their society by acting on issues that they define as important (Zimmerman, 2000).

### 3. Proposed Novel Framework

This section proposed a novel framework based on dependable and independent variables. Figure 2.1 is the detailed elaboration of the theoretical novel framework for our research. It shows the dependent variable as “women empowerment” that how it is affected concerning independent factors like training (Personal factor), Inter-gender communication (Relational factor), and organizational policies (environmental factor). Moreover, a mediator named “Organizational Culture” is also derived from literature to assess mediating factors of the above sectors' independent variables. A moderator named “Government support” is chosen from literature as boosting effect to explain the relationships between dependent variable i.e., “women empowerment” and independent variables “training, Inter-gender communication and organizational policies. This framework will be assessed based on the data collected using proposed instrument in future work.



**Figure 2.1: Proposed Novel Framework of Women Empowerment in Public Organizations at Managerial Level**

### 3. Future Work

This novel framework will lead to discussion on the research methodology that will be adapted in future. It will include research design, sample population, sample size, and the process of development of the study survey questionnaire. The work will select the quantitative research approach to identify the most appropriate forms to be used in future work. It will also discuss the statistical methods used for respondent profiles, data analysis, and ethical considerations observed during the fieldwork in future.

### 4. Conclusion

In this paper three main factors were identified that is personal factors, relational factors, and environmental factors for organizational behavior. These factors were further explored and led to elaborated proposed framework. The proposed novel framework was comprised of training, organizational polices, intergender communication, governmental support, organizational culture based on women empowerment dependent factor in organizations at managerial level. This framework will be used for further data collection based on the further proposed instrument from literature and quantitative sampling techniques. It is concluded that this framework will be of great benefit for Saudi organizations to empower women at managerial level.

### References

- Aguinis, H., Kraiger, K. (2009). "Benefits of Training and Development for Individuals and Teams, Organizations, and Society". *Annual Review of Psychology*. 60 (1): 451–474.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behaviour and Human decision processes*, 50(2), 179-211. Doi: 10.1016/0749-5978(91)90020-t
- Ajzen, I. (2002). Perceived Behavioural Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behaviour. *Journal of Applied Social Psychology*, 32(4), 665–683.
- Brody, D. & DeMarco, C. & Lovrich, N. (2002). Community Policing and Job Satisfaction: Suggestive Evidence of Positive Workforce Effects from a Multijurisdictional Comparison in Washington State. *Police Quarterly*. 5. 181-205. 10.1177/109861102129198093.
- Jacobson, R. & Eaton, A. (2018). How Organizational Policies Influence Bystander Likelihood of Reporting Moderate and Severe Sexual Harassment at Work. *Employee Responsibilities and Rights Journal*. 30. 10.1007/s10672-017-9309-1.
- Kinninmont, J. (2016). Saudi Arabia Faces Its Future in Vision 2030 Reform Plan. Chatham House, April, 29.
- Mohindra & Azhar. (2012). Gender Communication: A Comparative Analysis of Communicational Approaches of Men and Women at Workplaces. *IOSR Journal of Humanities and Social Science*. 2. 18-27. 10.9790/0837-0211827.
- Morley, L. (1993). Empowering women managers in the public sector. *Women in Management Review*, 8(7).
- Morcos, M. (2018). ORGANISATIONAL CULTURE: DEFINITIONS AND TRENDS
- Narayanan, S. (2016). CHALLENGES OF WOMEN EMPOWERMENT IN A PRIVATE ORGANIZATION IN MALAYSIA. *International Journal for Studies on Children, Women, Elderly And Disabled*, ISSN 0128-309X. 1.

- Natalie & Katie. (2013). Gender Discrimination in the Workplace. Faculty of Social Sciences, California.
- Zimmerman, M. (2000). Empowerment theory. Psychological, organizational and community levels of analysis. In J. Rappaport, & E. Seidman (Eds.), Handbook of Community Psychology pp. 43-63.

## A SURVEY RESEARCH ANALYSIS OF EFFECTIVENESS OF VOCABULARY LEARNING THROUGH ENGLISH VOCABULARY CORPUS

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**Abstract:** *Vocabulary learning and teaching is a hard task for English as Additional/ Second/ Foreign Language (EAL/ ESL/ EFL) Learners and teachers respectively. With the advancements in technology, language pedagogy has also adopted new trends. One of the recent trends in vocabulary learning and teaching within language pedagogy. The current study aims at investigating the effectiveness of vocabulary learning through a modern digital technique namely Corpus-Driven learning. For this purpose, a one Million (1M) (1,000,000) words English Vocabulary Corpus (EVC) was extracted from books (20%), magazines (20%), transcript of TV shows (20%), transcript of Movies (20%) and transcript of TV drama serials and shows (20%). All the data was chosen from five (5) native English Language speaking countries including America, Canada, England, Australia and New Zealand. This English Vocabulary Corpus (EVC) was taught for three (3) slots of one (1) credit hour to 100 final year students of BS English Language. A questionnaire was distributed among 100 students of BS English Language between 20-25 years old through online Google Forms after teaching them EVC. The survey questionnaire was according to the demand for research and vocabulary items from the GRE syllabus were taken for teaching. 5-Point Likert Scale was used to collect the responses for 13 close-ended questionnaires in five options including Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. The results indicated that the English Vocabulary Corps (EVC) was liked by the students to be taught at institutions for teaching vocabulary. EVC produced effective results on cognition as it helped in the better understanding of meanings, particular contexts and multiple contexts of the words. Students were most likely to use EVC in academia for learning vocabulary. EVC is better than the traditional methods of learning vocabulary as it is creative and easy to understand.*

**Keywords:** English Vocabulary Corpus (EVS), language pedagogy, vocabulary learning, vocabulary teaching, English as Second/ Foreign Language (EAL/ ESL/ EFL), Corpus-Driven, 5-Point Likert Scale.

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## **1. Introduction**

The 1 Million (1M) (1,000,000) words English Vocabulary Corpus was extracted from books (20%), magazines (20%), Transcript of TV Shows (20%), Transcript of Movies (20%) and Transcript of TV Drama serials (20%). All these were chosen from five (5) native English Language speaking countries including America, Canada, England, Australia and New Zealand. All the categories were taken 4% from Each country and individual contribution of each country was 20%. An example includes that 4% of 20% books published in Australia were taken and same was taken in this category by each country. These similar procedures were applied to other categories as well.

### **1.1 Research Questions**

This research study has a substantial interest in tailoring specific viable solutions to subsequent research questions:

- i. What is the Effectiveness of EVC in Language Pedagogy?
- ii. How can vocabulary be learned utilizing Corpus?

### **1.2 Research Objectives**

This study argues the significance of the use of relevant lexicon in informal and formal conversations. This quantitative survey research method has the following aims:

- i. To investigate about effectiveness and productivity of EVC
- ii. To explore the use of EVC for learning vocabulary

### **1.3 Delimitations**

The appeared empirical outcome herein can be contemplated with caution and bearing in mind certain delimitations. These incorporated:

- i. The Study is delimited to learning and teaching GRE Vocabulary items only.
- ii. This study has only utilized EVC for teaching vocabulary items.

## **2. Literature Review**

Corpus Linguistics is an emerging interdisciplinary field which deals with the use of digital computational tools and programs for language teaching and learning. This field is gaining attention from researchers and scholars from disciplines of linguistics, computer science and business. Corpus linguistics is very effective in diachronic deviations in the language. Corpus is a digitized full text of a writer, age, area, discipline, field or even a language. Corpus can also be used for lexicon, psychological, historical, lexical, semantic, semiotic, pedagogical, acoustical and phraseologic drifts in language over time and genre. For instance, while studying Shakespearean Corpus it was evident that 'You' forms were used in comedies and romances with lexical verbs while 'Thou' forms in tragedies, histories and all other sub-genres with closed class verbs (Busse, 2002a, 2002b; Rudanko, 2006; Walker, 2005).

Corpus is a web-based, open-source and free software package that provides versatile and advanced text analysis which helps the beginner and advance learners for lexicons (Bradley, 2018; Miller, 2018; Ubaldi & Caviglia, 2014; Welsh, 2014). In any online communication, conveyance of lexicons and their interpretation was seemed difficult than direct communication. It was because of limitations of communication modality (Arimoto & Okanoya, 2014; Kruger, Epley, Parker, & Ng, 2005). The detection of semantic deviation in early modern English was “a difficult and largely unsolved problem for the history of the English lexicon”? As described by Manfred Görlach (Lancashire, 2012, p.181).

Closed-caption TV corpus was limited to data of 28 months and was limited to main characters and genres instead of lexicon analysis (Mochizuki & Shibano, 2015). Written discourses had different lexicon annotations in terms of writers, readers and text itself studied in two corpora illustrated as a genre-and domain-balanced corpus of Standard English and movie review corpus (Buechel & Hahn, 2017). There was a gap as no TV Corpus was used as well as spoken discourses were ignored in the research work. lexicon Movies Transcript Corpus (EMTC) used more than 2.1 million utterances from movies close to real life to study misinterpretation of partner’s lexicons. It was unable to focus dramas and was limited to text-based communication (Duc-Anh & Matsumoto, 2018). There were books and researches recently on lexicon learning. In these works, lexicons were analysed in intellectual and cultural contexts with their modern shift but were unable to make use of any real-life contexts like TV Corpus (Ruys, Champion, & Essary, 2019; Harbus, 2019).

### **3. Research Methodology**

A quantitative questionnaire was distributed among the survey of 100 students of BS English Language final year between 20-25 years old through online Google Forms on the topic “Effectiveness of Vocabulary Learning through English Vocabulary Corpus” after teaching them from English Vocabulary Corpus (EVC) for three (3) slots of one (1) credit hour each. The questionnaire was according to the demand of research and vocabulary items from GRE syllabus were taken for teaching. 5-Point Likert Scale was used to collect the responses for thirteen (13) close-ended questions from selective sample of 100 students in five options including Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

### **4. Results and Discussion**

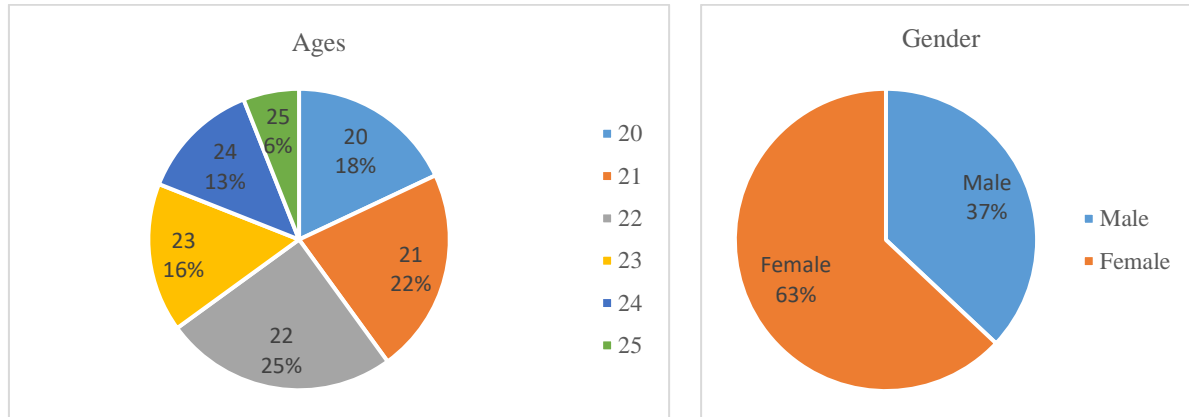
This section deals with the results obtained through the results of survey. The hundred (100) students solved the questionnaire and the results are produced in the form of quantitative data and pie charts. The results are divided into three (4) parts. In the first part, ages of participants are shown. In the second part, gender based analysis of the results are shown. In the third part, the results obtained through questionnaire are shown in the form of quantitative data and pie charts. In the fourth part, the findings are shown in the form of a table. Findings are discussed in the third part of results before pie charts.

#### **4.1 Ages of Participants**

The Pie chart of ages shows the 6 age groups of students which were categorized as follows on the scale: 18% students were 20 years old; 22% students were 21 years old; 25% students were 22 years old; 16% students were 23 years old; 13% students were 24 years old and 6% students were 25 years old.

## 4.2 Gender of Participants

The Pie Chart of gender of participants shows that the 37% participants were male while 63% participants were female.



## 4.3 Findings

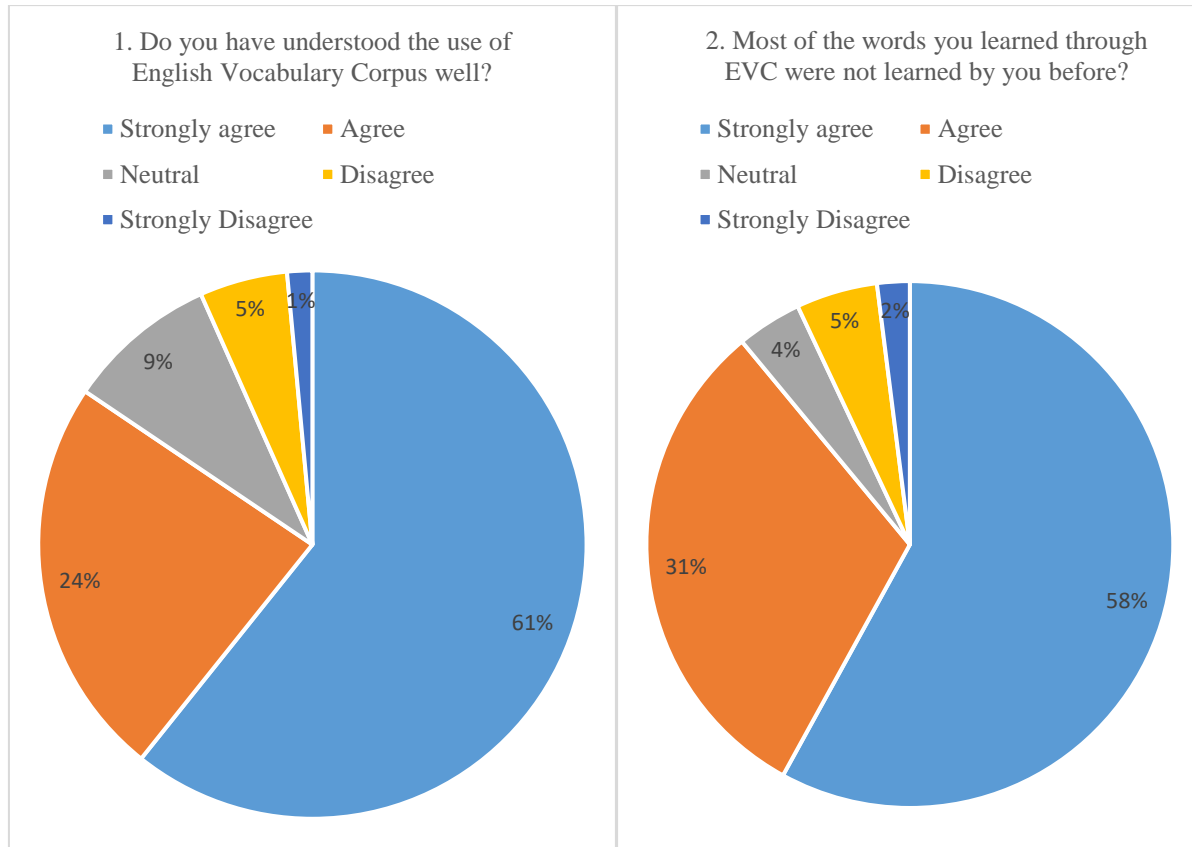
Quantitative findings of recorded responses of thirteen (13) questions answered by students are mentioned below in the form pie charts.

### 4.3.1 Do you have understood the use of English Vocabulary Corpus well?

The first question asked was, “Do you have understood the use of English Vocabulary Corpus well?” This question was asked to analyze the understanding of the participants about English Vocabulary Corpus. The answer of this question was also important for the reliability and validity of English Vocabulary Corpus. The responses given by students were as: 61 students stated Strongly Agree (61%), 24 students said Agree (24%), 9 students stayed neutral (9%), 5 students were favoring Disagree (5%) and 1 student narrated Strongly Disagree (1%). This shows that most of the people understood the use of EVC and it tells that the results generated are from the class of students who were aware of what is asked.

### 4.3.2 Most of the words you learned through EVC were not learned by you before?

The second question asked was, “Most of the words you learned through EVC were not learned by you before?” This question was asked to analyze the understanding of the words to be taught by English Vocabulary Corpus. The answer of this question was also important for generations of results by English Vocabulary Corpus. The responses given by students were as: 58 students stated Strongly Agree (58%), 31 students said Agree (31%), 4 students stayed neutral (4%), 5 students were favoring Disagree (5%) and 2 students narrated Strongly Disagree (2%). This shows that most of the words were never remembered by the students and they have not encountered the meanings or contexts of the words. It also helps us to make results that the use of EVP can be easily analyzed with accuracy in results.

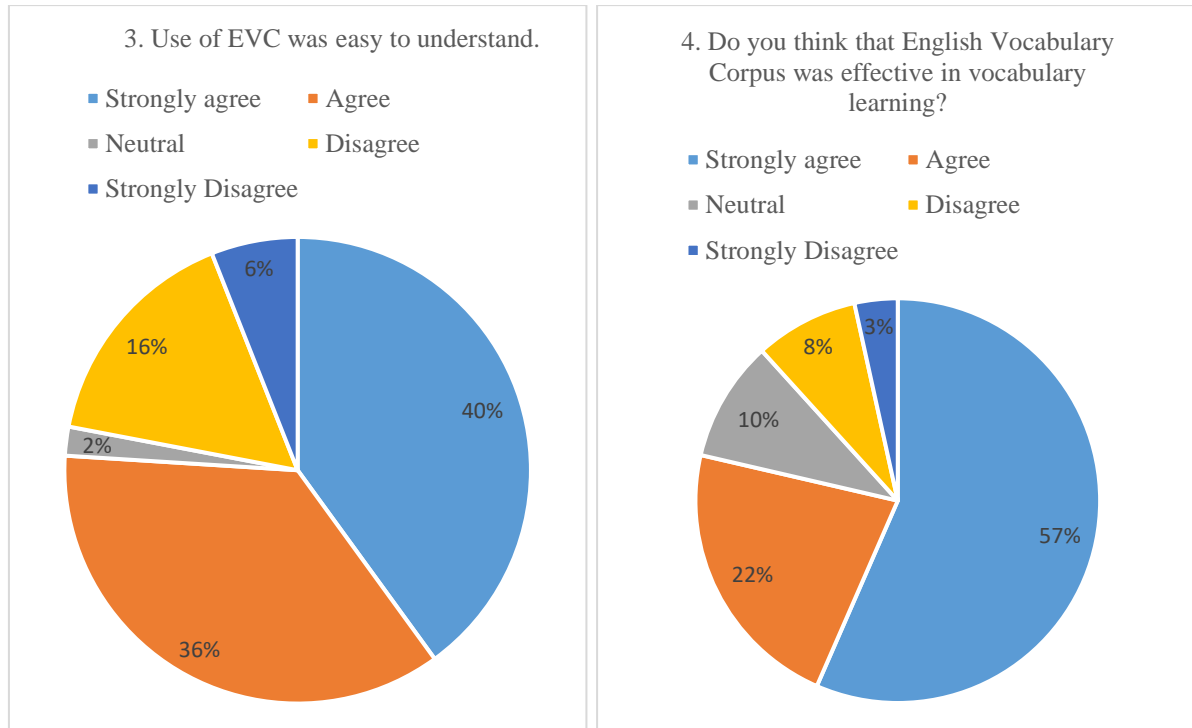


#### 4.3.3 Use of EVC was easy to understand.

The third statement asked was, “Use of EVC was easy to understand.” This statement was asked to analyze the understanding about the difficulty in the use of English Vocabulary Corpus. The answer of this question helped in understanding the difficulty level of English Vocabulary Corpus. The responses given by students were as: 40 students stated Strongly Agree (40%), 36 students said Agree (36%), 2 students stayed neutral (2%), 16 students were favoring Disagree (16%) and 6 students narrated Strongly Disagree (6%). This shows that EVP is overall easy to understand.

#### 4.3.4 Do you think that English Vocabulary Corpus was effective in vocabulary learning?

The fourth question asked was, “Do you think that English Vocabulary Corpus was effective in vocabulary learning?” This question was asked to judge the effectiveness of English Vocabulary Corpus for learning vocabulary items. The answer of this question helped in analyzing the productivity of EVC. The responses given by students were as: 57 students stated Strongly Agree (57%), 22 students said Agree (22%), 10 students stayed neutral (10%), 8 students were favoring Disagree (8%) and 3 students narrated Strongly Disagree (3%). This shows that EVP is overall effective for learning vocabulary items.



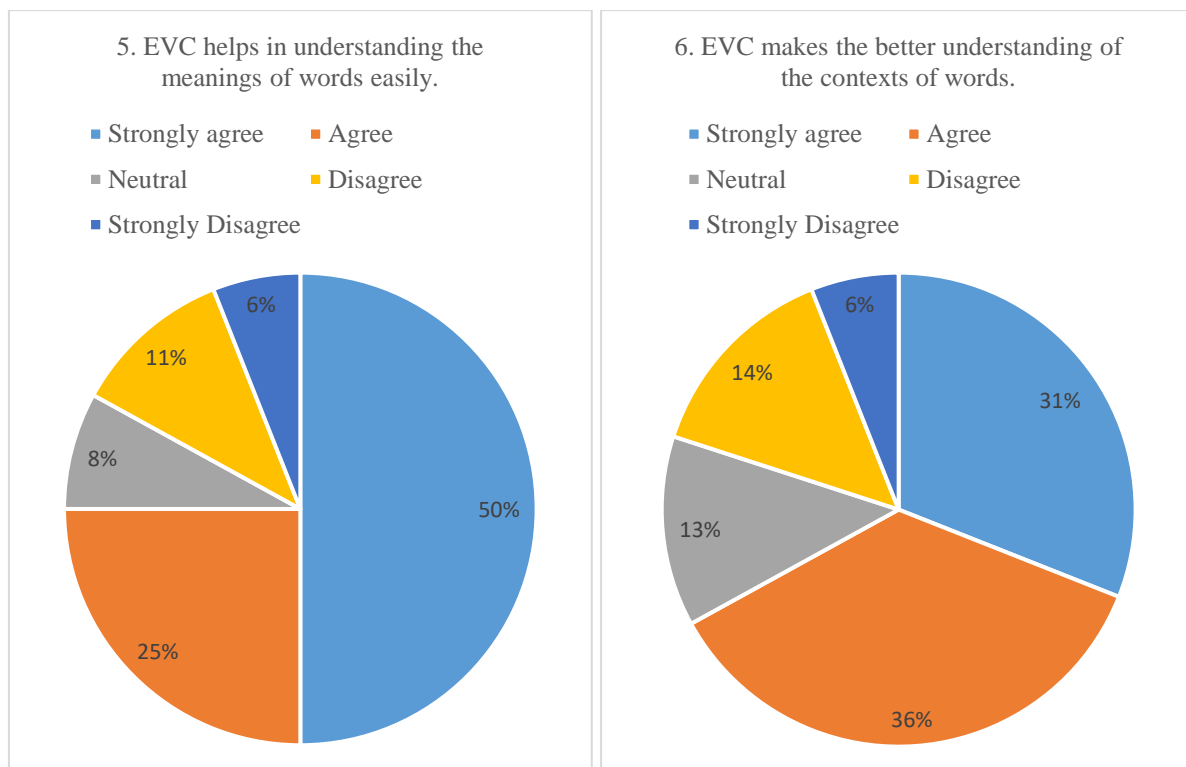
#### 4.3.5 ECV helps in understanding the meanings of words easily.

The fifth statement asked was, “ECV helps in understanding the meanings of words easily.” This question was asked to judge the effectiveness of English Vocabulary Corpus for learning the meanings of complex vocabulary items. The answer of this question helped in understanding the productive nature of EVC. The responses given by students were as: 50 students stated Strongly Agree (50%), 25 students said Agree (25%), 8 students stayed neutral (8%), 11 students were favoring Disagree (11%) and 6 students narrated Strongly Disagree (6%). This shows that EVP is is productive in learning the meanings of vocabulary items.

#### 4.3.6 EVC makes the better understanding of the contexts of words.

The sixth statement asked was, “EVC makes the better understanding of the contexts of words.” This statement was asked to judge the effectiveness of English Vocabulary Corpus for learning the contexts of vocabulary items. The answer of this question helped in understanding the productivity of EVC in terms of contexts of the words. The responses given by students were as: 31 students stated Strongly Agree (31%), 36 students said Agree (36%), 13 students stayed neutral (13%), 14 students were favoring Disagree (14%) and 6 students narrated Strongly Disagree (6%). This shows that EVP is is productive in learning the particular contexts of vocabulary items.



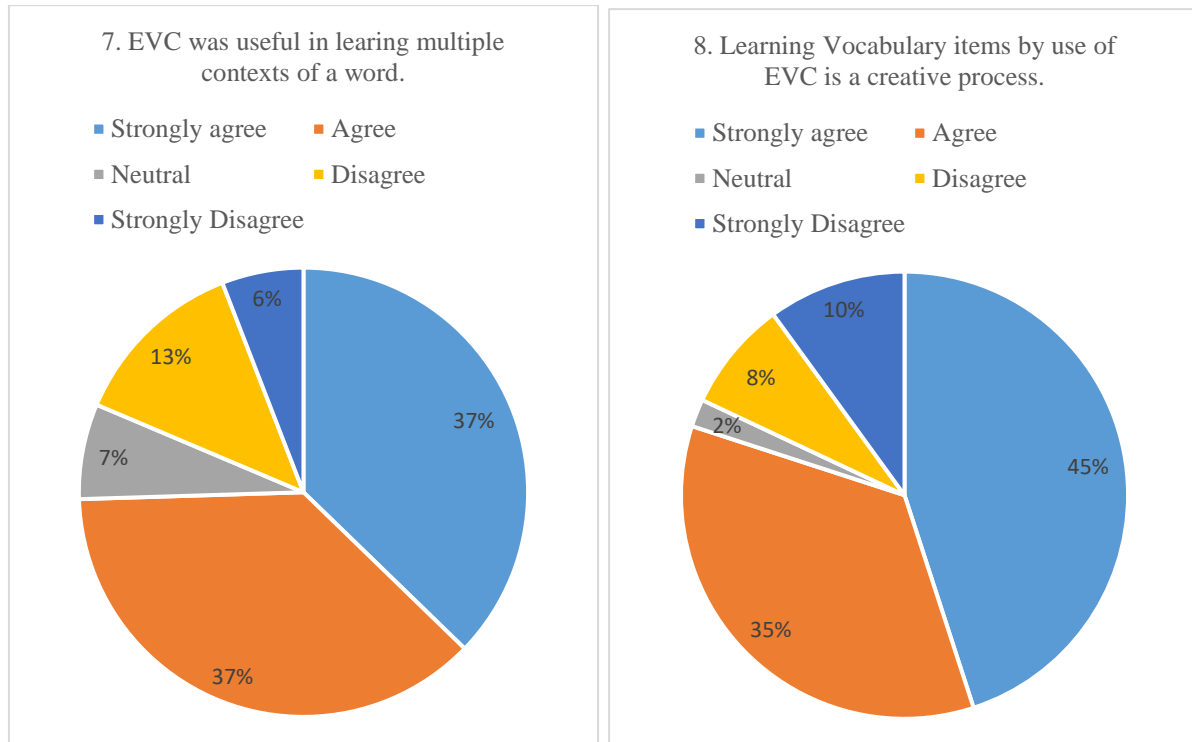


#### 4.3.7 EVC was useful in learning multiple contexts of a word.

The seventh statement asked was, “EVC was useful in learning multiple contexts of a word.” This statement was asked to judge the effectiveness of English Vocabulary Corpus for learning different contexts of vocabulary items. The answer of this question helped in understanding the productivity of EVC in terms of multiple contexts learning. The responses given by students were as: 37 students stated Strongly Agree (37%), 37 students said Agree (37%), 7 students stayed neutral (7%), 13 students were favoring Disagree (13%) and 6 students narrated Strongly Disagree (6%). This shows that EVP is is productive in learning the multiple contexts of vocabulary items.

#### 4.3.8 Learning vocabulary items by use of EVC is a creative process.

The eighth statement asked was, “Learning vocabulary items by use of EVC is a creative process.” This statement was asked to see the creativity in the use of EVC. The answer of this question helped in checking the creativity of EVC for exploring meanings and contexts. The responses given by students were as: 45 students stated Strongly Agree (45%), 35 students said Agree (35%), 2 students stayed neutral (2%), 8 students were favoring Disagree (8%) and 10 students narrated Strongly Disagree (10%). This shows that the use EVP is a creative process.



#### 4.3.9 EVC has made learning of vocabulary items interesting.

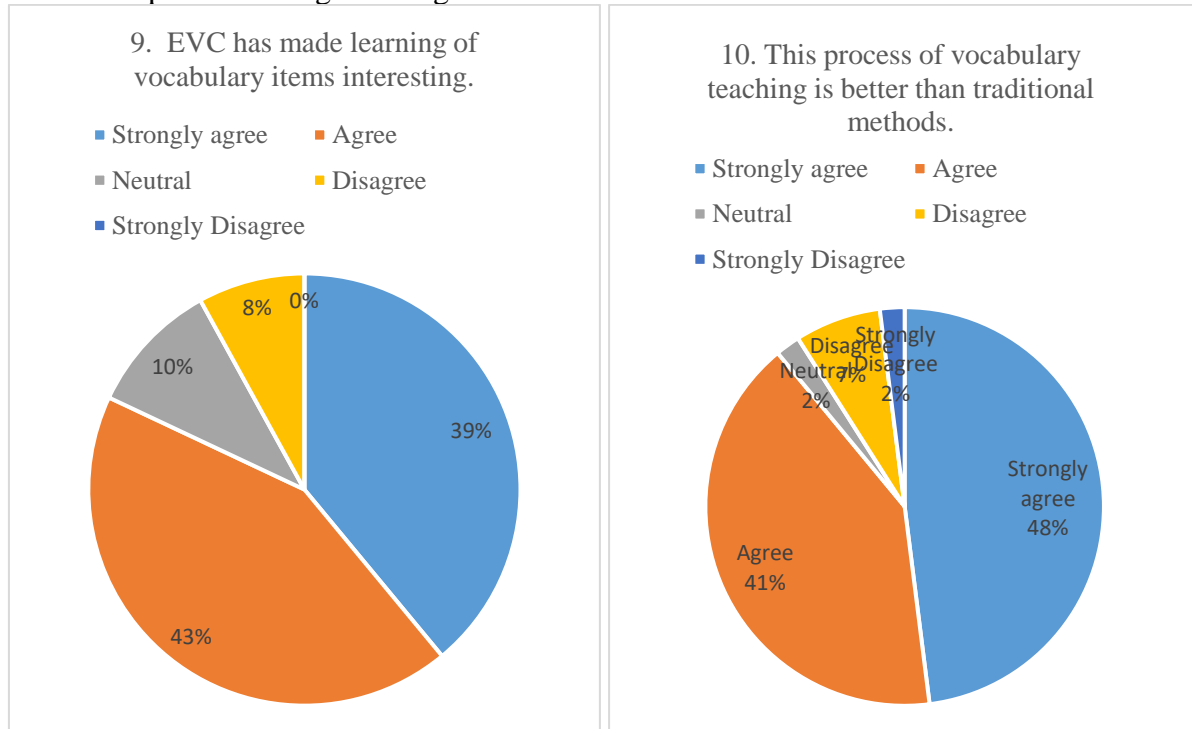
The ninth statement asked was, “EVC has made learning of vocabulary items interesting.” This statement was asked to see the interest of students in the use of EVC. The answer of this question helped in analyzing the overall interests of students in the use of EVC for exploring meanings and contexts. The responses given by students were as: 39 students stated Strongly Agree (39%), 43 students said Agree (43%), 10 students stayed neutral (10%), 8 students were favoring Disagree (8%) and no student narrated Strongly Disagree (0%). This shows that students have taken interest in the use of EVP.

#### 4.3.10 This process of vocabulary teaching is better than traditional methods.

The tenth statement asked was, “This process of vocabulary teaching is better than traditional methods.” This statement was asked to compare the use of EVC with traditional methods of vocabulary learning. The answer of this question helped in analyzing the comparative difference in learning vocabulary items through traditional methods and EVC. The responses given by students were as: 48 students stated Strongly Agree (48%), 41 students said Agree (41%), 2 students stayed neutral (2%), 7 students were favoring Disagree (7%) and 2 students narrated Strongly Disagree (2%). This shows that EVP is better in learning vocabulary items than traditional methods.

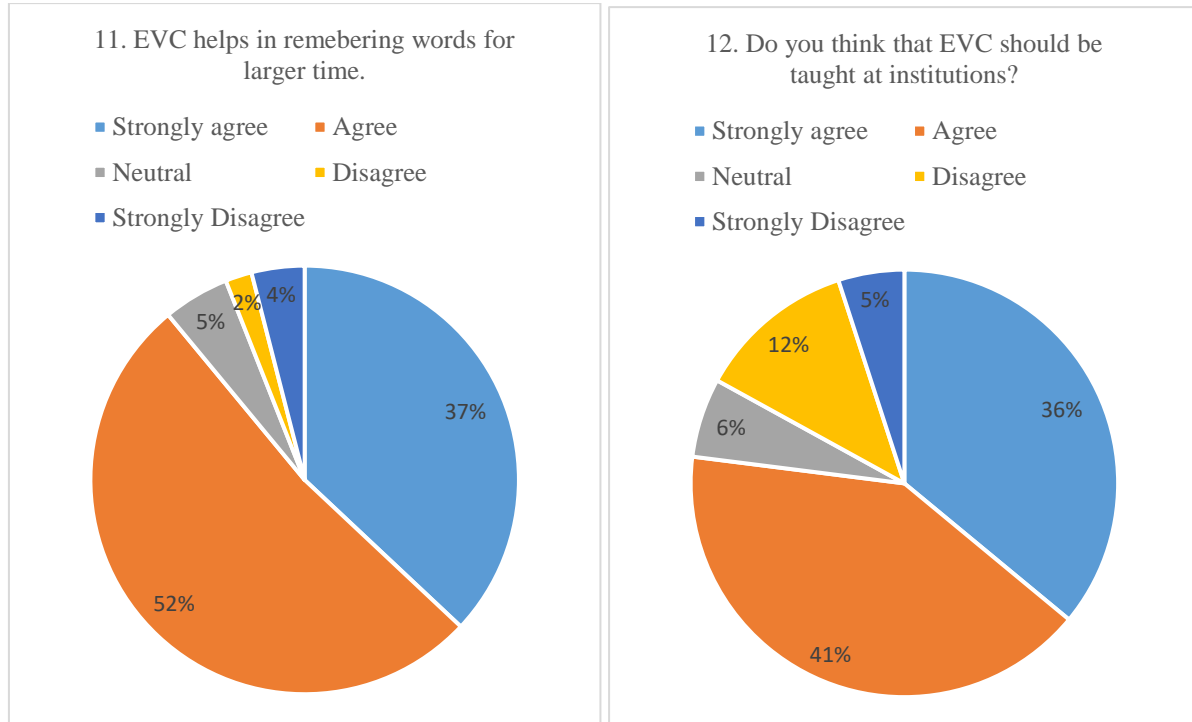
#### 4.3.11 EVC helps in remembering words for larger time.

The eleventh statement asked was, “EVC helps in remembering words for larger time.” This statement was asked to check the impact of EVC on cognition of students. The answer of this question helped in analyzing the visual impact of vocabulary learning through EVC as it helps in association of meanings for remembering. The responses given by students were as: 37 students stated Strongly Agree (37%), 52 students said Agree (52%), 5 students stayed neutral (5%), 2 students were favoring Disagree (2%) and 4 students narrated Strongly Disagree (4%). This shows that EVP is better in learning vocabulary as it helps in remembering vocabulary items for larger time. It helps in retaining meanings and contexts.



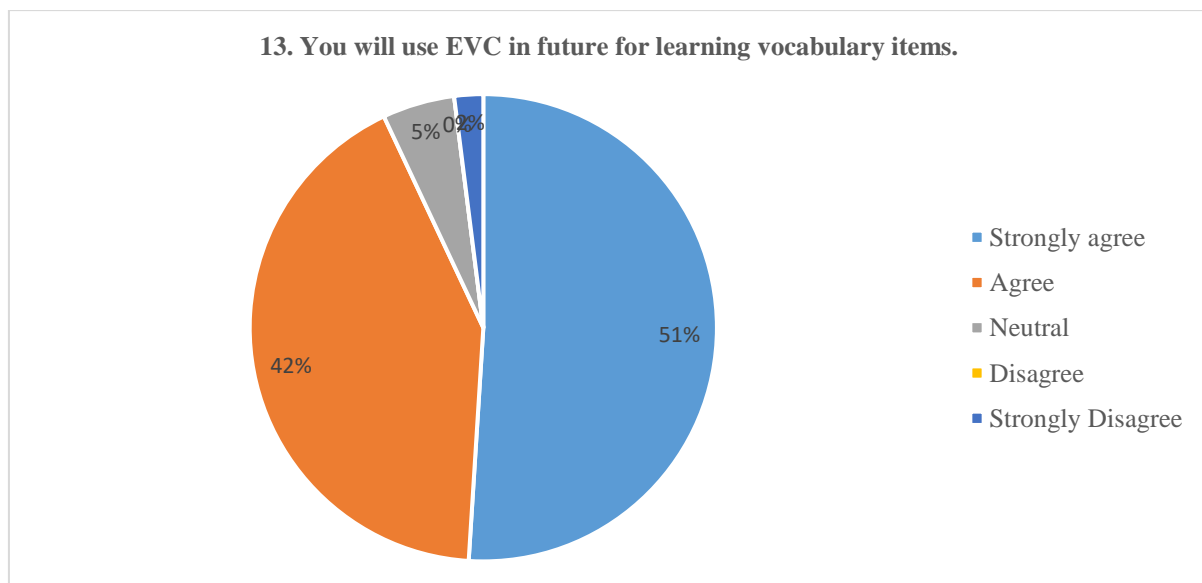
#### 4.3.12 Do you think that EVC should be taught at institutions?

The twelveth question asked was, “Do you think that EVC should be taught at institutions?” This question was asked to know if the use of EVC be granted at academic institutions for vocabulary learning. The answer of this question helped in exploring the interest of students in learning vocabulary. The responses given by students were as: 36 students stated Strongly Agree (36%), 41 students said Agree (41%), 6 students stayed neutral (6%), 12 students were favoring Disagree (12%) and 5 students narrated Strongly Disagree (5%). It symbolizes that EVC can be used at institutions and it will generate better results.



#### 4.3.13 You will use EVC in future for learning vocabulary items.

The thirteenth statement asked was, “You will use EVC in future for learning vocabulary items.” This question was asked to know if the students would use EVC by their own for vocabulary learning. The answer of this question helped in exploring the use of ECV by the students for future correspondence to learn vocabulary through EVC. The responses given by students were as: 51 students stated Strongly Agree (51%), 42 students said Agree (42%), 5 students stayed neutral (5%), no students were favoring Disagree (0%) and 2 students narrated Strongly Disagree (2%). It symbolizes that EVC would be used by students to learn vocabulary in future.



#### 4.4 Findings (Table)

A table is being generated to express results of all 13 questions at a single platform. This platform is used to see all the information at a single point. The results of thirteen survey questions in the form of table is analysed as follows:

No.	Questions (Survey)	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Do you have understood the use of English Vocabulary Corpus (EVC) well?	61	24	9	5	1
2.	Most of the words you learned through EVC were not learned by you before?	58	31	4	5	2
3.	Use of EVC was easy to understand.	40	36	2	16	6
4.	Do you think that EVC was effective in vocabulary learning?	57	22	10	8	3
5.	EVC helps in understanding the meanings of words easily.	50	25	8	11	6
6.	EVC makes the better understanding of the contexts of words.	31	36	13	14	6
7.	EVC was useful in learning multiple contexts of a word.	37	37	7	13	6
8.	Learning vocabulary items by use of EVC is a creative process.	45	35	2	8	10
9.	EVC has made learning of vocabulary items interesting.	39	43	10	8	0
10.	This process of vocabulary teaching is better than traditional methods.	48	41	2	7	2
11.	EVC helps in remembering words for larger time.	37	52	5	2	4
12.	Do you think that EVC should be taught at institutions?	36	41	6	12	5
13.	You will use EVC in future for learning vocabulary items.	51	42	5	0	2

#### 5. Conclusion

In a nutshell, the discussion can be sum up at the point that the English Vocabulary Corps (EVC) was liked by the students to be taught at institutions for teaching vocabulary. The use of EVC was creative and it produced effective results on cognition. The use of EVC was creative and it helps in the better understanding of meanings, particular contexts and multiple contexts of the words. EVC was liked by students and they are most likely to use it at academia for learning vocabulary. EVC is better than the traditional methods of learning vocabulary as it is creative and easy to understand.

Futuristic vision is implication of the EVC for future correspondence of results. It can be taught at university level as the students have liked this method of learning. The future researches include its survey on primary, elementary, secondary ad high school levels. It can be used for experimental data gathering and other kinds of studies. The future of Corpus linguistics is open to exploration!



## References

- Arimoto, Y., & Okanoya, K. (2014). Emotional synchrony and covariation of behavioral/physiological reactions between interlocutors. *2014 17th Oriental Chapter of the International Committee for the Co-ordination and Standardization of Speech Databases and Assessment Techniques (COCOSDA)*. doi:10.1109/icsda.2014.7051428
- Bradley, J. (2018). Digital tools in the humanities: Some fundamental provocations? *Digital Scholarship in the Humanities*, 34(1), 13-20. doi:10.1093/llc/fqy033
- Buechel, S., & Hahn, U. (2017). *Readers vs. Writers vs. Texts: Coping with Different Perspectives of Text Understanding in Emotion Annotation (pp.1-12)*. doi:10.18653/v1/w17-0801
- Busse, U. (2002). Linguistic variation in the Shakespeare Corpus. *Pragmatics & Beyond New Series*, 106, 1-344. doi:10.1075/pbns.106
- Busse, U. (2002). *Linguistic variation in the Shakespeare Corpus: Morpho-syntactic variability of second person pronouns*. Amsterdam, Netherlands: John Benjamins Publishing.
- Duc-Anh, P., & Matsumoto, Y. (2018). *EMTC: Multilabel Corpus in Movie Domain for Emotion Analysis in Conversational Text*. Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC-2018).
- Harbus, A. (2019). 4 The Old English Vocabulary of Emotions. *Before Emotion: The Language of Feeling*, 400-1800.
- Kruger, J., Epley, N., Parker, J., & Ng, Z. (2005). Egocentrism over e-mail: Can we communicate as well as we think? *Journal of Personality and Social Psychology*, 89(6), 925-936. doi:10.1037/0022-3514.89.6.925
- Lancashire, I. (2012). Semantic drift in Shakespeare, and early modern English full-text corpora. *English Corpus Linguistics: Crossing Paths*, 181-196. doi:10.1163/9789401207935\_010
- Miller, A. (2018). Text mining digital humanities projects: Assessing content analysis capabilities of Voyant tools. *Journal of Web Librarianship*, 12(3), 169-197. doi:10.1080/19322909.2018.1479673
- Mochizuki, H., & Shibano, K. (2015). Detecting Topics Popular in the Recent Past from a Closed Caption TV Corpus as a Categorized Chronicle Data. *Proceedings of the 7th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management*. doi:10.5220/0005612103420349
- Rudanko, M. J. (2006). Linguistic variation in the Shakespeare Corpus: Morpho-Syntactic variability of second person pronouns (review). *Language*, 82(1), 189-190. doi:10.1353/lan.2006.0065
- Ruys, J. F., Champion, M. W., & Essary, K. (2019). *Before emotion: The language of feeling, 400-1800*. London, England: Routledge.
- Uboldi, G., & Caviglia, G. (2014). Information visualizations and interfaces in the humanities. *New Challenges for Data Design*, 207-218. doi:10.1007/978-1-4471-6596-5\_11
- Walker, T. (2005). Ulrich Busse. Linguistic variation in the Shakespeare Corpus: Morpho-syntactic variability of second person pronouns. *Journal of Historical Pragmatics*, 6(2), 324-328. doi:10.1075/jhp.6.2.10wal
- Welsh, M. E. (2014). Review of Voyant Tools. *Collaborative Librarianship*, 6(2), 96-98. Retrieved from <https://digitalcommons.du.edu/collaborativelibrarianship/vol6/iss2>

# AN IDEA TO DESIGN A CHIP FOR WOMEN AND CHILDREN SECURITY TO PREVENT MOLESTATION BY SUBSTANCE ABUSE

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**Abstract:** *The idea is to design a chip that detects alcohol or drug level when reached beyond dangerous level and informs family member or guardian of the alcohol or drug consumer at the same time by sending signal in the form of text or any electronic form. The purpose of designing this chip is to prevent drug/alcohol abuse of women and children because they are considered easy targets by culprits. Many electronic security systems have been designed and developed earlier but the person in dangerous situation has to be conscious to press a button or activate security system. If a person has consumed or is made to consume drug or alcohol at a very high level, he/she will not be in right senses to message or call his/her family member when in danger. Therefore, it is important, message or signal is automatically sent to the concerned when alcohol or drug level reaches danger mark. Hence chip has to have sensor to detect whether danger mark is reached along with other electronic components like transmitter and receiver, encoder and decoder. The main challenge is to have as minimum as possible circuitry on chip to serve our purpose which can be fitted inside light bracelet or ring that can be worn by women or children.*

**Keywords:** Security chip, Substance abuse, Wrist Sensor, RF Module, GSM/GPRS Module, Electronic Circuits.

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## 1. Introduction

Problem of women and child trafficking and abuse is not recent in this world and most of the cases involve drug and alcohol abuse. We should not think that only street children are made drug addicts so that they can beg and do according to the culprit's needs and even sold to other culprits but anyone can become easy target of such crime if drugged or made to consume alcohol at an intolerable level. Most of the children rescued by Non-Government Organizations (NGO) were once victims of drug abuse. NGO's rehabilitation centres can track if their children are consuming drugs if there is a system formed where children are made to wear bracelet or ring which constantly senses their wrist nerve and if such incident happens, immediately sends sorted information of that child to the NGO. Similarly, such embedded bracelet or ring can be worn by women who go to clubs or bars with colleagues or friends for drinking and might get in wrong hands. To avoid such miss happenings, an idea of designing such unique security chip is proposed in the following section.

The purpose of designing this chip is to prevent drug/alcohol abuse of women and children because they are considered easy targets by culprits. Many electronic security systems have been designed and developed earlier but the person in dangerous situation has to be conscious to press a button or activate security system. If a person has consumed or is made to consume drug or alcohol at a very high level, he/she will not be in right senses to message or call his/her family member when in danger. Therefore, it is important, message or signal is automatically sent to the concerned when alcohol or drug level reaches danger mark. Many recent great advances have been seen in semiconductor and electronics industry which have made our daily lives comfortable and easier but social problems concerning women and children security still exist. Top priority here is not to make existing electronics smart as a recent trend going on in semiconductor industry but to design less complex as simple as possible system on chip (SOC) serving the application of prevention of incident and providing security by communication. The whole purpose of designing this chip is safety and security of women and children.

## 2. Literature Review

First of all, we need to find out which part of our body can serve as a sensory nerve to the sensor in chip and the most convenient for us would be to detect something from our wrist or finger. Median nerve in our hands has been utilised in many studies and biomedical instruments to detect alcohol and drug consumption (Alam, 2017) (Dale, 2016). In (Alam, 2017), it is seen heavy alcohol consumption is more likely to contribute to Carpel Tunnel Syndrome (CTS) and its diagnosis is based upon symptoms of numbness, tingling and/or burning in the distribution of the median nerve in the hand. Median nerve is shown in figure 1. Similarly, in (Dale, 2016), to detect wrist nerve abnormalities, wrist surface skin temperature was automatically recorded by a temperature electrode embedded in the wrist sensor shown in figure 2. At the end of the session, the results were sent electronically via modem to the manufacturer for review and interpretation by a board certified electro-diagnostician. Sensitivity and specificity values were computed for sensory and motor latencies using a range of values for thresholds indicating nerve conduction abnormality. Such Wrist wearables have been used recently in many applications like safe pedestrian crossing (Sureshkanth, 2018) and continuous implicit Authentication (Ekiz, 2020).

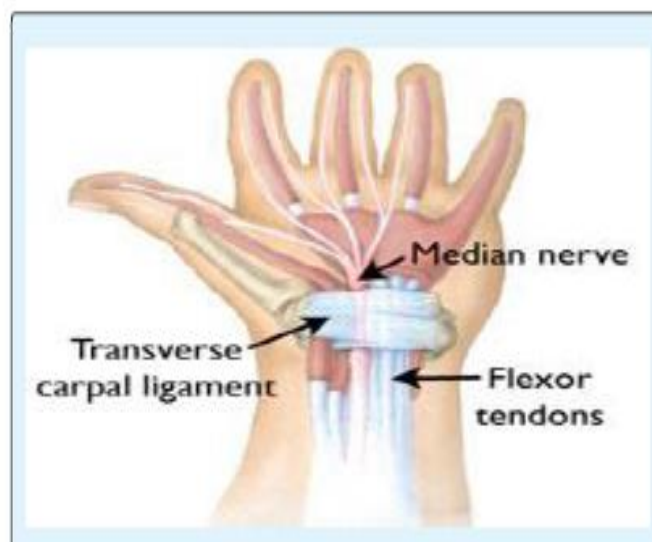


Figure 1: Anatomy of human hand (Alam, 2017)

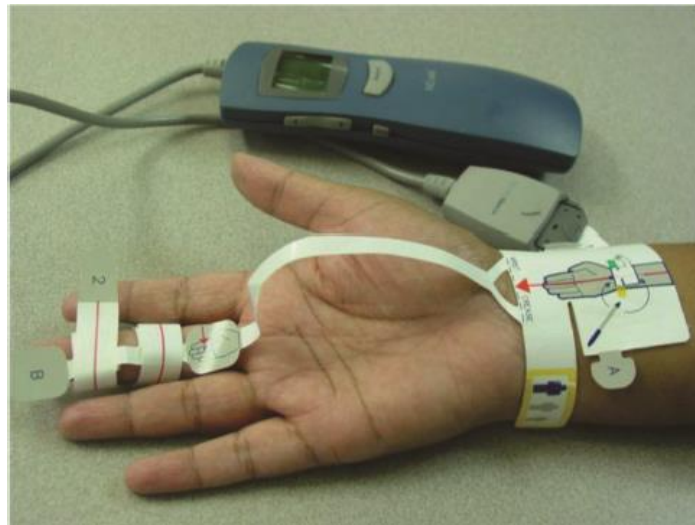


Figure 2: Sensor set-up of (Alam, 2017)

## 2.1 Problem Statement

If a person has consumed or is made to consume drug or alcohol at a very high level, he/she will not be in right senses to message or call his/her family member when in danger. Therefore, it is important, message or signal is automatically sent by electronic equipment to the concerned when alcohol or drug level reaches danger mark. Such electronic chip or equipment is neither designed nor available in the market yet.

## 3. Proposed Idea

In this paper an idea is proposed to design a chip that detects alcohol or drug level when reached beyond dangerous level and informs family member or guardian of the alcohol or drug consumer at the same time by sending signal in the form of text or any electronic form. Many electronic security systems have been designed and developed earlier but the person in dangerous situation has to be conscious to press a button or activate security system. If a person has consumed or is made to consume drug or alcohol at a very high level, he/she will not be in right senses to message or call his/her family member when in danger. Therefore, it is important, message or signal is automatically sent to the concerned when alcohol or drug level reaches danger mark. Hence chip has to have sensor to detect whether danger mark is reached along with other electronic components like transmitter and receiver, encoder and decoder. The main challenge is to have as minimum as possible circuitry on chip to serve our purpose which can be fitted inside light bracelet or ring that can be worn by women or children.

Arduino microcontroller chip can be used to design basic working model for implementing this idea and along with its IDE software can be used for writing a code for testing the phone numbers of guardian/family of the person wearing the chip. The basic working prototype of security system with panic button on Arduino have used RF434 and SIM900 modules along with other electronic components like resistors, LCD, capacitors and power supply. RF434 as the name suggests works at radio frequency of 434MHz. Designed for global market, SIM900 is a quad-band GSM/GPRS engine that works on frequencies GSM 850MHz, EGSM 900MHz, DCS 1800MHz and PCS 1900MHz. Here panic button needs to be replaced by a nerve sensor. Arduino model UNO along with other RF Module and SIM900 module and their functioning are shown in the following figures.

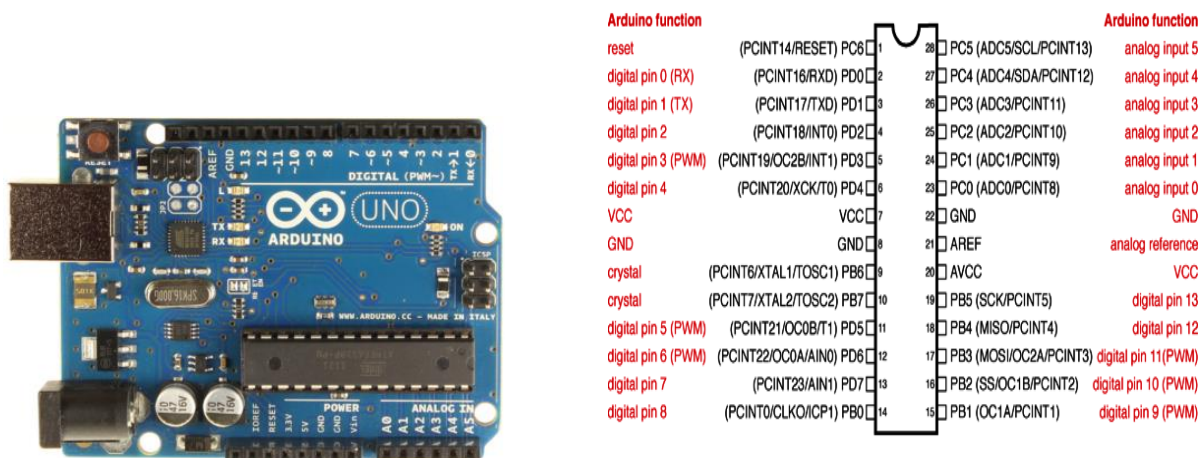


Figure 3: Arduino model UNO and the Pin Diagram of the UNO along with mapping of Atmega328 pins

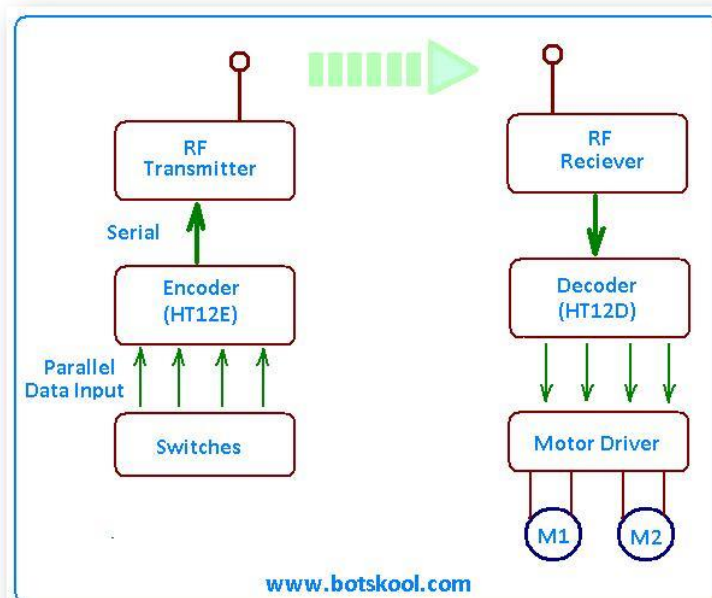


Figure 4: Working model of RF Module (Arduino Channel)



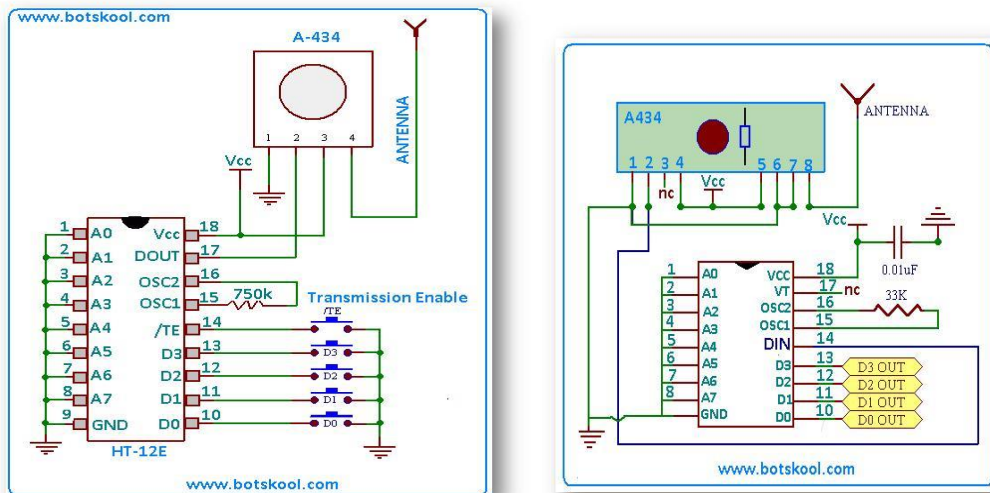


Figure 5: Working of HT12E/D (encoder and decoder along with RF434 (botskool.com))

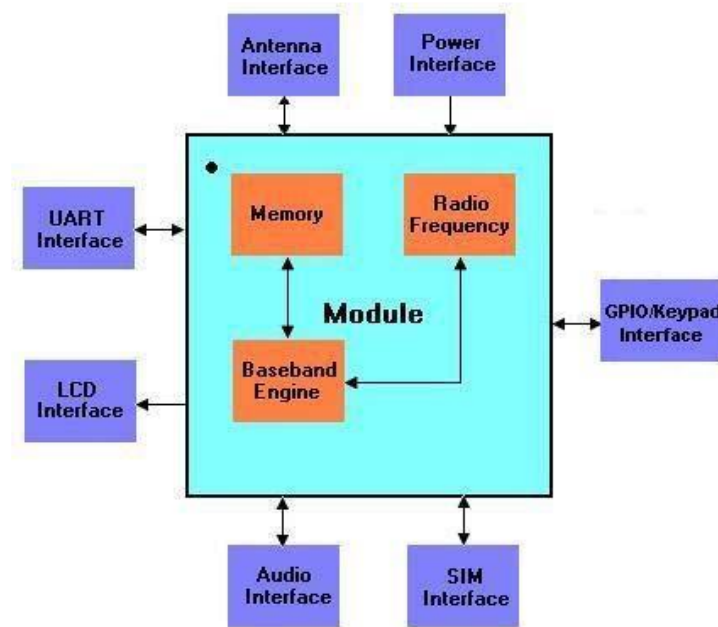


Figure 6: Functional diagram of the SIM900 (Arduino Tutorial)



Figure 7: SIM900 Evaluation Board (Arduino Hardware)



Figure 8: Top and Bottom View of the SIM900 (Arduino Channel)

Apart from sensor, electronic circuitry is needed to send message and receive signal when sensor detects danger. Thus, we need transmitter, receiver, encoder, decoder and also some sort of GPS/GPRS system. Security systems earlier had used RF module and GPS/GPRS module for communication. Currently small size CMOS technology RF modules are available because of the recent trend of downscaling in semiconductor industry to accommodate large number of transistors in smaller area of chip. CNTFETs and graphene transistors for 16nm and lesser technology have also been proposed even for fuzzy logic gates (Zaki, 2019) which can be considered designing electronic components for this chip. But still there are fabrication issues for such models unlike CMOS and MOS technology.

#### 4. Conclusion

With the advancement in technology, there is a hope that this idea may be implemented by manufacturers so that full-fledged security chip is available in the market that can be fitted in light bracelet or ring which can be worn by women and children to prevent their molestation by substance abuse in real time and at the same time that information can be used to catch the culprits by law and order.

#### References

- Ekiz, D., Can, Y. S., Dardagan, Y. C. & Ersoy, C. (2020). Can a Smartband Be Used for Continuous Implicit Authentication in Real Life. *IEEE Access*, 8, 59402-59411.
- Zaki, F., Mustajab, P. (2019). Voltage Mode CNFET Based Fuzzy Min-Max Circuits. *IEEE International Conference on Electrical, Electronics and Computer Engineering*, 2687-7767.
- Sureshkanth, N. V., Maiti, A., Jadliwala, M., Cramer, K. & He, J. (2018). A Practical Framework for Preventing Distracted Pedestrian-Related Incidents Using Wrist Wearables. *IEEE Access*, 6, 78016-78030
- Alam, Md. S., Salve, U., Kumar, N. (2017). A Study on the Alcohol Beverages Drinking Effect on Potential CTS Symptoms. *Ergonomics International Journal*, 1(1), 2577-2953.
- Dale, A. M., Agboola, F., Yun, A., Zeringue, A., Al-Lozi, M. T. & Evanoff, B. (2016). Comparison of Automated versus Traditional Nerve Conduction Study Methods for Median Nerve Testing in a General Worker Population. *PMC Journals*, 7(3), 276-282.
- <http://arduino.cc/en/Tutorial/HomePage>
- <http://www.arduino.cc/playground/Projects/ArduinoUsers>
- <http://www.instructables.com/tag/type-id/category-technology/channel-arduino/>
- Arduino hardware reference <http://arduino.cc/en/Main/Hardware> [www.botskool.com](http://www.botskool.com)

# ATTITUDES TOWARDS BIDAYUH AS A MEDIUM OF INSTRUCTION FOR KINDERGARTENS IN SARAWAK, MALAYSIA

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**Abstract:** *Currently the indigenous languages used as the medium of instruction in public schools in Malaysia are Iban in Sarawak, KadazanDusun in Sabah, and Semai in West Malaysia. While the medium of instruction in kindergartens is not as strictly regulated as the medium of instruction in public schools, the demand for kindergartens using indigenous languages need to be high enough for the programme to be sustainable. There are presently some Bidayuh playschools and preschools established by the Dayak Bidayuh National Association in Sarawak. The study examined attitudes towards Bidayuh as a medium of instruction for kindergartens among the Bidayuh community in Sarawak, Malaysia. Questionnaire data were obtained from 61 Bidayuh who originated from the Kuching and Kota Samarahan districts. Results showed mixed responses to the prospect of setting up kindergartens using Bidayuh as the medium of instruction but a majority were in support. The participants believed that Bidayuh language kindergartens would provide opportunities for children to learn Bidayuh language and culture, and good moral values. However, 41% of the participants disagreed that it should be for the purpose of providing higher quality education. There were some concerns on the selection of the Bidayuh variety to use as the medium of instruction, curriculum and logistics which indicate the tremendous challenges faced by mother tongue-based kindergartens.*

**Keywords:** Bidayuh, kindergarten, mother tongue-based education, indigenous language, culture.

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## 1. Introduction

Malaysia, a Southeast Asian country with 32.73 million population (Department of Statistics Malaysia, 2021) has a multilingual population. It is estimated that there are 134 established languages in Malaysia, of which 112 are indigenous languages (Eberhard, Simons, & Fennig, 2020). Omar (2014) estimated that 80 indigenous languages from the Austronesian language family are found in Sabah and Sarawak, the two Malaysian states situated on the island of Borneo. Sarawak, with at least 25 different ethnic groups (Kheung & Aduce, 2018) has more than 51 indigenous languages based on lexico-statistic studies (Norahim, forthcoming). The Bidayuh language is the fourth largest indigenous language group in Sarawak with 217,800 speakers (Sarawak Government Portal, 2017), after the Iban, Malay, and Chinese. Yet, recent studies on the usage and vitality of the Bidayuh language have found that the language is showing signs of gradual shift or decline due to various factors including urban migration, education and mixed marriage whereby the younger generation use dominant languages such as English and Malay for communication and education and many parents are not transmitting the Bidayuh language to their children (Coluzzi, Riget, & Wang, 2013; Dealwis, 2008; 2010; Norahim, 2010; 2017; Ting & Campbell, 2007). As such, the vitality of the Bidayuh language may be threatened in the future if there is no effective intervention to revitalise the language.

While there is a Bidayuh local radio station (wai.fm) within the Radio Television Malaysia (RTM), the Bidayuh language is not used widely in the media or commerce and is not taught in school, unlike the other major indigenous language (Iban). However, the Dayak Bidayuh National Association (DBNA) with the initial support of UNESCO and SIL, set up Bidayuh medium playschools and kindergarten in a few participating villages beginning in 2007 with the goal of providing Bidayuh students with a strong educational foundation (Joyik, Siam, Tan, Bongarra, & Simpson (2017) and helping in the transmission of the language and culture to the younger generation (Siam & Smith, 2013). Ultimately, the intervention that can revitalise Bidayuh language is to have it taught in school like other indigenous languages namely, Iban, Kadazandusun in Sabah and Semai in Peninsular Malaysia. According to the Malaysian language education policy, an ethnic language or a mother tongue referred to as “Pupil’s Own Language” (POL) can be taught in school when it is requested by at least 15 pupils and/or their parents (Omar, 2014).

While the medium of instruction in kindergartens is not as strictly regulated as the medium of instruction in public schools, the demand for kindergartens using indigenous languages need to be high enough for the programme to be sustainable. This study examined attitudes towards Bidayuh as a medium of instruction for kindergartens among the Bidayuh community in Sarawak, Malaysia. The objectives of the study were to:

- (1) determine the extent of Bidayuh usage among the Bidayuh participants; and
- (2) describe their attitudes towards Bidayuh language kindergartens.

## 2. Literature Review

Research on multilingual education shows that children, particularly in the minority or indigenous groups learn more effectively when taught in their mother tongue or indigenous language (Awopetu, 2016; Cummins, 2009; Dumatog & Dekker, 2003; Thomas & Collier, 1997; Walter, 2010). In the United States, Thomas and Collier (1997) found that overall academic success of non-native English speakers in all subjects, including English, were directly correlated with the amount of grade level academic work done in the student’s first language. Similarly, studies in other parts of the world such as the Nigeria, (Awopetu, 2016), Philippines (Dumatog & Dekker, 2003), Guatemala, Eritrea, and Cameroon (Walter, 2010) have shown that minority and indigenous students learned more effectively when taught in their mother tongue than in the standard medium of instruction. In Malaysia, similar findings on the benefits of mother-tongue education were obtained. Bagang (2017) reported that pupils from a mother tongue-based kindergarten organised by the Kadazandusun community in Sabah were more confident and performed better academically in primary schools than their counterparts from other kindergartens. Cummins (2009) argued that children can be taught to transfer their linguistic skills in their mother tongue to learn new concepts and new languages.

Despite empirical evidence on the positive effects of learning in the mother tongue, there is reservation among the parents on the benefits of mother-tongue education. In some multiethnic countries such as Nigeria which has 400 indigenous languages, the medium of instruction in pre-primary school is the mother tongue or the language of the immediate environment so that rural students can be eased into learning in the standard medium of instruction at later stage. Awopetu (2016) conducted a quasi-experimental study to compare the performance of pre-school children taught in English and an indigenous language over a 12-week period. Post test results showed that children who received instruction in the indigenous language performed significantly better than their counterparts taught in English. It was concluded that the use of the mother tongue improved learning abilities as the children did not have to translate the concepts taught into English and could express themselves freely, making them more motivated and confident. However, some parents and teachers worry that their children would be left behind in academic achievement and opportunities if they were not taught in the standard or dominant language such as English. In Kenya, Waithaka, (2017) found that parents and teachers in rural schools preferred their children to be taught English because they believed that English was more prestigious language which would benefit their children in the globalised world. The parents perceived their mother tongue to be inferior and inconsequential and the teachers insisted on using English or other dominant languages despite the education policy of using the mother tongue of the rural community as medium of instruction in early childhood education.

### 3. Background

In Sarawak, the Bidayuh community through DBNA started their own heritage language playschools called *sikuraa piramin* beginning in 2007 and kindergartens in 2009 to provide Bidayuh children with a strong educational foundation by using their mother tongue as a medium of instruction which will facilitate learning. Additionally, it will encourage inter-generational transmission of the language and culture and to strengthen ethnic identity (Siam & Smith, 2013). The Bidayuh playschools and kindergartens were conducted in the four main Bidayuh language varieties, namely, Biatah, Bau, Serian and Rara, and in their respective communities.

The Bidayuh language family comprises five major varieties, or sometimes called dialects, namely, Biatah (spoken mostly around Padawan, Penrissen and Kuching areas), Bau (formerly known as Jagoi or Bau-Jagoi spoken in Bau district), Serian (formerly called Bukar-Sadung, spoken in Serian district), Salako and Rara spoken in Lundu district. These varieties are not mutually intelligible because there is insufficient lexicostatistical overlap between them for developing one standard Bidayuh with a unified orthography (Joyik et al., 2017). With professional and technical support from SIL, each of the Bidayuh variety community developed their own spelling system and written materials such as stories, picture dictionaries and word list to add to the existing but limited Bidayuh written materials, which may be used in the teaching of Bidayuh language in school.



The Bidayuhs, formerly known as Land Dayaks, mostly live in the four districts of the Kuching-Samarahan division namely Lundu, Bau, Kuching, and Serian districts at the western end of Sarawak (Noeb, & Ridu, 2012) also known as the Bidayuh belt (Dundon, 1989). While 70% of Bidayuhs still live in rural areas in 2010, these areas, such as Padawan, Bau, and Lundu, are close to Kuching, the capital city which means that they can benefit from the rapid development in the city (Kheung & Aduce, 2018). Also, they are in contact with multiethnic and multilingual people for various purposes and settings, such as for work and education. Consequently, most Bidayuhs are multilingual and they are able and willing to code switch or use other languages such as Sarawak Malay, Iban and even English to communicate with speakers of other languages.

Currently, the Bidayuh playschools and kindergartens are community-based in that the participating villages bear the cost of running the schools, including teachers' salary and teaching learning resources. In the early stages and for a limited time, UNESCO funded the programme and SIL provided the technical and professional support but it is the community who need to manage the infrastructure and logistics such as the school building and other aids for parents to send their children to the schools. For the past few years and in the future, the community would need to be fully self-sustained, although DBNA has been, and will continue to render necessary support and aids. For a mother tongue-based or indigenous language education, such as the Semai to be fully supported by the government, including curriculum and materials development, and teacher training, it needs to be endorsed and managed by the education ministry (Abdul Ghani, 2015).

In Malaysia, the indigenous languages used as the medium of instruction in public schools and at the primary school levels are Iban in Sarawak, KadazanDusun in Sabah, and Semai in West Malaysia. To date, the Bidayuh playschools and kindergartens are essentially community-based and privately owned as they have yet to be endorsed and supported by the government. At one time there were 14 schools in nine villages, but this number has declined in recent years due to challenges such as lack of students and financial constraints faced by the community where parents have a choice to send their children to other kindergartens. Thus, it is important to investigate the attitudes towards Bidayuh language as a medium of instruction in early childhood.

#### **4. Method**

A descriptive study was conducted to gather information on the participants' attitude towards Bidayuh language kindergartens.

The participants of the study were Bidayuh colleagues, friends and family of the first researcher. A total of 61 participants completed the survey questionnaire and they were all Bidayuhs from around Kuching division, and mostly from the Bau (44.26%) and Biatah (40.98%) varieties. The participants' demographic background is presented in Table 1. The majority of them (62.3%) were within the age of 31-50 and had parents with school age children or children who were still living at home. Being in that age group, most of them had Malay medium education in primary (59.02%) and secondary (63.93%) school as the medium of education was switched from English to Malay or Bahasa Malaysia in 1970. Also, most of the participants were considered highly educated with 44 participants (72%) having a degree or higher. While most of the participants said they spoke Bidayuh (45.90%) at home, English was the significant other language (32.79%) spoken in the Bidayuh home.



**Table 1: Demographic background of Bidayuh participants (N=61)**

Demographic background		Frequency	Percentage
Age	Below 20	4	6.56
	21-30	8	13.11
	31-40	21	34.43
	41-50	17	27.87
	51-60	8	13.11
	61 and above	3	4.92
Gender	Female	32	52.46
	Male	29	47.54
Educational Background	Form 3	3	4.92
	Form 5	8	13.11
	Form 6	1	1.64
	Diploma	5	8.20
	Degree and higher	44	72.13
Medium of education in primary school	Chinese	4	6.56
	English	21	34.43
	BM	36	59.02
Medium of education in secondary school	Chinese	0	0
	English	22	36.07
	BM	39	63.93
Religion	Christianity	58	95.08
	Islam	3	4.92
Bidayuh language background	Bau	27	44.26
	Biatah	25	40.98
	Serian	6	9.84
	Other Bidayuh varieties	3	4.92
Main language spoken at home	Bidayuh	28	45.90
	English	20	32.79
	Sarawak Malay	9	14.75
	Malay	1	1.64
	Chinese	1	1.64
	Iban	1	1.64
	Other languages	1	1.64

The questionnaire used in this study comprised two sections. Section 1 is on the participants' background information namely, the town in which they live, their age, gender, educational background, medium of education in the primary and secondary school, occupation, religion, which Bidayuh language variety they belong to and the main language they speak at home. Section 2 contains items on the participants' usage of the Bidayuh language as shown in Table 2 to provide a context for understanding their attitude to the Bidayuh medium kindergartens (Section 3). For the items on their attitude towards Bidayuh language as medium of instruction in kindergartens, participants rated their response on a five-point Likert-scale ranging from 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, and 5 for Strongly Agree. There was an open-ended question at the end of Section 3 to elicit the participants' opinions and comments on Bidayuh language kindergartens. Section 3 of the questionnaire was formulated based on the results of Kayad, Ting, Arritt, and Siam's (forthcoming) study on the views of parents and teachers on the benefits of Bidayuh language preschool.

The questionnaire was created using Google form and the link was given to the researchers' contacts comprising Bidayuh colleagues, friends, family members and their Bidayuh contacts. These contacts were invited to participate in the study via email and phone (WhatsApp).

The data were analysed using descriptive statistics such as frequency counts and percentage and mean scores. The participants' opinions and comments in response to the open-ended question on the Bidayuh language kindergartens were analysed according to themes that reflect their attitudes.

## **5. Results and Discussion**

### **5.1 Extent of Bidayuh Usage Among the Bidayuh Participants**

The results on the extent of Bidayuh usage were used as a context to understand the participants' attitude towards Bidayuh language kindergartens. Usage was reflected in the frequency of use and ability to use the Bidayuh language for various purposes and in various contexts as shown in Table 2.

The results showed that the Bidayuh participants ranged from those who spoke Bidayuh extensively in daily life to those who hardly used Bidayuh. Although almost half of the participants reported that they speak Bidayuh at home (45.90%), one-third of them (32.79%) used mainly English at home. This resonates with Norahim's (2010; 2017) findings that educated and urban Bidayuh tend to use other dominant languages like English. While the majority (67.21%) of Bidayuh speakers said that they used Bidayuh almost every day, 18.03% of the Bidayuh participants reported that they did not use the language at all in a week. With this result on Bidayuh language use in view, it is interesting that the participants still reported positive attitudes towards having Bidayuh language kindergarten (results reported in Section 5.2).

Next, the results on the participants' self-reported proficiency in Bidayuh showed that there is a range of proficiency level. In terms of ability to understand Bidayuh in a conversation, the majority of the participants (62.30%) rated themselves as fluent and competent speakers of Bidayuh in that they were able to "easily understand conversations conducted in Bidayuh, even on abstract, complex unfamiliar topics spoken at a natural speed". However, some speakers (14.75%) reported that they could not communicate effectively in Bidayuh despite being able to "understand a lot of what is being said". It may be that they understand but they could not speak or express themselves fluently in Bidayuh, showing that they have receptive language skills in Bidayuh but lack productive skills. Further, there was a notable number of participants (16.39%) who reported they had rather limited understanding of Bidayuh for effective conversation as they could only understand "main points of every day conversation that is conducted clearly in a Bidayuh language familiar to me". This is because some Bidayuh varieties are not mutually intelligible, making both Bidayuh interlocutors' resort to a standard or different language such as English or Malay to communicate more effectively. A number (6.56%) of Bidayuh speakers rated their ability to understand their language as limited to familiar topics such as self, family and activities at word level, and at slow pace.

The Bidayuh participants' ability to speak Bidayuh is much lower than their ability to understand Bidayuh. It is not surprising that only 16.39% of the participants stated that they were able to speak clearly and effectively in Bidayuh, even on complex topics. Most of them were able to speak Bidayuh when the topic was within their interest (39.34%) and with which they were familiar (24.59%). That some (19.67%) could only speak a few words in Bidayuh suggest a decline in the ability to use the language which some researchers regard as gradual shift from Bidayuh to dominant language, thus making Bidayuh language threatened in the long term (Coluzzi, 2017; Coluzzi et al., 2013; Dealwis, 2010; Norahim, 2017).

**Table 2: Extent of Bidayuh usage among the Bidayuh participants (N=61)**

Extent of Bidayuh usage		Frequency	Percentage
Main language spoken at home	Bidayuh	28	45.90
	English	20	32.79
	Sarawak Malay	9	14.75
	Malay	1	1.64
	Chinese	1	1.64
	Iban	1	1.64
	Other languages	1	1.64
Frequency of speaking Bidayuh during the week	Not at all	11	18.03
	1-2 times per week	6	9.84
	3-5 times per week	2	3.28
	Almost everyday	41	67.21
	Everyday	1	1.64
Ability to understand Bidayuh	I cannot understand Bidayuh at all	0	0
	I can understand some Bidayuh words when people are talking slowly and clearly about themselves, family and activities.	4	6.56
	I can understand the topic of the conversation that is conducted slowly and clearly in Bidayuh.	0	0
	I can understand the main points of everyday conversation that is conducted clearly in a Bidayuh language familiar to me.	10	16.39
	I can understand a lot of what is said but may find it hard to participate effectively in a conversation conducted in Bidayuh.	9	14.75
	I can easily understand conversations conducted in Bidayuh, even on abstract, complex unfamiliar topics spoken at a natural speed.	38	62.30
Ability to speak Bidayuh	I cannot speak Bidayuh at all.	0	0
	I can say a few Bidayuh words.	12	19.67
	I can say simple sentences in Bidayuh to describe people, living or work conditions, daily activities, and likes/dislikes.	0	0
	I can speak Bidayuh quite well to describe something familiar.	15	24.59
	I can use Bidayuh to give clear, detailed descriptions on a wide range of topics I am interested in.	24	39.34
	I can use Bidayuh to give clear, detailed descriptions on complex topics and speak smoothly.	10	16.39

Note: Some totals do not add up to 100 due to rounding off

## 5.2 Attitudes of Bidayuh participants towards Bidayuh language kindergartens

The participants' attitudes towards Bidayuh language kindergartens were generally positive as shown in Table 3.

**Table 3: Attitudes of Bidayuh participants towards Bidayuh language kindergartens (N=61)**

Items	Mean Score
1. Bidayuh language kindergartens should be set up so that children can learn the Bidayuh culture.	4.07
2. Bidayuh language kindergartens should be set up so that Bidayuh children can learn the Bidayuh language.	3.93
3. Bidayuh language kindergartens should be set up so that children can learn good moral values.	3.90
4. Bidayuh language kindergartens should be set up so that Bidayuh children will feel at home when they hear their teachers speaking Bidayuh.	3.71
5. Bidayuh language kindergartens should be set up so that children can have high quality education.	3.39

Note: Their attitudes were measured on a five-point Likert scale: 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, 5 for Strongly Agree. The mid-point is 3, the minimum mean score is 1, and the maximum mean score is 5.

The most favourable reasons for the benefit of the Bidayuh language kindergartens were Bidayuh cultural education (mean score of 4.07 out of 5) followed by Bidayuh language education (mean score of 3.93). In addition, the participants also agreed that Bidayuh children will feel at home when they hear their teachers speaking Bidayuh (mean score of 3.71). The analysis of the Bidayuh participants' open-ended responses confirmed the questionnaire results on the value attached to maintenance and preservation of the Bidayuh language and culture through Bidayuh medium education in kindergartens, as shown in Excerpts (1) and (2):

- (1) Bidayuh language kindergartens should be set up so that children will have the golden opportunity to learn the language so that the Bidayuh language will not be endangered in the future. (P8)
- (2) preserve culture (P21)

These results confirm the widely accepted positive aspect of mother tongue education, that is, it enhances the transmission of heritage language and culture (Benson, 2004) which would develop cultural pride in children (Ball, 2011).

The participants also believed that Bidayuh language kindergartens should be set up so that children could learn good moral values (mean score of 3.90) but not so much for high quality education as this item had the lowest mean score among the five items. The mean score of 3.39 is marginally positive because 41% of the participants disagreed that Bidayuh language kindergartens should be set up for the purpose of providing higher quality education. On the contrary, the Bidayuh participants might think that kindergarten education in standard languages such as English, Malay or Chinese are of better quality. The wish for the Bidayuh children to attend kindergartens that use other languages as the medium of instruction is more widespread than expected. One participant (P6) said that Bidayuh kindergartens should “include English, Malay or Mandarin lesson to cater for the needs to communicate with other community”. In fact, P34 felt that the Bidayuh language should be taught outside of the formal education system, that is, in a Bidayuh language centre. One participant even said that Bidayuh kindergarten was “Not applicable at all” (P25). This echoes the Kenyan rural parents who insisted that their children be taught in English although neither they themselves nor their children could speak or understand English (Waithaka, (2017). This is because they believed it was the only opportunity for their rural children to be exposed to the prestigious language of the globalised world.

The open-ended questionnaire item on reasons for having Bidayuh language kindergartens sparked opinions on the necessity of having Bidayuh as a medium of instruction. Generally, the results indicate that a large number of the Bidayuh participants were not in support of the use of Bidayuh as the medium of instruction. Only one Bidayuh participant (P19) believed that Bidayuh language kindergartens should be “set up in all Bidayuh villages”. Some other Bidayuh participants such as P37 and P58 expressed strong views on the need for the Bidayuh subject to be compulsory but not as a medium of instruction (Excerpts 3 and 4).

- (3) Make Bidayuh language as mandatory like how Iban, Chinese language been taught at Kindy. (P37)
- (4) Compulsory one subject to be taught. (P58)

However, more participants were in favour of Bidayuh being taught as an elective subject in kindergarten, giving parents the option of whether to enrol their children in the Bidayuh class as shown in Excerpt (5) below:

- (5) Can teach Bidayuh language as main alongside English and BM plus Mandarin. Because when they enter primary school BM and English or Mandarin is the main language. Bidayuh language study at young age is good so there will be continuation of use of that language among new Bidayuh generations and hence knowledge of Bidayuh culture. (sic) (P22)

One participant was of the view that the need for Bidayuh class might only be in urban areas where the younger generation may no longer be speaking Bidayuh as a home language. P44 said that:

- (6) Bidayuh language kindergartens will only benefit Bidayuh’s children that live in urban areas and their parents did not taught (sic) them to converse or use Bidayuh at home. For Bidayuh children in rural area, other language medium kindergarten should be continued. (P44)

P44's view is supported by the empirical evidence obtained through the questionnaires (Table 2). Only 45.90% of the 61 participants use Bidayuh as the main language at home, and English seemed to be taken over as the main language of family communication for 32.79% of the participants, many of whom live in urban Kuching rather than in Bidayuh villages.

The Bidayuh participants also highlighted some practical and pedagogical challenges dealing with the curriculum (Excerpt 10).

- (7) The idea is good but it needs to be refined i.e. is there enough materials to support such efforts? What is the syllabus? Which Bidayuh dialects to be used as medium of instruction? Target group? Many more questions. (P20)

The Bidayuh language has a particular problem that does not affect Iban or Semai which has less regional variations. Mutual intelligibility of the four Bidayuh varieties is low. Till now, the Bidayuh language continues to be presented in the four main distinct varieties in the Bidayuh radio programmes which have slots for each variety. The DBNA Bidayuh playschools and kindergartens are run in the four main varieties of Bidayuh which affects pedagogical resources, orthography to be selected and target learners. Related to the distinctiveness of the Bidayuh varieties is the availability of qualified teachers because the teachers need to be native speakers of the Bidayuh varieties. P30 said that "qualified teachers who master Bidayuh language is a must to run the [Bidayuh language kindergarten] programme". The Bidayuh language usage results described earlier (Table 2) shows that fluent and competent speakers of the language is becoming a rarity, and most are likely to be from among the older generation.

## 6. Conclusion

The study showed ambivalent attitudes towards Bidayuh as a medium of instruction for kindergartens among the Bidayuh community in Sarawak, Malaysia. The closed-ended questionnaire items elicited positive attitudes whereas the open-ended item elicited which we consider as more genuine perceptions of the viability of Bidayuh language kindergartens. The participants believed that Bidayuh language kindergartens would provide opportunities for children to learn Bidayuh language and culture, and good moral values. While the Bidayuh participants of the study showed generally good usage of the language and positive attitudes towards Bidayuh kindergartens, they seemed to prefer Bidayuh language to be taught in school for the purpose of language and cultural enrichment rather than a medium of instruction. Some participants were of the view that other languages were more useful for giving their children access to opportunities outside of the Bidayuh community, as well as the means to communicate with other ethnic groups. The Bidayuh participants were aware of the pedagogical challenges, particularly the selection of the Bidayuh variety to use as the medium of instruction, as well as the curriculum, teaching-learning materials and trained teachers. DBNA's endeavour to establish Bidayuh playschools and kindergartens in 2007 could be costly and challenging endeavour in the long term because it is essentially a community-based yet private effort towards introducing the Bidayuh language in education. Ideally, the Bidayuh community should secure governmental support for the implementation of Bidayuh language in education to ensure its sustainability. An area for further investigation is the number of Bidayuh parents in urban and rural areas who would enrol their children in Bidayuh language classes if Bidayuh is offered as a subject in school under the "Pupil's Own Language" (POL) programme. This will identify specific areas where there is adequate demand for the Bidayuh subject, giving the endeavour some focal points to move forward.



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## References

- Abdul Ghani, A. (2015). Revitalizing the indigenous Semai Orang Asli language in Malaysia. *Asia Pacific Journal of Advanced Business and Social Studies* 1(1), 180-185.
- Awopetu, A. V. (2016). Impact of mother tongue on children's learning abilities in early childhood classroom. *Procedia – Social and Behavioral Sciences*, 233, 58-63.
- Bagang, E. (2017, May 16). Madius: Promote Kadazandusun Language based on Bundu Liwan. <http://www.newsabahtimes.com.my/nstweb/fullstory/15694>
- Ball, J. (2010). Enhancing learning of children from diverse language backgrounds: Mother tongue-based bilingual or multilingual education in the early years, UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0021/002122/212270e.pdf>
- Benson, C. (2004). *The importance of mother tongue-based schooling for educational quality. Commissioned study for EFA Global Monitoring Report*. Retrieved from <https://mlephil.wordpress.com/2009/09/26/the-importance-of-mother-tongue-based-schooling-for-educational-quality/>
- Bongarrá, M., & Siam, J. (2017). The Bidayuh language development and preservation project: A review. In M. Bongarrá, M. Arritt, & F. Kayad (Eds.), *Selected Papers of the Bidayuh Language and Development Project (2003-2017)* (pp. 79-94). Kuching, Malaysia: Dayak Bidayuh National Association.
- Coluzzi, P., Riget, R., & Wang, X. (2013). Language vitality among the Bidayuh of Sarawak (East Malaysia). *Oceanic Linguistics*, 52, 375-395. DOI: 10.1353/ol.2013.0019.
- Coluzzi, P., (2017). The vitality of minority languages in Malaysia. *Oceanic Linguistics*, 56(1), 210-225.
- Cummins, J. (2009). Fundamental psycholinguistic and sociological principles underlying educational success for linguistic minority students. In T. SkutnabbKangas, R. Phillipson, A.K. Mohanty & M. Panda (Eds.), *Social justice through multilingual education* (pp. 19-35). Bristol: Multilingual Matters.
- Dealwis, C. (2008). *Language choice among the Dayak Bidayuh undergraduates*. (Unpublished doctoral dissertation). Universiti of Malaya, Malaysia.
- Dealwis, C. (2010, March). *Language choices of educated younger generation of Bidayuh at home*. Paper presented at the 7<sup>th</sup> International Malaysian Studies Conference, Penang, Malaysia.
- Department of Statistics Malaysia. (2021). *Demographic statistics fourth quarter 2020*. [https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=430&bul\\_id=Szk0WjBIWHVTV2V1cGxqQ1hyVlppZz09&menu\\_id=L0pheU43NWJwRWVSZklWdzQ4TlhUT09](https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=430&bul_id=Szk0WjBIWHVTV2V1cGxqQ1hyVlppZz09&menu_id=L0pheU43NWJwRWVSZklWdzQ4TlhUT09)
- Dumatog, R., & Dekker, D. E. (2003, November 6-8). *First language education in Lubuagan, Northern Philippines*. Paper presented at the Conference on Language Development, Language Revitalization and Multilingual Education in Minority Communities in Asia, Bangkok, Thailand.
- Dundon, S. J. (1989). Bidayuh language and dialect. *Sarawak Museum Journal*, 30, 408-409.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (2020). *Ethnologue: Languages of the world* (23<sup>rd</sup> ed.). Dallas, Texas: SIL International. <http://www.ethnologue.com>.

- Joyik, I. P., Siam, S., Tan, G., Bongarrá, M., & Simpson, S. E. (2017). The Bidayuh first language-based multilingual education programme. In M. Bongarrá, M. Arritt, & F. Kayad (Eds.), *Selected Papers of the Bidayuh Language and Development Project (2003-2017)* (pp. 67-78). Kuching, Malaysia: Dayak Bidayuh National Association.
- Kayad, F., Ting, S. H., Arritt, J., & Siam, J. (forthcoming). Perceptions of parents and teachers towards mother tongue-based education: A case study of Bidayuh in Malaysia.
- Kheung, L. C., & Aduce, S. A. Z. (2018). The demographic profile and sustainability growth of the Bidayuh population of Sarawak. *International Journal of Academic Research in Business and Social Sciences*, 8(14), 69–78.
- Noeb, J., & Ridu, R. (2012). Language development in Bidayuh: Past, present, and future. In C. R. Rensch, C. M. Rensch, J. Noeb & R. S. Ridu (Eds.), *The Bidayuh language, yesterday, today, and forever*. Kuching, Malaysia: Dayak Bidayuh National Association. <https://www.sil.org/resources/publications/entry/48010>
- Norahim, N. (2010). *Language choice of Bidayuh graduates in Kuching-Samarahan division* (PhD dissertation). Universiti Malaya, Malaysia. <http://studentsrepo.um.edu.my/id/eprint/3274>
- Norahim, N. (2017). Bidayuh as a threatened language. In A. Omar & N. Norahim (Eds.), *Linguistic minorities: Their existence and identity within larger communities* (pp. 37-60). Kota Samarahan, Malaysia: UNIMAS Publisher.
- Norahim, N. (forthcoming). *Documenting under-resourced languages in Sarawak, Borneo*.
- Omar, A. H. (2014). Processing Malaysian Indigenous Languages: A Focus on Phonology and Grammar. *Open Journal of Modern Linguistics*, 4, 728-738. <http://dx.doi.org/10.4236/ojml.2014.45063>
- Sarawak Government Portal. (2017). *Sarawak population by district, 2017*. <https://data.sarawak.gov.my/home/data/resource/d8336af5-4667-463f-aa61-441edad63d08>
- Siam, J., & Smith, J. (2013, November 6-8). Walking among durians: The Malaysia Bidayuh schools' journey. Paper presented at 4th International Conference on Language and Education, Multilingual Education for All in Asia and the Pacific, Bangkok, Thailand.
- Thomas, W. P., & Collier, V. P. (1997). *School effectiveness for language minority students*. (NCBE Resource Collection Series, No. 9). Washington, DC: National Clearinghouse for English Language Acquisition. <http://www.ncela.gwu.edu/ncbepubs/resource/effectiveness/index.htm>
- Waithaka, E. N. (2017). Choice of the medium of instruction in Kenyan preschools: averting xenocentrism. *Journal of Education and Practice*, 8(9), 210-216
- Walter, S. (2010). *The mother tongue instructional model: In search of insights*. Dallas, Texas: SIL International. [https://www.sil.org/system/files/reapdata/10/90/41/109041987787319837031630587354878698602/SW\\_World\\_Bank\\_powerpoint\\_on\\_MLE.pdf](https://www.sil.org/system/files/reapdata/10/90/41/109041987787319837031630587354878698602/SW_World_Bank_powerpoint_on_MLE.pdf)

# COVID-19 PANDEMIC AND ONLINE LEARNING: THE CHALLENGES OF INSTRUCTORS IN TERTIARY INSTITUTIONS

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**Abstract:** *The COVID-19 pandemic is undoubtedly having an unparalleled global impact on the education system. With the backdrop of this pandemic, governments and educational institutions around the world have launched various policy initiatives to cater to student learning. It has impacted educational activities, and this has resulted in tremendous crisis-response migration of universities with online learning serving as the educational platform. This research will explore into instructors' challenges in E-learning during the pandemic. A semi-structured open-ended questionnaire was designed to get responses from instructors. This was followed by a focus group discussion to explore deeper into instructor challenges which could further inform the future direction of and practice in virtual instruction. A key finding will be that this pandemic was an unavoidable disruption that created challenges to the teaching world. It brought instructors to share and reflect on the challenges faced in order to transform online teaching and learning and making it a positive learning curve for the community.*

**Keywords:** Covid-19, Disruption, E-Learning, Challenges, Innovation.

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## 1. Introduction

The worldwide spread of the COVID-19 pandemic has brought many consequences that has impacted people's well-being especially in education. The teaching and learning process has been affected tremendously and the pandemic demanded educators and learners to change to alternative isolated instruction with minimum adjustment time. In the spring of 2020, school across the world closed in the effort to reduce the transmission of the COVID-19 virus, throwing educational systems into disarray, disrupting the schooling of over 80% of the students worldwide, and upending the lives of teachers and their students (International Labour Organization, 2020; UNESCO, 2020 in Jelińska & Paradowski, 2021). Most of the Governments around the world have briefly closed learning institutions at every level in an endeavour to contain the spread of the COVID-19.

In Malaysia as well, the government as a parcel of the over the nation lockdown has closed all learning institutions, as a result of which, learners amplifying from school-going children to postgraduate understudies, are affected. This has somehow required learning institutions to venture into alternative teaching and learning method to ensure that the situation did not hold the learning process. By forcing all learning institutions to move to online channels, this pandemic has forced instructors to go an extra mile in preparing and delivering online lessons for students. It obviously created challenges that need to be faced by all parties, specifically instructors in order to ensure that the learning process would be a smooth sailing journey for everyone. Online learning is the use of the internet and many other essential tools for the production of educational content, instructional delivery, and program management (Fry, 2001).

## 2. Literature Review

COVID-19 has created pressure on the educational systems from primary to higher education settings. During this period, learners from primary to higher education institutions are shifting from traditional face to face lesson to online learning from the comforts of their homes. Students continue their education through online learning and the model is currently the best alternative as keeping schools open poses a safety risk for students (Angdhiri, R. P., 2020). A learning system supported formalized teaching but with the assistance of electronic resources is known as E-learning. While teaching is often based in or out of the school rooms, the utilization of computers and therefore the Internet forms the main component of E-learning. E-learning also can be termed as a network-enabled transfer of skills and knowledge and therefore the delivery of education is formed to an outsized number of recipients at an equivalent or different time (Chitra & Raj, 2018).

Earlier, it was not accepted wholeheartedly because it was assumed that this technique lacked the human element required in learning. The transition from traditional face to face to online education created a struggle in change and adaptableness among instructors globally over time especially when handling the present millennial generation. Past research has identified key findings in teaching a leading through the pandemic; learning institutions' management reported that several goals will be more important including emergency preparedness, reducing learning gaps, and addressing students' mental health (Hamilton, L. et. al., 2020). Educators and students in learning institutions across the country have faced extensive, exceptional changes to teaching and learning because of the COVID-19 pandemic, which shuttered learning institutions in 2020.

Referring to a research on teaching styles by Alhussain (2012); Ahmed and Mubeen (2013), Krishnan et. al. (2019) and Vijayaratnam et. al. (2020) utilizing the Staffordshire Assessment of teaching styles tool, uncover that most of the respondents charted the all-around flexible and adaptable teaching style (Style 1). Fascinatingly, teachers followed style 1: the all-around flexible and adaptable teaching style disregarding certain factors like teachers' age, mode of teaching, location of institution, subject matter and gender. Anthony et. al. (2019) conducted a quantitative research on Blended Learning Teaching Style in the classroom by applying the Partial Least Squares-Structural Equation modelling (PLS-SEM), the research discovered that Blended Learning permitted lecturers to reflect on their styles of teaching and beliefs. From the students' perspective, they observed that lecturers were swift in giving response to online queries.

An additional semi-structured interview-style study conducted by Douglas et. al. (2020) focusing on the perceptions of the learners' engagement in addition to instructors' perspectives in using Online Discussion Board from the University of Tasmania discovered that online engagement over discussion boards encouraged receptiveness and commitment among learners', it helped in promoting positive learning practices.

The implication of external stimuli on students' learning styles cannot be underestimated. Research on learning styles conducted on more than 1000 university students in Malaysia, Indonesia and China by Sagadevan and John (2019); Lai, Y.L., & Lee, J., (2019; Lee, J. (2019) discovered that majority of the learners are visual learners and this possibly a new shared learning style of the digital natives. Digital generation that has benefited from the development and advancement in the interconnectivity through the internet. The same study furthermore highlighted that students selected social media as the most preferred method of communication for the purpose of academic learning and group discussion; email the least option, supporting the study of Zhang et. al. (2019), Yang et. al. and Lai (2013). Therefore, it is not surprising that digital natives favour informal learning practices compared to a formal one. Another finding from this study is that students procured responsibility of their own learning progress, but with close supervision and inspiration from the instructors. (Sagadevan and John, 2019).

### **Online learning versus F2F learning**

With the rise of the pandemic situation in Malaysia, institutions have switched to online learning. Online learning has a similar function to face-to-face learning in the aspects of attending classes, assignments, and assessments. However, research have seen that online learning differs in relation to the learning pace of the student. A study done in Austria where students felt that learning independently is better of through online learning as compared to face-to-face learning. (Paechter & Maier, 2010). Besides, through the learning management systems (LMS), students find it easier to assess the materials at any given time with proper support.

Furthermore, with online learning, it gives space for introvert speakers to shine out through collaborative online platforms. (Paechter & Maier, 2010). However, some studies do feel that face-to-face learning helps in students social emotional being. (Paechter & Maier, 2010). There were also some studies that showed that students preferred a face-to-face class for certain activities. A study done in Australia where students had preferred doing written activities face-to-face as there are more engagement, conducive classroom space and there is a smooth flow of idea in classroom discussions (Kemp & Grieve, 2014).

### **The real work of a teacher in times of pandemic**

Research findings by Lapada, A et.al ( 2020) ;Moorhouse, B.J. (2020); Moorhouse, B.J. (2020) revealed the many challenges faced by instructors from acquiring the knowledge and skills required in delivering online classes , establishing communication with students via social media for greater engagement, having a stable internet access during class, and encouraging participation and utilization of features in online classes, time management in the conduct of classes and monitoring of responses etc. Interestingly, respondents also agreed that they faced problems managing the stress caused by community quarantine at home and in between online classes demands as well as beating the deadlines and requirements set by the school administrators.



## **Fully online learning theory**

As our world embraces technology, the method instruction is provided to students is changing from face-to-face instruction to online formats. Creating effective interactive learning environments for online courses is vital to the success of students. Online learning instructions is comparatively current format for teaching and as a developing method of teaching it is essential for educators to comprehend the best approaches for crafting learning environments with available technology. Technology can improve or defeat the structure of community learning environments. Social constructivism is a variety of cognitive constructivism that emphasizes the collaborative nature of much learning. Social constructivism was developed by post-revolutionary Soviet psychologist Lev Vygotsky. Social constructivists recognize that learning proceeds in a community setting, the fact that instructors and students interact to create meaning. Constructivists apprehend knowledge is growing at such rapid speeds that it is essential for learners to know effective ways to obtain relevant and applicable information. Transformative learning theory is also tacked in communication, focusing on reflection as a main element. It is compulsory for instructors to integrate these main elements when creating their online courses. Various learning theories have comparable components and can be mixed together to offer the finest online learning environment. Online learning communities should assist students feel more connected to their peers and instructors (Snyder, 2009).

According to the social constructivist theory, learning environments provide chances for students to cultivate meaning by debating, dialoguing and discussing with other learners. Numerous opportunities of social contact and interaction generate meaning from present and prior knowledge, therefore expanding understanding and extending knowledge for the students. Referring to studies conducted by Conole, Dyke, Oliver & Seale, 2004; Neo, 2008; Siemens, 2005; Snyder, 2009, "Learners are actively involved in constructing knowledge of a topic using communication and social interactions with peers". Through affective online learning, social interaction is still available even though students are in remote venues from each other.

Connectivism begins with an individual's knowledge that is structured and applied as needed. The promptness at which information is replicating and becoming outdated has shaped the need for new means of providing instruction. Knowledge is changing from what is known to how to find the information when is needed (Siemens, 2005). This contributes to persistent learning for an individual established on one's ability to find accurate information, to relate it with prior and present information, therefore increase one's knowledge.

## **2.1 Problem Statement**

Although numerous researches conducted on online student centred and constructive teaching practices over the years, research findings that highlights and reveals the challenges faced by instructors in the process of online instruction is rare. Hence, this research will investigate deep into instructors' real experiences in fully online teaching and learning during the pandemic using key findings from past research. A semi-structured open-ended questionnaire is designed to get responses from instructors. This is followed by focus group discussions to investigate deeper into instructor experiences as this could further inform the future direction of and practice in virtual instruction.



### **3. Method**

#### **3.1 Participants**

Thirty participants, consisting of university lecturers teaching undergraduates from institutions of higher learning in Malaysia were selected at random for this research. They had varying teaching experience which cut across different discipline areas.

#### **3.2. Research Method**

A semi structured open-ended questionnaire was designed based on the key findings from past research (Lewis C & Hamid, H, 2006, Bradford, G. & Wyatt, S. (2010) & Rusly et.al 2020). These were then distributed to instructors in various institutions of higher learning. The responses were then analysed for process, meaning, and understanding (Merriam, 2016) of faculty practices. Data analysis consisted of identifying and codifying themes through the use of constant comparative method (Strauss & Corbin, 2014). Once the themes were developed, a focus group discussion was held to understand at a deeper level teacher experiences in the online learning realm. Before the focus group, participants were sent a summary of the research findings and a list of questions that will be covered.

### **4. Results and Discussion**

#### **4.1 Results**

Table 1: Shows the demographic characteristics of the study subjects. As shown in the table, the highest percentage of instructors' years of teaching experience was less than 10 (51.6%); second highest was between 11 to 20 (38.7%) and the lowest percentage was more than 20 (9.7%). Regarding disciplines, almost half of the instructors were teaching the Language (48.4%), 6 were teaching Social Science disciplines (19.4%) and the rest of the instructors were teaching the Math, Science, Engineering and Accounting disciplines (32.4%). Moreover, this table revealed that the nearly equal percentage of instructors had experience in online teaching; instructors with experience (45.2%) and instructors with no experience (54.8%). Concerning platforms used for online learning interactions and activities, the majority of instructors used BlackBoard (54.8%) as learning platform, and (35.5%) of the instructors used MS TEAMS to interact and communicate with students for online learning, and equal percentage (3.2%) of the instructors used WebCt, VLE and Google meet.

## 4.2 Challenges to fostering interaction in synchronous learning

All respondents mentioned about students being passive and not responding to questions in the live synchronous online classes. This lack of participation is evident when students refuse to unmute their microphone or turn on the video. The recurring themes that appear in most comments are ‘passive’ ‘not responsive’ and ‘not attentive’. This was added to the fact that *students were not focusing in class as they had the advantage to watch the recording*. Interestingly, poor communication skills were singled out by some respondents as the cause of lack of participation. A respondent summed up her frustration as follows: ‘*poor communication skills leads to a lack of motivation from students which leads to a lack of courage to speak and the lack of ability to ask questions*. Most instructors attributed this challenge to ‘*not knowing students’ background and knowledge level*’. A similar scenario was seen by teachers in a University in Hamburg, where it was difficult to know whether students had problems as they were silent all the time (Kuladinithi et.al, 2020). In contrast, students were seen to be actively participating in the online activities designed by the lecturers in the asynchronous classes. This has caused stress for lecturers as they were ‘*running out of ideas to maintain active online teaching mode*’.

## 4.3 Student Presence and Attention Span

Interestingly all respondents agreed that the greatest challenge was the ‘difficulty in maintaining enthusiasm’ amongst students even with using tools such as “Padlet”, “Kahoot” to conduct tasks and quizzes”. To sustain motivation, some resorted to “*asking question regularly, randomly call out names, online peer discussions and preparing feedback prompts*”. As per one respondent, “*you do not know if they are with you or listening to you*” The inability to ‘not know and see their facial reaction’ added to instructors’ frustration in maintaining enthusiasm in class. Instructors understood and were sensitive of students’ ‘lack of confidence to follow the lesson and raise issues in class’. Another challenge was students’ short attention span and their reluctance to turn on their video cameras. This aligns with Rasmitalida et.al (2020) research findings on students being enthusiastic at the start, but this enthusiasm decreased a month or two into the online class. Focus group: The general frustration among instructors was that not all students were responsive and the silence or ‘no communication’ posed a challenge for instructors to engage in real discussions. They agreed that this lack of participation could be attributed to students’ low confidence as evidence in a research done in a London University by Geraniou & Crisan (2019) and also students not knowing each other well as they would in a face to face setting.

#### **4.4 Challenges in facilitating learning**

##### **4.4.1 Student interaction and engagement**

20 of the respondents mentioned facing difficulties with low interactions and engagements from students to share and respond to the activities conducted. The focus group revealed firstly, the challenge on students prefer face to face interactions and they were too shy to turn on their camera for online interactions which many a time resulted in spending extra time to convince students to share and respond (Paechter & Maier, 2010). Secondly, the instructors revealed that learners tend to disregard active interactions in a big size class. Students tend to ignore the instructor and took longer time to respond to the questions or prompts shared during online session.

##### **4.4.2 Technical / connectivity limitation**

Some respondents (11 instructors) recorded technical / connectivity limitation as a challenge in facilitating learning with learners during online session. One of the respondents shared having connectivity issues during heavy rainfall and unavailability of technical support during emergency situation. The issues caused difficulties for instructors to facilitate effective online learning 'as with unstable internet connection, students coming in and out distorted ongoing discussions. As mentioned by Mercado (2008) that the transition from traditional to e-Learning requires that commitment is available from all levels especially the administration; it is to address possible limitations in resource and conflicting perspectives in e-Learning and eliminate constraints.

#### **4.4 Challenges to giving feedback**

##### **4.4.1 Student commitment**

10 of the respondents mentioned facing difficulties with low commitments from students to reflect and react to the feedback shared. The focus group revealed firstly, the challenge on students not understanding some of the feedback due to unclear messages which many a time resulted in assumptions and misunderstandings and this was echoed by research done by Hardavella, Aamli-Gagnat, Saad et.al. (2017). Secondly, the instructors revealed that learners tend to ignore feedback shared and more importantly some did not work on the feedback to make the necessary improvements. More frustration was students not taking their lessons seriously and instructors not knowing what they were up to behind the screen.

##### **4.4.2 Time constraint**

Some respondents listed time constraint as a challenge in sharing timely feedback with learners. One of them shared the need "to work around the clock" to feedback on learner submissions. Interestingly all respondents in this category were from the English discipline which involved the grading of essays especially instructors' added attention to identify ideas and points presented by learners, as proven by Cavanaugh & Song (2014) that providing feedback to students on their writing represents the most important task of an essay. The focus group revealed that most instructors preferred to personalize their feedback on top of the marking rubrics provided. The marking rubrics allowed students to check how they will be graded, and the personalized feedback allowed students to understand and reflect on their learning and make improvements for the next submission.

Table 1: Demographic characteristics of the study subjects (n=31)

Demographic characteristics	Respondents - Instructors (n=31)	
	NO.	%
Years of teaching experience:		
< 10	16	51.6
11:20	12	38.7
> 20	3	9.7
Discipline:		
English	15	48.4
Social sciences	6	19.4
Business/Accounting	3	9.7
Sciences	3	9.7
Math	2	6.5
Engineering / IT	2	6.5
Experience in online teaching:		
YES	14	45.2
NO	17	54.8
Years of experience in online teaching:		
<1	2	14.3
2:4	10	71.4
>5	2	14.3
Platform:		
BlackBoard	17	54.8
WebCT	1	3.2
VLE	1	3.2
Google meet	1	3.2
MS TEAMS	11	35.5

## 5. Conclusion

The COVID-19 pandemic was an unintentional and unavoidable disruption that brought the teaching community together to think of novel ways of using and coping with technology to transform online teaching and learning making it an effective learning alternative for the community. In light of the study findings, it can be concluded that all respondents faced challenges in managing and coping with online teaching and learning during the pandemic. Various platforms used by different institutions have taken over the teaching and learning process from the traditional face to face to fully online method. The common challenges faced by instructors were fostering interaction in synchronous learning, student presence and attention span, facilitating learning and giving feedback. There was a clear connection between information gathered from the respondents and the focus group.

The findings of the study, highlighted challenges and frustrations faced and managed by the instructors in making online learning as effective as the traditional face to face teaching method. Lesson learnt is that instructors must be open to assessing their teaching styles and students' learning styles, and online course content for strategies that can prevent communication, cognitive and even emotional disconnect between instructor and learner.

Finally, there was no statistically significant difference between the instructor's demographic variables, and the challenges and frustrations faced in conducting online teaching and learning activities. The findings also disclose that the instructors attentive use of creative strategies within the constructivist model which was pushed by the dire need of learning continuity in the education sector during the COVID 19-pandemic has successfully managed the challenges and frustrations faced. As aptly put by a respondent, 'the main challenge for the instructors 'was keeping students engaged and reassuring them that we are doing the best for them' knowing very well students were experiencing 'adaptability struggles with this new norm of learning'.

Future research could probe into innovative strategies used s active learning strategies by instructors for online learning to break the silence in the online classroom. Also, the collaboration among instructors in institutions of higher learning to create communities of practice to take fully online teaching and learning to greater heights.

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## References

- Ahmed, S. D. H., & Mubeen, S. M. (2013). Exploring teaching style in an undergraduate medical college following traditional curriculum in Pakistan. *JPMa. The Journal of the Pakistan Medical Association*, 63(11), 1409-1414. Retrieved from <https://www.jpma.org.pk/PdfDownload/5192>
- Alhussain, A. M. (2012). Identifying Teaching Style: The Case of Saudi College English Language and Literature Teachers. *English Language Teaching*, 5(8), 122-129. Retrieved from <http://dx.doi.org/10.5539/elt.v5n8p122>
- Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies*, 7(2), 90-109. Retrieved from <http://dx.doi.org/10.29333/ejecs/388>
- Angdhiri, R. P. (2020). Challenges of home learning during a pandemic through the eyes of a student. *Jakarta POst, Jakarta*.
- Anthony, B., Kamaludin, A., Romli, A. *et al.* (2019) Exploring the role of blended learning for teaching and learning effectiveness in institutions of higher learning: An empirical investigation. *Educ Inf Technol*, 24, 3433-3466. Retrieved from <https://doi.org/10.1007/s10639-019-09941-z>
- Bradford, G. & Wyatt, S. (2010). Online learning and student satisfaction: Academic standing, ethnicity, and their influence on facilitated learning, engagement, and information fluency. *Internet and Higher Education*, 13(3), 108-114. Retrieved from <https://doi.org/10.1016/j.iheduc.2010.02.005>
- Cavanaugh, A. J., & Song, L. (2014). Audio Feedback versus Written Feedback: Instructors' and Students' Perspectives. *MERLOT Journal of Online Learning and Teaching*. 10(1),122. Retrieved from [https://jolt.merlot.org/vol10no1/cavanaugh\\_0314.pdf](https://jolt.merlot.org/vol10no1/cavanaugh_0314.pdf)
- Chitra, A. P., & Raj, M. A. (2018). E-learning. *Journal of Applied and Advanced Research*, 3(S1),11-13. Retrieved from <http://dx.doi.org/10.21839/jaar.2018.v3iS1.158>

- Conole, G., Dyke, M., Oliver, M., & Seale, J., (2004). Mapping pedagogy and tools for effective learning design. *Computers & Education*, 43(1/2), 17-33. Retrieved from <https://doi.org/10.1016/j.compedu.2003.12.018>
- Douglas, T., James, A., Earwaker, L., Mather, C., & Murray, S. (2020). Online Discussion Boards: Improving Practice and Student Engagement by Harnessing Facilitator Perceptions. *Journal of University Teaching and Learning Practice*, 17(3), 7. Retrieved from <http://ro.uow.edu.au/jutlp>
- Fry, K. (2001). E-learning markets and providers: some issues and prospects. *Education+ Training*. Retrieved from <https://doi.org/10.1108/EUM0000000005484>
- Genone, J. (2020, Apr 23). The hard part of online teaching is not the “online” part. *Medium*. Retrieved from <https://medium.com/edtechx360/the-hard-part-of-online-teaching-is-not-the-online-part-65e556a6da3a>
- Geraniou, E., & Crisan, C. (2019, February). University students’ engagement with an asynchronous online course on digital technologies for mathematical learning. Freudenthal Group, Utrecht University and ERME. Retrieved from <https://discovery.ucl.ac.uk/id/eprint/10077723/>
- Jelinska & Paradowski (2021). Teachers’ perception of student coping with emergency remote instruction during the COVID-19 pandemic: The relative impact of educator demographics and professional adaptation and adjustment. *Frontiers in Psychology*. Retrieved from [https://www.academia.edu/44813797/Teachers\\_perception\\_of\\_student\\_coping\\_with\\_emergency\\_remote\\_instruction\\_during\\_the\\_COVID\\_19\\_pandemic\\_The\\_relative\\_impact\\_of\\_educator\\_demographics\\_and\\_professional\\_adaptation\\_and\\_adjustment](https://www.academia.edu/44813797/Teachers_perception_of_student_coping_with_emergency_remote_instruction_during_the_COVID_19_pandemic_The_relative_impact_of_educator_demographics_and_professional_adaptation_and_adjustment).
- Kemp, N., & Grieve, R. (2014). Face-to-face or face-to-screen? Undergraduates' opinions and test performance in classroom vs. online learning. *Frontiers in psychology*, 5, 1278. Retrieved from <https://www.frontiersin.org/articles/10.3389/fpsyg.2014.01278/full>
- Kuladinithi, K., Fisser, L., Fuger, K., Stolpmann, D., Vatandas, Z., Timm-Giel, A., & Dürkop, A. (2020, August). Online teaching of project-based learning courses: issues, challenges and outcomes. In *ACM SIGCOMM 2020*. ACM Special Interest Group on Data Communication (SIGCOMM). Retrieved from <https://doi.org/10.15480%2F882.2863>
- Krishnan, S., Vijayaratnam, P., & John, S. (2020). An Investigation on How Mode of Teaching, Location of Educational Institution and Teacher’s Age Affect Teaching Style. *International Journal of Advanced Research in Education and Society*, 2(1), 107-115. Retrieved from <http://myjms.mohe.gov.my/index.php/ijares/article/download/9145/4129>
- Lapada, A, Robledo, DA, Miguel F. Alam, Z.F. (2020). Teachers’ Covid-19 Awareness, Distance Learning Education Experiences and Perceptions towards Institutional Readiness and Challenges. Retrieved from <https://doi.org/10.26803/ijlter.19.6.8>
- Lai, Y. L., & Lee, J. (2019). Trend of Internet Usage and Learning Style of Digital Natives. *PUPIL: International Journal of Teaching, Education and Learning*, 3(2). Retrieved from <https://doi.org/10.20319/pijtel.2019.32.94102>
- Lee, J. (2019). Learning Preferences and Experiences in Different Environments. *Universal Journal of Educational Research*, 7(9): 1933-1937. Retrieved from <https://doi.org/10.13189/ujer.2019.070912>



- Lewis, C. C., & Abdul-Hamid, H. (2006). Implementing effective online teaching practices: Voices of exemplary faculty. *Innovative Higher Education*, 31(2), 83-98. Retrieved from <https://doi.org/10.1007/s10755-006-9010-z>
- Mercado, C. (2008). Readiness assessment tool for an e-learning environment implementation. *Special Issue of the International Journal of the Computer, the Internet and Management*, 16, 18-11. Retrieved from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.588.5146&rep=rep1&type=pdf>
- Merriam, S.B. (2016). *Qualitative research and case study application in education* (4<sup>th</sup> ed.). San Francisco, CA: Jossey-Bass.
- Moorhouse, B.J. (2020). Adaptations to a face-to-face initial teacher education course 'forced' online due to the COVID-19 pandemic. *Journal of Education for Teaching*. Retrieved from <https://doi.org/10.1080/02607476.2020.1755205>
- Neo, M. (2005). Web-enhanced learning: Engaging students in constructivist learning. *Campus-Wide Information Systems*, 22(1), 4-14. Retrieved from <https://doi.org/10.1108/10650740510574375>
- Paechter, M., & Maier, B. (2010). Online or face-to-face? Students' experiences and preferences in e-learning. *The internet and higher education*, 13(4), 292-297. Retrieved from <https://doi.org/10.1016/j.iheduc.2010.09.004>
- Rusly, N. H. M., Abd Aziz, A., & Ngadiron, S. A CASE STUDY ON THE APPLICATION OF WEB-BASED BLENDED LEARNING. *Management*, 5(17), 20-27. Retrieved from <http://www.jistm.com/PDF/JISTM-2020-17-06-03.pdf>
- Sagadavan, R & John, S (2019). Gap Refinement of Teaching and Learning Practice in Digital Era Via Informal Guidance. *International Journal of Engineering and Advanced Technology (IJEAT)*. 8(35)
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1), 3-10. Retrieved from [http://www.itdl.org/Journal/Jan\\_05/article01.htm](http://www.itdl.org/Journal/Jan_05/article01.htm).
- Strauss, A., & Corbin, J. (2014) *Basics of qualitative research* (4<sup>th</sup> ed.). Newbury Park, CA: Sage.
- Snyder, M. (2009). Instructional-design theory to guide the creation of online learning communities for adults. *TechTrends: Linking Research & Practice to Improve Learning*, 53(1), 45-57. Retrieved from <https://doi.org/10.1007/s11528-009-0237-2>.
- Tyng, C. M., Amin, H. U., Saad, M. N., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in psychology*, 8, 1454. Retrieved from [https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01454/full?source=post\\_page](https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01454/full?source=post_page)
- Vijayaratham, P, John, S & Krishnan, S (2020) An Investigation on how Gender Qualifications, Years of Teaching Service, Program Level, Type of Program Taught and Academic Rank Affect Teaching Style. [Paper Presentation] Proceedings of ISERD International Conference, New York, USA, 16th – 17th July, 2020. International Conference, Institute for Technology and Research (ITRESEARCH)
- Zhang, L., Wu, Y., Qian, X., Lv, P., & Zhou, X. (2019). Analysis on WeChat-Based Blended Learning in Network Marketing Course. *International Journal of Emerging Technologies in Learning (iJET)*, 14(17), 86-101. Retrieved from <https://doi.org/10.3991/ijet.v14i17.11277>

# GENDER INEQUALITY, CONFLICT, AND SEXISM WITHIN THE FAMILY INSTITUTION: A PILOT STUDY ON UNIVERSITY STUDENTS' EXPERIENCE

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**Abstract:** *This paper examined the incidence of gender inequality, conflict, and sexism within the family institution of students from a local private university, Universiti Tunku Abdul Rahman (UTAR) in its Kampar Campus, Perak, Malaysia. Forty (40) respondents were surveyed in this preliminary study. Results showed that traditional gender roles remained dominant in labour division within their respective families or households. For example, an overwhelming majority of the respondents stated that 'mother' did most of the housework and that their duties in the family were mainly divided along gender lines; with male family members mainly repairing, plumbing, and washing cars etc... while the female family members were focused on laundry, cleaning, and cooking. However, on a positive note, this pilot study found high reported incidence of gender equality practice in terms of pocket money given to the respondents and their opposite-gender siblings. Shared financial control in the household between 'father' and 'mother' or solely by women were evident too. Sexism was also not strongly exhibited by the respondents with the majority believing and agreeing that both genders are equal. Finally, this paper contributes to the existing literature by giving additional information about closing the gender gap and discusses labour division along gender lines within the family institution in Malaysia.*

**Keywords:** Gender inequality, Sexism, Traditional gender roles, and Family institution.

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## 1. Introduction

The family institution is an important building block of society and many of us learned our first, most basic knowledge about the world and moral values within the family. Moreover, the family institution, whether nuclear or extended, plays vital roles as the primary agent of socialization when it comes to children acquiring a healthy gender identity and developing a good personality via secure attachment to parents or caregivers. This Attachment Theory was developed by John Bowlby and later was greatly expanded by Mary Ainsworth (Cherry, 2019). Secure attachment is considered as essential because it is thought to form a protective factor that can prevent a child from turning towards violent criminality in adulthood (Meloy, 2003; Criminology Wiki, n.d.).

Moreover, early secure attachments help children develop a good self-esteem and an ability to self-reveal to others. These children also tend to be more independent, have better grades in school, form stronger social ties with others, and experience less mental health issues like depression and anxiety (Cherry, 2019). Hence, this showed the importance of the family institution as the primary agent of socialization and why its functions are manifold as suggested by the Structural-Functional paradigm, one of Sociology's three major paradigms (Macionis, 2015).

However, if one were to use Feminism and the Social-Conflict paradigm to view the family institution, it revealed a very different picture of this basic building block of society. The family, as the primary agent of socialization, is viewed as perpetuating inequality (class, gender, and race) and women have no choice but to perform 'the second shift' (Macionis, 2015), i.e., household chores which they are mostly responsible for despite having worked the whole day at the office. Feminism views the family institution as oppressing women and taking advantage of their unpaid labour at home (Macionis, 2015).

In a family unit, each member has multiple roles to play, and often, due to patriarchy and tradition, they perform only traditional gender roles which form part of the hidden family structure. Moreover, the traditional gender roles are complementary in nature, like bread and butter, and is an efficient way to organize a family as viewed by the Structural-Functional paradigm. As a result of such reciprocity, traditions have morphed into sexism. For example, it is expected of the daughter instead of the son to do the dishes and expected of the son instead of the daughter to help trim the garden grass. While such gender-based labour division is efficient, it unfortunately also engenders stereotypes, discrimination and cause a kind of 'learned helplessness' in both boys and girls within the family. For example, Asian families even have some traditions to chase the male members out of the kitchen as "they do not belong there". So, boys learned from young that it's okay not to contribute to household chores and girls also learned that it's okay to depend on men to repair things etc...

In this paper, 'gender inequality' is defined as unequal treatment or unequal access to resources between men and women. This inequality sometimes occurs naturally due to biological or psychological differences but is also due to cultural norms (Wikipedia, 2021). Meanwhile, 'sexism' is defined as "prejudice or discrimination based on sex or gender" (Masequesmay, 2020). It can also be defined as "the belief that one sex or gender is superior to the other" (Masequesmay, 2020). Finally, 'conflict' means disagreement and clashes which affect relationships within the family institution.

## 2. Literature Review

Nikiforidis et. al. (2017) found that despite parental claims of treating all their children equally, their research discovered that parental claims and parental spending were always contradictory. They accurately predicted that mothers and fathers preferred or favoured the child who shared the same sex/gender as themselves. Their findings were true for parents in both the U.S. and India. Pabilonia and Ward-Batts (2007) found that Asian fathers in the U.S. worked fewer hours relative to white fathers if they have a son instead of a daughter, which the authors interpret as son preference.

Moreover, a consistent finding in the literature is that fathers spent more of their non-work hours with sons compared to daughters (Yeung et al., 2001; Lundberg et al., 2006; Mammen, 2008; Price 2008). Mammen (2008) observed that siblings benefit by having brothers since fathers spend approximately 23 more minutes in a two-child family with at least one son, relative to two daughters. However, the increased time spent with daughters comes from an increase in watching television together and therefore may be of limited value. Lundberg et al. (2006) suggested that if the increased paternal time with sons stemmed from sons requiring more parental time, then mothers would also spend more time with their sons, and not daughters. However, Lundberg et al. found the opposite to be true; single mothers with only one child spend more time with daughters than sons.

In addition to the empirical evidence on parental time, Lhila and Simon (2008) found no difference in prenatal care by gender for U.S. parents who chose to go to full term, including for Indian and Chinese immigrants. However, time diaries of older children suggested that household chores are more likely to be done by daughters, and that girls and boys are more likely to do chores that fit in traditional roles (e.g., cooking and cleaning for girls as opposed to yard work) (Gager et al., 2009; Bianchi & Robinson, 1997).

Closer to home, Hirschman (2016) found that women in pre-colonial Southeast Asia enjoyed a relatively high status in a patriarchal system. He also argued that the early Malay people's family structure was more egalitarian and did not follow the typical patriarchal patterns such as son preference known to be very common in East and South Asian societies. Hirschman (2016) cited Anthony Reid, a renowned historian, who wrote that women in the sixteenth and seventeenth century Southeast Asia enjoyed relative autonomy and economic importance and that their status "...probably was higher than in any part of the world".

According to Francis (2020), every woman should be her own chief financial officer. Women often faced transitions such as marriage, divorce, starting a new job, motherhood, or widowhood etc... At each of these stages, financial needs could be different, and women face obstacles and misconceptions. She offered five tips for women to enjoy financial security, namely, using a budget, having an emergency fund, be her own financial planner, don't wait to invest, and to save money.

## 2.1 Problem Statement

This pilot study investigates the incidence of gender inequality, conflict, and sexism within the family institution of students from UTAR, Kampar Campus. Firstly, this paper explores respondents' beliefs in gender inequality (e.g., which gender is superior?). Believing in gender equality influences the family's decisions on children's household chores assignments, education directions and financial support. Kohei (2011), in his study of four Southeast Asian countries, reported that women were more supportive of gender equality.

Secondly, gender inequality, such as unequal household chores performed by male and female family members is a common issue not only in Malaysia but also in other parts of Asia and the West (Armstrong, 2020; Brenan, 2020; Yiswaree Palansamy, 2020; Institute of Epidemiology & Healthcare, 2019; Nippon.com, 2019; Oxfam, 2019; Bryan & Sevilla Sanz, 2008, as cited in Browne, 2013).

Thirdly, this paper also examines financial control in the respondents' households. The question will provide a glimpse into the family structure in terms of gender equality. This is because gender beliefs affect behaviours, and finances are often a great source of conflict between couples (McWhinney, 2020).

### 3. Method

This paper had used a quantitative research method. The second to the sixth authors had collected these data for their assignment entitled 'Gender Discrimination in the Family Institution' during their *Introduction to Sociology* course in their January 2020 trimester.

#### 3.1 Materials

The online survey, consisting of 23 questions, was created in a Google Form format, and disseminated among UTAR students via WhatsApp. Seven questions relevant to the themes of this study are listed here:

Theme #1: Beliefs in gender inequality

- 1) Which gender do you think are more superior?

Theme #2: Gender inequality

- 2) Do you experience gender discrimination within your family?
- 3) Who does most of the household chores in your family?
- 4) Give an example of the household chores you do in your family?
- 5) How many hours do you spend doing household chores per week?

Theme #3: Financial control in families

- 6) Do you receive the same amount of pocket money as your siblings of opposite gender?
- 7) Who controls the family finances in your family?

##### 3.1.1 Sample

Forty students from UTAR, Kampar Campus, responded to the survey. The ratio of male and female respondents was, coincidentally, evenly split, 20:20 (50%:50%). Thirty-three (82.5%) respondents were Chinese Malaysians, five (12.5%) Indian Malaysians (including a Punjabi), and a (2.5%) Malay Malaysian. Only one (2.5%) respondent was a foreigner from Pakistan.

##### 3.1.2 Site

The research took place in UTAR (Kampar Campus), Perak, Malaysia.

##### 3.1.3 Procedures

The data collection was via convenience sampling, and the sample size collected was constrained by time factor, in accordance with the university's teaching-and-learning trimester of 14 weeks.



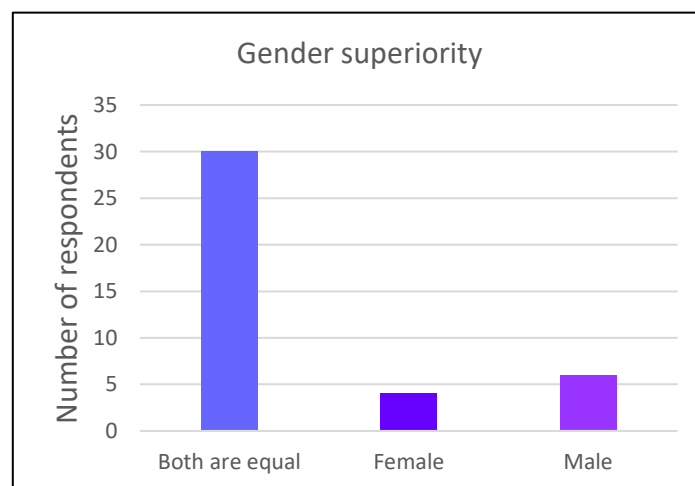
### 3.2 Data Analysis

The data was analysed using simple math tabulation in percentages and numbers. Only questions that were relevant to the themes of this study are reported.

### 4. Results and Discussion

Question 1. When asked which gender they think has more superiority, three in four (N=30, 75%) respondents have transcended sexism (see Figure 1). Ten (25%) respondents still think that their own gender is the more superior one compared to the others. Further probing, such as interviews, would have yielded more information on why they had agreed to the concept of gender equality. Could it be that a new generation of Zoomers or Generation Z, who have ready access to the “global” culture via social media are becoming more gender sensitive than the older generations?

On the other hand, the authors could not help but wonder if these responses were mere social desirability bias? Numerous studies (Larson, 2018; Crowne & Marlowe, 1960; Dodou & De Winter, 2014) found serious social desirability bias in survey responses. Future studies should address the issue by using some of the techniques suggested by Sheperis (2021) or the subliminal cues technique (Prasad & Mishra, 2019) to indirectly obtain this information.



**Figure 1: Respondents' View on Gender Superiority**

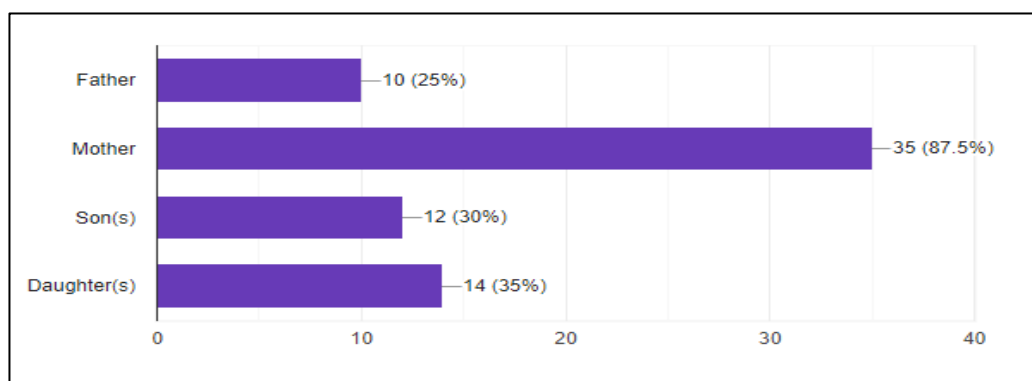
Question 2. A majority (N=34, 85%) of the respondents reported that they have not experienced any gender discrimination within their families. Only a small number of the respondents (N=6, 15%) admitted that they had experienced gender inequality, conflict, and sexism. This could be due to increased awareness of gender equality practices among modern, Generation X (henceforth, spelt as Gen X) parents.

There are three possible reasons for such gender equality practices by Gen X parents: (a) Gen X parents' own early bitter experience of being discriminated against by their Baby Boomers parents which they hated and vowed not to repeat with their own children, (b) their household's continued prosperity, and (c) Gen X's higher level of educational attainment. Research had shown that (and I quote verbatim): “Education is positively associated with attitudes favouring gender equality in Egypt” (Yount, 2005, as cited in van de Vijver, 2007). According to Duflo (2012), and I quote verbatim: “Reducing poverty, it seems, even without targeting women, will disproportionately help women” (p. 1056).



For the minority of respondents who had experienced discrimination within their own families, a respondent commented that females are second class citizens who had to do housework and that men think they are weak. Another respondent mentioned that her grandfather kept telling her that there is no need to study so much because girls need to stay at home and take care of the family in the future. Finally, one more female respondent's family does not prioritize girls furthering their studies. From these three female respondents, we can infer that a small number of families still do not want girls to pursue education.

Question 3. From Figure 2, thirty-five (87.5%) respondents reported that women and 'mother' did most of the household chores. This means that the traditional gender roles are still commonly practised within the respondents' families. What is not known in the survey result is whether 'mother' comprised working women doing the 'second shift' (Macionis, 2015) or just full-time homemakers. A follow-up research will yield more information on this.



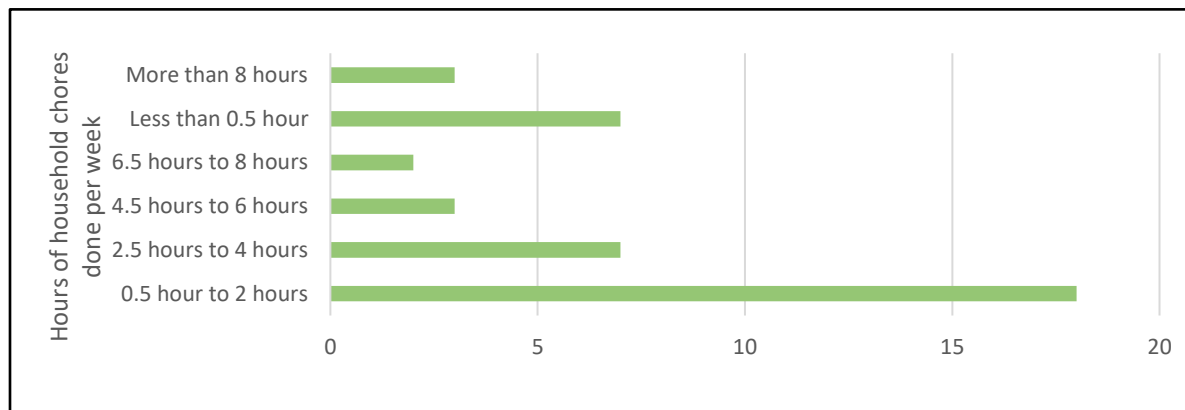
**Figure 2: Mother is Mainly Responsible for Household Chores**

Conversely, twenty-two (55%) men, i.e., father and son(s) were reported having helped in household chores as shown in Figure 2. So, even though household chores are still gendered, they may change gradually in the future. Functionalism would view this kind of labour division along gender lines as an efficient way of organizing a family, any family. However, feminists and the Social-Conflict paradigm view such arrangements as power over women (i.e., oppression) and 'domestic slavery' (Macionis, 2015).

Married women doing more household chores is a common issue even in the West and other parts of Asia. For example, statistics in the U.K. showed similar incidence whereby women spent more than 160 minutes per day doing the 'second shift', i.e., household chores after work (Bryan & Sevilla Sanz, 2008, as cited in Browne, 2013). In contrast, men were shown to do less than 100 minutes per day of household chores after work (Bryan & Sevilla Sanz, 2008, as cited in Browne, 2013). Moreover, women in the U.K. also spent more minutes per day doing household chores *before* work compared to men (Bryan & Sevilla Sanz, 2008, as cited in Browne, 2013). In Spain, its National Institute of Statistics found that women spent double the time doing unpaid household chores as men in 2018 (Cerrato & Cifre, 2018). Also, Cerrato and Cifre (2018) found that the greater involvement of women in household chores and the greater family-to-work conflict that they experienced may lead to increased marital conflict with their husband.

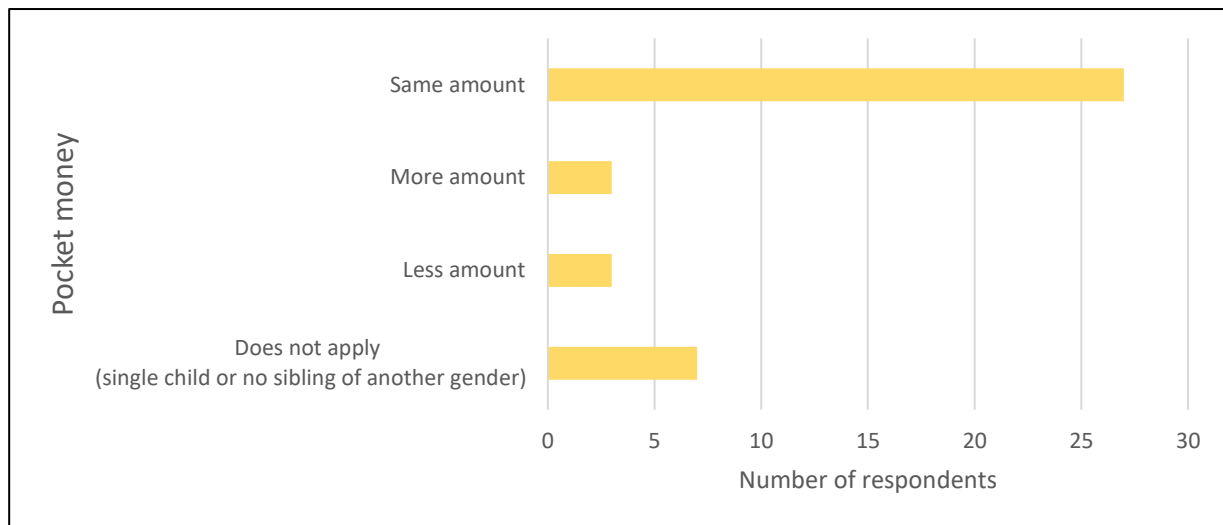
Question 4. On the other hand, when asked how many hours they spend doing household chores, 18 respondents (45%) reported that they do only 30 minutes to 2 hours per week (see Figure 3). This showed that they do not do much household work and most probably the chores in their family were done by their mothers rather than themselves. Moreover, as students, they probably also spent a lot of their time completing their coursework, studying, and relaxing.

Question 5. On the type of household chores performed by males and females in their respective families, it's found that 28 (70%) respondents' male family members wash the family cars and do plumbing/gardening/repair work. This is typically a male's gender role and duty. Only five (12.5%) male family members cared for a younger sibling/baby which is a traditional female role. This showed that there is less incidence of changing gender roles. The same goes for the women where the typical female roles of cooking, cleaning/sweeping/mopping, and laundry/ironing clothes garnered a high 35 (87.5%) responses respectively. Only very few females spent time doing plumbing/gardening/repair work (N=7, 17.5%) and washing their family car(s) (N=6, 15%).



**Figure 3: Household Chores Done Per Week by Respondents**

Question 6. From the financial aspect, each respondent was asked about the amount of allowance they received as compared to their sibling of another sex/gender. The result (Figure 4) showed that over half of them (N=27, 67.5%) received the same amount of pocket money. However, there were six (15%) respondents who received more amount or less amount compared to their sibling of another sex/gender. This showed that many families have gender equality practices despite a small number of parents still discriminating their son(s) and daughter(s) and tended to favour one over the other.



**Figure 4: Amount of Pocket Money Received by Respondents**

In contrast, over in the U.K., numerous statistics from 2016 to 2020 showed boys getting more pocket money than girls (BBC News, 2016; Osborne, 2016; Weale, 2017; Chipakupaku, 2019; gohenry, 2020). Nonetheless, in a study conducted in 2018 by the U.K. Halifax Pocket Money Survey, girls were reported to have more pocket money than boys “for the first time in a decade” (The Money Advice Service, n.d.; Peachey, 2019).

Question 7. This paper also found that while nearly half (N=17, 42.5%) of the respondents said that ‘father’ was the one controlling the family’s finances, more than one-third (N=15, 37.5%) reported that both ‘father’ and ‘mother’ control the family’s finances. Only eight (20%) respondents reported that ‘mother’ controlled the family’s finances. This showed that in some families, there is mutual financial control where no one is more superior to the other. This also showed the changing role of women, whereby they are no longer confined to their homes but also worked outside. On the other hand, the authors wonder if fathers controlling the family’s finances are the sole breadwinners.

Several possible reasons explained why women are controlling the family’s finances (above), namely, single motherhood or gender equity practices or the families abiding by traditional values whereby women are given the authority to manage their families’ finances or it could be a modern shift in values which embrace gender equity. In contrast, the 2016 Women Financial Management Report in China found that “60 percent of Chinese women control family finances” (Wu, 2016). Home is where ‘mother’ rules as an ancient Chinese saying goes. This shift in financial control from men to women in China and elsewhere showed that the pendulum had probably swung back, favouring women, as their ability to manage their family’s finances improved due to more years of schooling, and improved financial literacy. Moreover, women’s affluence is also growing (The Economist, 2018). Nonetheless, despite the progress made so far, a 2013 OECD report still found that women have generally displayed less confidence and poorer financial literacy than men (Hung, Yoong & Brown, 2013). Since these data are about eight years old, there could have been some changes by now if the latest data are made available for viewing.

## 5. Conclusion

From the results and discussion, this study found some gender equality practices despite small pockets of gender inequality, conflict, and sexism within the family institution. For example, a majority view both genders as equal; over half of the respondents had received the same amount of pocket money as their sibling of another sex/gender; and family finances are managed equally or by women. This showed progress in gender equity. Only household chores remained divided along traditional gender roles.

Despite much progress made towards gender equity, married women are still shackled by the burden of doing most of the household chores. However, with this increased awareness, change and improvements are always possible in the future.

The limitations of this study are that the findings cannot be generalized to the entire population and therefore, more research is needed to determine how widespread gender equality practices and gender discriminatory practices exist within the family institution in Malaysia. Also, the number of respondents, both among Chinese Malaysians and other ethnic groups, should be increased to reflect multi-racial Malaysia.

As Malaysia continues to urbanize, globalize and westernize, and as it becomes the educational hub to go to in Southeast Asia, gender equality practices will be one way to ensure its continued prosperity and growth. This is because the empowerment of women has many wide-ranging social benefits (Duflo, 2012).

Finally, this paper has contributed to the existing literature on narrowing the gender gap in Malaysia and provided a peek into gender equality practices within the family institution. Future studies may explore the pros and cons of labour division along gender lines in the context of Asian cultures.

## 6. Acknowledgement

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## References

- Armstrong, M. (2020, February 14). The UK's Housework Gender Roles. *Statista*. Retrieved from  
• Chart: The UK's housework gender roles | Statista
- BBC News. (2016, June 3). Pocket Money: Boys Get 13% More than Girls, Survey Finds. Retrieved from Pocket money: Boys get 13% more than girls, survey finds - BBC News
- Barford, A., Dorling, D., Smith, G.D. & Shaw, M. (2006). Life Expectancy: Women Now on Top Everywhere. *BMJ*, 332, 808. Retrieved from dannydorling\_publication\_id1824.pdf
- Bianchi, S. & Robinson, J. (1997). What Did You Do Today? Children's Use of Time, Family Composition, and the Acquisition of Social Capital. *Journal of Marriage and Family*, 59, 332-334.
- Brenan, M. (2020, January 29). Women Still Handle Main Household Tasks in U.S. *Gallup*. Retrieved from Women Still Handle Main Household Tasks in U.S. (gallup.com)
- Browne, K. (2013). *Sociology for AS AQA* (4<sup>th</sup> ed.). Cambridge: Polity Press.

- Callan, V.J. & Kee, P.K. (1981). Sons or Daughters? Cross-cultural Comparisons of the Sex Preferences of Australian, Greek, Italian, Malay, Chinese and Indian Parents in Australia and Malaysia. *Population and Environment*, 4, 97-108. Retrieved from <https://doi.org/10.1007/BF01255800>
- Cerrato, J. & Cifre, E. (2018). Gender Inequality in Household Chores and Work-Family Conflict. *Frontiers in Psychology*, 9, Article 1330. doi:10.3389/fpsyg.2018.01330
- Chakrabarti, O. (2017). In the Words of Johanna Tantria T. Wardham: “Gender Inequality Starts from the Household”. *UN Women: Asia and the Pacific*. Retrieved from Gender inequality starts from the household | UN Women – Asia-Pacific
- Cherry, K. (2019). What is Attachment Theory? Retrieved from Bowlby & Ainsworth: What Is Attachment Theory? (verywellmind.com)
- Chipakupaku, D. (2019, July 18). Gender Pay Gap Extends to Pocket Money, with Boys Earning 5% More than Girls – Study. *SkyNews*. Retrieved from Gender pay gap extends to pocket money, with boys earning 5% more than girls - study | UK News | Sky News
- Choi, H., Joesch, J.M. & Lundberg, S. (2008). Sons, Daughters, Wives, and the Labour Market Outcomes of West German Men. *Labour Economics*, 15(5), 795-811.
- Criminology Wiki (n.d.). Attachment Theory. Retrieved from Attachment Theory | Criminology Wiki | Fandom
- Crowne, D.P. & Marlowe, D. (1960). A New Scale of Social Desirability Independent of Psychopathology. *Journal of Consulting Psychology*, 24, 349-354.
- Dahl, G.B. & Moretti, E. (2008). The Demand for Sons. *Review of Economic Studies*, 75(4), 1085-1120.
- Dodou, D. & De Winter, J.C.F. (2014). Social Desirability is the Same in Offline, Online, and Paper Surveys: A Meta-Analysis. *Computers in Human Behavior*, 36, 487-495.
- Duflo, E. (2012). Women Empowerment and Economic Development. *Journal of Economic Literature*, 50(4), 1051-1079. Retrieved from Women Empowerment and Economic Development (mit.edu)
- Francis, S. (2020, February 4). Every Woman Should Be Her Own Financial Officer. *CNBC*. Retrieved from Every woman should be her own chief financial officer (cnbc.com)
- Gager, C.T., Sanchez, L.A., & Demaris, A. (2009). “Whose Time Is It?: The Effect of Gender, Employment, and Work/Family Stress on Children’s Housework”. *Journal of Family*, 30(11), 1459-1485.
- Hirschman, C. (2016). Gender, the Status of Women, and Family Structure in Malaysia. *Malaysian Journal of Economic Studies*, 53(1), 33-50. Retrieved from A127.pdf (washington.edu)
- Hung, A., Yoong, J. & Brown, E. (2013). Empowering Women Through Financial Awareness and Education. *OECD/INFE Evidence, Survey and Policy Responses*. Retrieved from TrustFund2013\_OECD\_INFE\_Women\_and\_Fin\_Lit.pdf
- Ichino, A., Lindström, E. & Viviano, E. (2011). Hidden Consequences of a First-Born Boy for Mothers. *IZA Discussion Paper No. 5649*. Retrieved from Hidden Consequences of a First-Born Boy for Mothers (iza.org)
- Institute of Epidemiology & Healthcare (2019, November 21). Women Still Doing Most of the Housework Despite Earning More. Retrieved from Women still doing most of the housework despite earning more | Institute of Epidemiology & Health Care - UCL – University College London
- Kohei, Y. (2011). Gender Perceptions in Southeast Asian Countries: Findings from JICA-RI Value Surveys. *World Development Report 2011: Gender equality and development*. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/9119/WDR2012-0001.pdf?sequence=1&isAllowed=y>



- Larson, R.B. (2018). Controlling Social Desirability Bias. *International Journal of Market Research*, 61(5). Retrieved from <https://doi.org/10.1177/1470785318805305>
- Lhila, A. and Simon, K.I. (2008). Prenatal Health Investment Decisions: Does the Child's Sex Matter? *Demography*, 45(4), 885-905.
- Lundberg, S. (2005). Sons, Daughters, and Parental Behavior. *Oxford Review of Economic Policy*, 21(3), 340-356. Retrieved from Sons, Daughters, and Parental Behavior (weebly.com)
- Lundberg, S., McLanahan, S. & Rose, E. (2007). Child Gender and Father Involvement in Fragile Families. *Demography*, 44(1), 79-92.
- Lundberg, S. & Pablonia, S.W. & Ward-Batts, J. (2006). Time Allocation of Parents and Investments in Sons and Daughters. Retrieved from (PDF) Time Allocation of Parents and Investments in Sons and Daughters (researchgate.net)
- Lundberg, S. & Rose, E. (2002). The Effects of Sons and Daughters on Men's Labor Supply and Wages. *The Review of Economics and Statistics*, 84(2), 251-268.
- Macionis, J.J. (2015). *Sociology* (15<sup>th</sup> ed.). Essex, England: Pearson Education Limited.
- Mammen, K. (2008). The Effect of Children's Gender on Living Arrangements and Child Support. *The American Economic Review*, 98(2), 408-412. Retrieved from <http://www.jstor.org/stable/29730056>
- Masequesmay, G. (2020). Sexism. *Encyclopedia Britannica*. Retrieved from <https://www.britannica.com/topic/sexism>.
- McWhinney, J. (2020, June 30). Top 6 Marriage-Killing Money Issues: How to Prevent Them from Damaging Your Relationship. Retrieved from Top 6 Marriage-Killing Money Issues (investopedia.com)
- Meloy, J.R. (2003). Pathologies of Attachment, Violence and Criminality. *Wiley Online Library*. Retrieved from <https://doi.org/10.1002/0471264385.wei1125>
- Miller, A.E., MacDougall, J.D., Tarnopolsky, M.A., & Sale, D.G. (1993). Gender differences in strength and muscle fiber characteristics. *European Journal of Applied Physiology and Occupational Physiology*, 66, 254-262. Retrieved from <https://doi.org/10.1007/BF00235103>
- Nikiforidis, L., Durante, K.M., Redden, J.P. & Griskevicius, V. (2017). Do Mothers Spend More on Daughters While Fathers Spend More on Sons? *Journal of Consumer Psychology*, 28(1), 149-156. Retrieved from Do Mothers Spend More on Daughters While Fathers Spend More on Sons? (rutgers.edu)
- Nippon.com (2019, September 30). Wives Do Seven Times as Much Housework as Husbands in Japan. Retrieved from Wives Do Seven Times As Much Housework As Husbands in Japan | Nippon.com
- Osborne, H. (2016, June 3). Boys Get More Pocket Money than Girls, Halifax Survey Finds. *The Guardian*. Retrieved from Boys get more pocket money than girls, Halifax survey finds | Pay | The Guardian
- Oxfam (2019, March 1). Unequal Distribution of Housework Spotlighted on Women's Month. Retrieved from Unequal distribution of housework spotlighted on Women's Month | Oxfam Philippines
- Pablonia, S.W. & Ward-Batts, J. (2007). The Effect of Child Gender on Parents' Labor Supply: An Examination of Natives, Immigrants, and their Children. *The American Economic Review*, 97(2), 402-406.
- Peachey, K. (2019, July 3). How Much Pocket Money Should We Give Our Kids? *BBC News*. Retrieved from How much pocket money should we give our kids? - BBC News
- Prasad, S. & Mishra, R.K. (2019). The Nature of Unconscious Attention to Subliminal Cues, *Vision (Basel)*, 3(3), 38.



- Price, J. (2008). Parent Child Quality Time: Does Birth Order Matter? *Journal of Human Resources*, 43(1), 240-265.
- Sheperis, C. (2021). How to Combat Social Desirability Bias. *aytm*. Retrieved from How to Combat Social Desirability Bias in Your Surveys (aytm.com)
- The Economist. (2018, March 8). Women's Wealth is Rising: Gender Inequality in Financial Wealth is Gradually Narrowing. Retrieved from Daily chart - Women's wealth is rising | Graphic detail | The Economist
- The Money Advice Service. (n.d.). Who Gets More Pocket Money? Girls or Boys? Retrieved from Who gets more pocket money? Girls or boys? - Money Advice Service
- van de Vijver, F.J.R. (2007). Cultural and Gender Differences in Gender-Role Beliefs, Sharing Household Task and Child-Care Responsibilities, and Well-Being Among Immigrants and Majority Members in The Netherlands. *Sex Roles*, 57, 813-824. Retrieved from <https://doi.org/10.1007/s11199-007-9316-z>
- Weale, S. (2017, January 24). Gender Pay Gap Starts Early with 20% Disparity in Pocket Money – Study. *The Guardian*. Retrieved from Gender pay gap starts early with 20% disparity in pocket money – study | Gender | The Guardian
- Wikipedia (2021, February 18). Gender Inequality. Retrieved from Gender inequality - Wikipedia
- Wikipedia (2021, February 5). Generation X. Retrieved from Generation X - Wikipedia
- Wu, Y. (2016, August 31). 60 Percent of Chinese Women Control Family Finances: Report. *China Daily*. Retrieved from 60 percent of Chinese women control family finances: report - China - Chinadaily.com.cn
- Yeung, W.J., Sandberg, J.F., Davis-Kean, P.E. & Hofferth, S.L. (2001). Children's Time with Fathers in Intact Families. *Journal of Marriage and Family*, 63, 136-154.
- Yiswaree Palansamy (2020, March 31). Do Your House Chores and Ignore 'Nonsensical' Suggestions for Wives, Anwar Tells Men. *MalayMail*. Retrieved from Do your house chores and ignore 'nonsensical' suggestions for wives, Anwar tells men | Malaysia | Malay Mail

# HUBUNGAN ANTARA PENGETAHUAN DENGAN SIKAP KESELAMATAN TERHADAP AMALAN KESELAMATAN JURULATIH UTAMA PUSAT KOKURIKULUM

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**Abstrak:** Tujuan kajian ini adalah untuk melihat tahap pengetahuan, sikap dan amalan aspek keselamatan jurulatih utama. Ia juga bertujuan untuk melihat samada terdapat perkaitan di antara pengetahuan terhadap amalan dan sikap terhadap amalan keselamatan. Data telah dipungut daripada 83 orang jurulatih utama Pusat Kokurikulum Pulau Pinang menggunakan borang soal selidik daripada kajian keselamatan oleh beberapa pengkaji lepas. Dapatan kajian menunjukkan jurulatih utama Pusat Kokurikulum Pulau Pinang memiliki pengetahuan, sikap dan amalan aspek keselamatan yang tinggi. Analisis korelasi dalam melihat perkaitan menunjukkan tidak ada perkaitan antara aspek pengetahuan terhadap amalan keselamatan ( $p=0.449$ ) manakala terdapat perkaitan aspek sikap terhadap amalan keselamatan jurulatih ( $p=0.001$ ).

**Kata Kunci:** pengetahuan keselamatan, sikap keselamatan, amalan keselamatan, jurulatih Pusat Kokurikulum.

**Abstract:** The objective of this study is to determine the relationship between the level of knowledge, safety attitudes and safety practices of the main coach towards all variables. The questionnaires were collected from 83 coaches in Pusat Kokurikulum Pulau Pinang using form and instruments in this study are adapted from previous studies related to security cultures. The findings of the study found that all coach has knowledge, safety attitude and safety practices in high level. The correlation analysis showed no relationship between the level of knowledge towards safety practices ( $p=0.449$ ) and there was relationship between safety attitudes towards safety practices ( $p=0.001$ ).

**Keywords:** safety knowledge, safety attitudes, safety practices, Pusat Kokurikulum trainer.

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## 1. Pengenalan

Aktiviti luar merupakan salah satu medium pelajar dalam membentuk jati diri mereka di samping memberi dorongan dan rangsangan dalam menuntut ilmu. Aspek keselamatan merupakan aspek yang menjadi teras utama dalam setiap aktiviti yang dilakukan semasa melakukan perkara yang melibatkan risiko. Tanggungjawab ini menjadi amalan setiap jurulatih dalam memberi pengalaman kepada mereka untuk memperkasakan aspek pengetahuan dan sikap keselamatan mereka pada tahap yang terbaik. Tidak kiralah di dalam aktiviti apa yang dilakukan, aspek keselamatan perlu diutamakan sekiranya aktiviti yang dijalankan adalah berisiko dan boleh mendatangkan kecederaan yang serius. Artikel yang ditulis ini adalah satu kajian yang berkaitan dengan amalan aspek keselamatan berdasarkan pengetahuan dan sikap jurulatih utama Pusat Kokurikulum. Sungguhpun *standard operation prosedure* (SOP) telah menggariskan bahawa setiap pergerakan yang dijalankan perlu mengikut ketetapan yang telah dibuat, namun kecelakaan kadangkala juga

berlaku. Dalam situasi ini, kredibiliti jurulatih menjadi sandaran dalam mendukung tanggungjawab dalam pelaksanaannya. Adakah aspek keselamatan diabaikan semasa menjalankan aktiviti pendidikan luar ini atau jurulatih kurang pengalaman atau sikap terhadap amalan keselamatan yang menjadi faktor utama kepada kemalangan ini menjadi persoalan dalam kajian ini.

Kajian dijalankan untuk melihat gambaran tentang pengurusan jurulatih pusat kokurikulum yang sentiasa mendapat pendedahan secara berkala tentang aspek keselamatan semasa beraktiviti. Gambaran yang positif tentang tahap pengetahuan, sikap dan amalan dapat menjadi alternatif kepada menyumbang kepercayaan peserta dan kementerian bagi menjadikan Pusat Kokurikulum sebagai medium aktiviti luar yang terjamin keselamatannya. Walaupun kadangkala kejadian yang menimpa peserta selalu dikaitkan dengan kredibiliti penganjur, namun faktor lain juga harus diambil kira dalam situasi yang berisiko ini. Objektif kajian dilakukan adalah untuk melihat tahap pengetahuan, sikap dan amalan aspek keselamatan jurulatih serta perkaitan antara ketiga-tiga aspek tersebut.

## 2. Sorotan Literatur

Aspek pengetahuan, sikap dan amalan keselamatan merupakan aspek yang penting dalam mengurangkan risiko kemalangan semasa menjalankan aktiviti luar yang berbahaya. Penekanan kepada semua aspek ini penting dalam menjangkakan segala kemungkinan yang berlaku semasa melakukan aktiviti luar. Daripada Hall dan Adriani (2002) pengetahuan dapat diklasifikasikan dalam dua peringkat iaitu eksplisit yang merujuk kepada pengetahuan yang jelas dan dituturkan, dan didapati di dalam pelbagai bentuk samada dalam bentuk dokumen, prosuder operasi piawaian, rangka tindakan dan jenis yang kedua ialah tacit iaitu pengetahuan yang ada dalam pemikiran manusia dan sukar dituturkan, malahan dalam organisasi ia terhasil daripada pemikiran dan pandangan individu secara kolektif. Berdasarkan Wikipedia pula, sikap ialah tingkah laku, perangai dan akhlak seseorang. Biasanya sikap seseorang itu berdasarkan hatinya. Namun kadangkala sikap kita juga menggambarkan bagaimana emosi kita. Sikap seseorang boleh berubah disebabkan perasaan, keadaan ataupun apa-apa sahaja yang tidak menyenangkan pemilik sikap itu. Amalan keselamatan bermaksud aplikasi pengetahuan berkenaan keselamatan atau pengetahuan yang digunakan untuk menyelesaikan masalah keselamatan (Gan, 2004). Amalan aspek keselamatan adalah semasa setiap jurulatih sentiasa mematuhi segala peraturan-peraturan yang telah disediakan oleh pengurusan Pusat Kokurikulum. Amalan keselamatan merupakan tonggak utama dalam mengurangkan risiko kemalangan dengan kejayaan mengawal selia setiap pergerakan yang dijalankan dengan rapi berdasarkan pengetahuan dan sikap keselamatan jurulatih

Kajian daripada Noorasikinismail et al, (2018), menunjukkan peratusan tinggi responden memberi maklumbalas positif terhadap komitmen keselamatan dan perlunya situasi selamat semasa beraktiviti. Dapatan ini adalah selari dengan kajian oleh Mohd Nazri et al, (2018) dan Syaiful Nizam et, al (2010), yang menyatakan faktor pengetahuan adalah tidak signifikan dengan latihan keselamatan, namun pendedahan terhadap pengetahuan aspek keselamatan guru-guru adalah dari pengalaman atau amalan pengurusan risiko secara tidak langsung.

Keupayaan jurulatih dalam menjalankan pengawasan yang rapi untuk menghindari sebarang kemalangan adalah bergantung pada keupayaan "*foreseeability*" jurulatih tersebut. Menurut Gifis (2003) dan Sawyer (2003), "*foreseeability*" merupakan satu keupayaan seseorang individu menjangkakan dan membuat peninjauan awal tentang sesuatu kemalangan yang mungkin berlaku. Keupayaan ini ditunjukkan melalui pendekatan dan penekanan yang lebih matang dalam pengawasan sesuatu kemalangan berlaku. Keupayaan ini berdasarkan kepada pengalaman jurulatih yang kerap mengendalikan program pendidikan luar dan memberi pengetahuan yang mendalam terhadap aspek keselamatan yang diperlukan.

Kajian yang dijalankan oleh Zahurul Haq bin Abu Bakar, (2013) terhadap 90 orang guru di tiga buah sekolah menengah menunjukkan tahap pengetahuan guru berada pada tahap tinggi di samping sikap guru yang positif dalam melaksanakan aktiviti kokurikulum.

Perkembangan amalan keselamatan dalam kajian lepas menunjukkan pentingnya amalan pengurusan keselamatan yang baik mampu mengurangkan jurang risiko yang dialami. Pengetahuan keselamatan yang dimiliki oleh jurulatih mampu memberikan pengalaman dalam mengamalkan aspek keselamatan dalam mengurangkan kemalangan. Kajian daripada Jaffry Zakaria (2015) terhadap jurulatih sukan menunjukkan pegawai atau staf yang menggunakan kemudahan sukan perlulah dilatih dengan baik berkaitan amalan aspek pengurusan risiko agar setiap prosuder risiko diamalkan dan dipatuhi. Melalui kajian oleh Muhd Anuar (2011), menunjukkan wujud hubungan antara amalan keselamatan terhadap pengetahuan keselamatan. Selaras dengan dapatan oleh Abdul Rahman et al. (2018) yang menunjukkan wujudnya korelasi antara amalan keselamatan dengan pengetahuan keselamatan. Perhubungan antara amalan keselamatan dan pengetahuan keselamatan adalah tinggi, kuat dan mempunyai hubungan yang setara. Menurut (Redja, 2011; Wong & Chen, 2010) pengurusan risiko ini adalah bertujuan untuk mengelakkan dan meminimumkan sesuatu kemalangan.

### 3. Metodologi

Kajian ini menggunakan kaedah tinjauan kuantitatif berdasarkan korelasi. Instrumen utama yang digunakan dalam kajian ini ialah soal selidik yang digunakan untuk mengumpul data daripada responden yang dipilih sebagai sampel kajian. Dalam kajian ini, jurulatih utama Pusat Kokurikulum Pulau Pinang telah diberikan soal selidik. Teknik persampelan rawak berstrata digunakan untuk membuat pemilihan sampel kajian memandangkan jumlah jurulatih lelaki adalah lebih ramai dari perempuan.

Soal selidik yang digunakan adalah berdasarkan daripada gabungan beberapa kajian lepas yang berkaitan keselamatan yang telah dijalankan dan telah diubahsuai mengikut situasi tahap keselamatan di Pusat Kokurikulum. Kesemua item soal selidik ini diambil daripada instrumen yang telah diuji kesahan konstruk sebelumnya oleh penyelidik lain bagi memastikan kebolehpercayaan dan kesahan soalan kajian ini berada pada tahap yang terbaik.

Daripada soal selidik yang dijalankan, responden dikehendaki memilih jawapan berdasarkan skala likert lima mata bagi item dalam aspek pengetahuan dan sikap manakala tiga mata iaitu pada bahagian item amalan aspek keselamatan. Menerusi soal selidik yang dijalankan bagi aspek pengetahuan dan sikap, responden dikehendaki membuat pemilihan daripada skala likert dari 1 hingga 5 yang menunjukkan tahap sangat tidak setuju kepada yang tertinggi iaitu sangat setuju. Bagi soal selidik amalan aspek keselamatan, skala likert 3 mata digunakan yang menunjukkan skala 1 adalah pada tahap rendah dan skala 3 pada tahap tinggi.

Kesahan dan kebolehpercayaan instrumen kajian adalah penting bagi memastikan dapat yang diperolehi boleh dipercayai dan tidak dipersoalkan (Kerlinger & Lee, 2001). Oleh itu, pengkaji memastikan kesahan dan kebolehpercayaan item soal selidik dengan menggunakan nilai *Cronbach Alpha* bagi keseluruhan instrumen kajian melalui perisian *Statistical Package for Social Sciences* (SPSS). Bagi memastikan tahap kebolehpercayaan di dalam kajian ini berada pada tahap yang memuaskan, pengkaji melakukan kajian rintis terhadap sampel yang mempunyai ciri-ciri yang sama untuk melihat kestabilan nilai *Cronbach Alpha* yang diperolehi. Kajian rintis dilakukan ke atas 30 orang jurulatih Pusat Kokurikulum Negeri Kedah yang mempunyai ciri-ciri yang serupa dengan populasi kajian. Setiap Pusat Kokurikulum mempunyai jurulatihnya dan mempunyai setiap *SOP* yang sama dalam mengendalikan program yang dianjurkan oleh Kementerian Pelajaran Malaysia. Min bagi *Cronbach Alpha* ( $\alpha$ ) kesahan item soal selidik ialah  $\alpha=0.803$  bagi pembolehubah yang dikaji.

Instrumen soal selidik adalah sesuai digunakan memandangkan populasi kajian adalah besar dan memudahkan pengumpulan data. Soal selidik adalah mudah ditadbir dan dapat meningkatkan ketepatan dan kebenaran terhadap rangsangan soalan yang diberi kerana tidak dipengaruhi oleh personaliti dan tingkah laku pengkaji. Tambahan pula responden berasa selamat untuk menjawab soal selidik kerana maklumat mereka dirahsiakan oleh sebab pengkaji tidak bersama mereka sewaktu menjawab soal selidik yang diberikan. Pengkaji telah mendapatkan kebenaran Pengarah Pusat Kokurikulum Pulau Pinang bagi mengedarkan soal selidik tersebut. Responden mengambil masa selama seminggu untuk mengisi soal selidik yang diedarkan menggunakan aplikasi atas talian dan talian *google form* bagi memudahkan pengumpulan data.

#### 4. Dapatan Kajian

Dalam kajian ini, seramai 83 orang sampel yang terdiri daripada jurulatih utama Pusat Kokurikulum telah dijadikan subjek kajian. Maklumat dari data yang dikumpulkan daripada soal selidik demografi telah dianalisis dengan menggunakan frekuensi dan peratusan.

##### 4.1 Tahap Kejurulatihan

**Jadual 1: Taburan Tahap Kejurulatihan Responden**

Tahap Kejurulatihan	Frekuensi	Peratus
Negeri	78	94%
Kebangsaan	5	6%

Jadual 1 menunjukkan taburan subjek mengikut tahap kejurulatihan. Daripada 83 orang subjek kajian yang dipilih, seramai 78 orang (94%) adalah berada pada tahap jurulatih negeri dan 5 orang (6%) mempunyai tahap kejurulatihan kebangsaan.

**Jadual 2: Taburan Subjek Berdasarkan Jantina**

Jantina	Frekuensi	Peratus
Lelaki	59	71%
Perempuan	24	28.9%

Jadual 2 pula menunjukkan taburan subjek mengikut jantina. Seramai 59 orang (71%) subjek kajian adalah lelaki dan selebihnya iaitu 24 orang (28.9%) ialah perempuan.

**Jadual 3: Taburan Subjek Berdasarkan Pengalaman Sebagai Jurulatih**

Pengalaman sebagai jurulatih	Frekuensi	Peratus
1 - 3 tahun	12	14.5%
4 - 6 tahun	15	18.1%
7 tahun dan ke atas	56	67.5%

Jadual 3 ini pula menunjukkan taburan subjek berdasarkan pengalaman sebagai jurulatih Pusat Kokurikulum. Seramai 12 orang (14.5%) adalah berpengalaman dalam lingkungan 1 hingga 3 tahun, 15 orang (18.1%) pula berpengalaman lebih kurang lingkungan 4 hingga 6 tahun dan 56 orang (67.5%) adalah berpengalaman melebihi 7 tahun.

#### 4.2 Tahap Pengetahuan, Sikap dan Amalan Keselamatan.

Bagi aspek pengetahuan dan sikap, nilai min 4.55 dan 4.87 menunjukkan tahap pengetahuan dan sikap berada pada tahap yang tinggi manakala bagi aspek amalan keselamatan juga menunjukkan min (2.92) dan pada tahap yang tinggi bagi skor maksima 3 mata skala likert. Daripada dapatan ini menunjukkan tahap pengetahuan, sikap dan amalan jurulatih utama yang tinggi terhadap aspek keselamatan.

Tahap pengetahuan, sikap dan amalan yang tinggi menunjukkan bahawa kebanyakan responden mempunyai kualiti aspek keselamatan yang tinggi. Berdasarkan pengalaman responden, kebanyakan responden mempunyai pengalaman melebihi 3 tahun dalam bidang menguruskan aktiviti pendidikan luar. Forsythe dan Keller (1997), yang membutikan bahawa penekanan kepada aspek keselamatan adalah sebahagiannya berasal daripada latar belakang dan pengalaman jurulatih tersebut.

#### 4.3 Analisis Korelasi

**Jadual 4: Analisis Regresi Terhadap Hubungan**

	r	Sig
Pengetahuan - amalan	0.084	0.449
Sikap - amalan	0.390	0.001

Hasil analisis kajian menunjukkan tidak ada hubungan diantara pengetahuan terhadap amalan keselamatan responden ( $p=0.449$ ) manakala wujud hubungan diantara sikap dan amalan keselamatan responden ( $p=0.001$ ). Walaupun hubungan yang wujud adalah lemah ( $r=0.390$ ), namun sikap keselamatan responden yang tinggi diamalkan dalam menjalankan aktiviti yang berisiko ini. Hasil analisis pengetahuan terhadap amalan keselamatan menunjukkan bahawa responden mempunyai tahap pengetahuan yang tinggi tetapi tidak menggunakan pengetahuan tersebut dengan baik dan menjadikan amalan semasa menjalankan aktiviti pendidikan luar dengan baik.



## 5. Perbincangan

Dapatan menunjukkan tahap pengetahuan, sikap dan amalan aspek keselamatan berada pada tahap yang baik dan memberangsangkan. Nilai min  $M=4.55$  bagi aspek pengetahuan menunjukkan semua jurulatih mempunyai tahap pengetahuan yang baik bersama dengan nilai min sikap  $M=4.87$  di mana nilai maksima lima dalam skala likert. Tahap amalan menunjukkan  $M=2.95$  juga menunjukkan bahawa amalan keselamatan jurulatih berada pada aras yang tinggi bagi nilai maksima tiga. Kesemua jurulatih Pusat Kokurikulum memahami tanggungjawab mereka terhadap aktiviti yang berisiko. Latihan keselamatan yang dijalankan secara kerap kepada semua jurulatih memberikan pengalaman dan menjadikan kebanyakan jurulatih yang melaksanakan program aktiviti luar sentiasa mematuhi SOP yang telah disediakan. Pengalaman hasil daripada latihan yang berterusan mampu memberikan pengetahuan yang mendalam terhadap aspek keselamatan yang perlu dititikberatkan.

Aspek pengetahuan dan aspek sikap keselamatan merupakan aspek yang terdapat dalam kesedaran jurulatih terhadap peraturan dan keselamatan yang disediakan. Sekiranya seseorang jurulatih mempunyai sikap yang terbaik pada diri dan orang lain, maka seseorang jurulatih itu akan menyedari tanggungjawabnya terhadap menjaga keselamatan diri dan orang lain. Untuk menjaga keselamatan ini, aspek pengetahuan adalah diperlukan supaya setiap yang dilakukan adalah mengikut garis panduan yang telah ditetapkan dan menjadikan amalan dalam kebiasaan.

Budaya akan melahirkan sikap individu yang positif dalam mengekalkan amalan keselamatan yang akhirnya dapat meningkatkan prestasi keselamatan individu melalui pematuhan dan penyertaan keselamatan (Zafir Khan Mohamaed Makhbul & Maran Kaliannan, 2019). Sikap positif ini akan mengukuhkan amalan aspek keselamatan jurulatih yang memberikan peningkatan kepada pematuhan peraturan keselamatan jurulatih. Budaya keselamatan yang kukuh akan membawa kepada pematuhan dan penyertaan keselamatan yang tinggi dalam kalangan individu (Vinodkumar & Bhasi (2010), Boubhaba et al. (2007). Dengan keadaan ini dapat mengurangkan kesan kepada risiko kemalangan yang disebabkan oleh kecuaiannya jurulatih berdasarkan sikap dan amalan yang lemah.

Mohd Nazri bin Hashim, (2018) keselamatan pekerjaan perlu kepada tindakan amalan pengurusan keselamatan sebagai faktor yang memberi kesan yang signifikan kepada pengetahuan keselamatan. Amalan keselamatan yang baik dapat memberi pengalaman kepada jurulatih justeru memberi pengetahuan secara tidak langsung. Selain daripada pembelajaran secara formal dan amali, pengukuhan daripada pengalaman sebenar adalah lebih praktikal yang memberi pengalaman dalam situasi yang sebenar.

Berdasarkan analisis korelasi terhadap hubungan antara pengetahuan terhadap amalan aspek keselamatan menunjukkan tiada perkaitan dimana pengetahuan yang tinggi terhadap aspek keselamatan jurulatih tidak dijamin sepenuhnya oleh jurulatih dan kemungkinan akan menyebabkan risiko kemalangan. Pengetahuan dan amalan keselamatan amat berkait rapat kerana dengan pengetahuan akan terjadinya amalan yang positif. Berdasarkan latihan yang dijalankan dari masa ke semasa sepatutnya mampu memberikan pengetahuan dan pengalaman yang luas kepada jurulatih dalam meningkatkan kemahiran jurulatih justeru membentuk sikap positif dalam mengutamakan aspek keselamatan semasa beraktiviti. Situasi ini berkemungkinan daripada pengalaman yang luas akan menyebabkan jurulatih akan merasa selesa dengan kemahiran dan pengalamannya seterusnya mempunyai keyakinan yang lebih terhadap aktiviti yang dijalanannya serta mengabaikan amalan keselamatan. Aspek yang dititik beratkan adalah semasa aktiviti yang betul-betul berisiko sahaja dan tidak memandang serius terhadap amalan aspek keselamatan yang sama penting dengan aktiviti lain yang dirasakan rutin biasa.

Berdasarkan dapatan sikap terhadap amalan keselamatan, wujud perkaitan yang menunjukkan ketinggian sikap keselamatan akan membantu amalan aspek keselamatan jurulatih dengan baik. Sikap positif yang dijamin mampu membentuk amalan yang biasa dalam pematuhan keselamatan. Jurulatih sedar akan risiko yang tinggi dalam aktiviti yang dijalankan dan sentiasa berhati-hati dan menjaga setiap langkah dan mengamalkan setiap aspek keselamatan dengan baik dalam mengurangkan kemalangan. Pengalaman yang kukuh dapat membantu jurulatih dalam membentuk sikap yang tinggi dalam menguruskan aktiviti yang melibatkan risiko yang tinggi dengan pematuhan kepada peraturan keselamatan. Menurut (Muthuviknesh & Kumar, 2014), keselamatan ditakrifkan sebagai pembebasan dari risiko, kecederaan dan bahaya. Jadi, kepentingan aspek keselamatan merupakan satu kemahiran yang amat diperlukan terhadap jurulatih dalam menjalankan aktiviti yang berisiko tinggi ini.

Selain daripada itu, harapan pengkaji agar dijalankan kajian lanjutan yang lebih menyeluruh dan skala yang lebih besar dengan menggunakan soal selidik sebagai instrumen kerana soal selidik yang digunakan sahaja tidak memadai untuk mendapatkan maklumat yang tepat memandangkan responden kadangkala tidak menjawab dengan telus. Kajian yang dijalankan ini dapat memberi gambaran kepada pihak kementerian dalam menyusun strategi dalam meningkatkan aspek keselamatan jurulatih berdasarkan aktiviti berisiko yang dijalankan dan dapat mengurangkan risiko kemalangan yang mungkin terjadi.

## Rujukan

- Saberi, N. S. B. N., & Hamzah, M. I. B. H. M. (2020, September). Amalan Pengurusan Risiko: Pelibatan Dalam Pendidikan Luar. In *(Webinar) Seminar Nasional Pendidikan 2020* (Vol. 1, No. 1, pp. 267-280).
- Mohd Noor, M. S. (2002). *Kajian ke atas sikap pelajar dan pensyarah terhadap amalan keselamatan bengkel dan makmal: kajian kes di Politeknik Sultan Abdul Halim Muadzam Shah* (Doctoral dissertation, Kolej Universiti Teknologi Tun Hussein Onn).
- Taff, M. A. M. (2011). Kerelevanan pendidikan luar dalam sistem pendidikan tinggi di Malaysia. *Asean Journal of Teaching and Learning in Higher Education (AJTLHE)*, 3(1), 11-27.

- Ismail, N., & Zainuddin, Z. A. (2018). Komitmen Terhadap Keselamatan Aktiviti Luar Dan Berisiko dalam Pendidikan. *Sains Humanika*, 10(3-2).
- Eng, J. A. J. (2016). *Pengurusan Aktiviti Luar Sekolah: Panduan Pengurusan Aktiviti di Luar Sekolah*. PTS Publications & Distributors Sdn Bhd.
- Jaffry Zakaria, M. T. H., & Salamuddin, N. PERANAN AMALAN PENGURUSAN RISIKO TERHADAP PERKEMBANGAN AKTIVITI SUKAN DAN REKREASI DALAM MENINGKATKAN KESEJAHTERAAN HIDUP MASYARAKAT.
- Radzi, M. S. M., Hamzah, R., & Udin, A. (2011). Menyelesaikan masalah pembangunan akhlak pelajar: Analisis penerapan kemahiran generik dalam amalan pendidikan. *Journal of Edupres*, 1, 223-229.
- Taff, M. A. M., & Yaakob, S. N. M. (2010). Pendidikan Luar di Malaysia. *Perspektif: Jurnal Sains Sosial dan Kemanusiaan*, 2(2), 61-73.
- Zulzali, M. A., & Salamudin, N. (2020). KESAN PENDIDIKAN LUAR TERHADAP KEPENGARANGAN DIRI (SELF-AUTHORSHIP) PELAJAR KOLEJ POLY TECH MARA, BANGI. *International Journal of Education and Pedagogy*, 2(4), 288-300.
- Eng, J. A. J. (2016). *Pengurusan Aktiviti Luar Sekolah: Panduan Pengurusan Aktiviti di Luar Sekolah*. PTS Publications & Distributors Sdn Bhd.
- KOO, A. K. (1998). Persepsi jurulatih dan guru sukan terhadap aspek keselamatan dalam program sukan.
- Saktirun, N. (2016). *Persepsi pelajar terhadap amalan, kemahiran dan sikap serta hubungannya dengan aspirasi kerjaya dalam mata pelajaran vokasional di sekolah menengah harian daerah Batu Pahat* (Doctoral dissertation, Universiti Tun Hussein Onn Malaysia).
- Krejcie & Morgan. (1970). Determining sample size for research activities. 30, 607-610
- Hashim, M. N., & bin Abd Aziz, F. S. (2018). PENGARUH PENGETAHUAN KESELAMATAN DALAM KALANGAN GURU. *JuPiDi: Jurnal Kepimpinan Pendidikan*, 5(2), 1-13.
- Kamaruddin, M. I., & Kamal, S. A. B. M. TAHAP KESEDARAN PELAJAR TERHADAP PERATURAN DAN KESELAMATAN DALAM MAKMAL SAINS.
- Berita Harian, (2017a). Aspek keselamatan di sekolah perlu perhatian khusus. Retrieved Februari 20, 2017, from <http://www.bharian.com.my/node/9856>
- Rahman, A., Anuar, M., & A Hamid, I. (2011). Pengetahuan dan pengamalan keselamatan bengkel di kalangan para pelajar kursus penyenggaraan bangunan di sebuah kolej komuniti. *Journal of Technical, Vocational & Engineering Education*, 2, 18-35.
- Makhbul, Z. K. M., & Kaliannan, M. (2019). HUBUNGAN ANTARA BUDAYA KESELAMATAN DAN PRESTASI KESELAMATAN DALAM SEKTOR PERKILANGAN: SIKAP KESELAMATAN SEBAGAI FAKTOR PENGANTARA. *e-Bangi*, 16(5).

- Hashim, M. N., & bin Abd Aziz, F. S. (2018). PENGARUH PENGETAHUAN KESELAMATAN DALAM KALANGAN GURU. *JuPiDi: Jurnal Kepimpinan Pendidikan*, 5(2), 1-13.
- Rahman, M. A., & Aziz, F. S. A. (2019). PERANAN KOMITMEN KESELAMATAN TERHADAP HUBUNGAN ANTARA AMALAN PENGURUSAN KESELAMATAN PENGETAHUAN KESELAMATAN DENGAN INISIATIF KESELAMATAN (THE ROLE OF SAFETY COMMITMENT IN THE RELATIONSHIP BETWEEN SAFETY MANAGEMENT PRACTICE, SAFETY KNOWLEDGE AND SAFETY I. *International Journal of Management Studies*, 25(2), 111-126.

# THE IMPLEMENTATION OF BEHAVIORISM, CONSTRUCTIVISM AND INFORMATION PROCESSING THEORY IN INSTRUCTIONAL DESIGN PRACTICE ACTIVITIES – A REVIEW

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**Abstract:** *Learning involves acquiring and adapting knowledge, skills, strategies, beliefs, attitudes, and behaviours. People learn cognitive, linguistic, motor, and social skills, and these can take many forms. Learning theories is to create a framework that helps learners understand how the information and knowledge is created and how the learning takes place. Learning can apply these frameworks according to difference learning by choosing the right instructional practices. This paper reviews on learning theories such as Behaviourism, Constructivism and Information Processing Theory in instructional practice activities meanwhile provide structured foundations for planning and conducting an instructional design activity. This learning theories practice to include solution that focus on the learner in the design process. Instructional design has evolved and influences from various practice (Behaviourism, Information Processing Theory and Constructivism) constructed a foundation which acts as pillars of successful approaches. While each theory includes specific focal points with regards to how learning occurs in an instructional design either by behavioural response or knowledge acquisition or contributed unique perspectives on learning as a whole and are responsible for how the field of Instructional Design has changed over time.*

**Keywords:** Learning, Behaviourism, Constructivism, Information Processing.

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## 1. Introduction

Learning is defined as a relatively permanent change in behaviour that occurs as a result of experience. Learning can also bring a change in behaviour and experience (Robbins, 2017).

Learning is a broad term and it includes many useful activities that we can do with our students. Along with growing process, the mental development of the child occurs. Thus, change takes place in behaviour continuously. The child goes on learning through experiences. From a psychological point of view, learning has been explained as a stimulus response process. The establishment of the stimulus response relationship is known as learning. To be able to teach is to be able to understand what to teach and thus, it's vital that educators know the psychology of learning as different students give different response to teaching and learning in their lives. It is inevitable that

educators realise the learning process that students assimilate in their lives when they learn. It is vital for teachers or educators to know that they cannot simply teach everything and anything in their lives to their students. They have to know how to make their students understand and make sure they retain information so that they can understand the subject matter well. The ability to make students understand what we have taught happens when we have understood the learning process and psychology behind it. (A. Bandura, 1977).

## **2. Literature Review**

### **Behaviourist Theory of Learning**

Behaviourism has momentarily influenced the field of Instructional Design. Behaviourism is the doctrine that regards psychology as a scientific study of behaviour and explains learning as a system of behavioural responses to physical stimuli. Many researchers are interested in the effects of reinforcement, practice and external motivation and a network of associations and learned behaviours. Educators that use behaviourist framework pre-plan a curriculum by breaking a content area into a hierarchy ranging from simple to more complex. Assumptions are made that observation, listening to explanations from teachers who communicate clearly, or engaging in experiences, activities or practice sessions with feedback will result in learning and that proficient skills will quantify to produce the whole or more encompassing concept (Bloom 1956, Gagne 1965).

Moreover, learners are always viewed as passive and they need external motivation and affected by reinforcement. Operant conditioning controls behaviour through positive and negative reinforcement. A classic example of operant conditioning is B.F Skinner and his Skinner box. The rat 'learned' to press the lever and was rewarded with food. The reward strengthened the behaviour. In most secondary schools, students are 'rewarded' for positive behaviour, thus, educators spend more time developing a sequenced, well-structured curriculum and determining how they will assess, motivate, reinforce and evaluate the learner (Skinner, 1953). Parrot 'learned' to convey similar toned voice from humans could be associated to their intelligent, playful and possessive behaviourism. They are intelligent, playful, and possessive. Parrots are highly empathic. Their behaviour and mood may reflect the energy and mood of their humans.

Learners are tested to see where they fall on the curriculum continuum and then expected to progress in a linear, quantitative fashion as long as clear communication and appropriate motivation, practice and reinforcement are provided. Learners' progress is assessed by measuring observable outcomes- namely, behaviours on predetermined tasks. The mastery-learning model (Bloom, 1976) is a case in point. This model assumes that wholes can be broken into parts, that skills can be broken into sub skills, and that these skills can be sequenced in a "learning line." Learners are diagnosed in terms of deficiencies, called "needs," then taught until "mastery" - defined as behavioural competence- is achieved at each of the sequenced levels. Moreover, it is assumed that if mastery is achieved at each level, then the more general concept (defined by the accumulation of the skills) has also been taught. It is important to note the use of the term "skill" here is the outcome of learning and the goal of teaching. The term itself is derived from the notion of behavioural competence. Although few schools today use the mastery-learning model rigidly, much of the prevalent traditional educational practice still in place stems from this behaviourist psychology. Behaviourist theory may have implications for changing behaviour, but it offers little in the way of explaining cognitive change – a structural change in understanding.



The great Russian psychologist, Ivan Pavlov's classical conditioning theory states that learning is a process that occurs through associations between an environmental stimulus and a naturally occurring stimulus. This famous dog experiment approves that events could trigger a conditioned response. In classical conditioning, the conditioned response is the learned response to the previously neutral stimulus. The previously neutral stimulus will then evoke the response all on its own. At this point, the response becomes known as the conditioned response (Pavlov, 1902).

John Broadus Watson, an American Behaviourist theory believed that all individual differences in behaviour were due to different experiences in learning. He considered emotion to be just another example of classical conditioning and he also rejected the notion of individual differences. He used contiguity to explain learning.

In addition, learning is the function of change in overt behaviour. Changes in behaviour are the results of an individual's response to events or stimuli that occur in the environment. Reinforcement is the key element in Skinner's S-R Theory. His research focused on positive and negative reinforcement to the mind of learners. For example, if you give RM10 each time when your student gets all correct for his spelling test, as a reward, the student will more likely to repeat this behaviour in the future, thus strengthening the behaviour of getting more corrects in the future spelling tests (Skinner, 1953)

### **Constructivism Theory of Learning**

Constructivism is a theory of learning that has roots in both philosophy and psychology. The essential core of constructivism is that learners actively construct their own knowledge and meaning from their experiences (Fosnot, 1996; Steffe & Gale, 1995). This core has roots that extend back through many years and many philosophers, including Dewey (1938), Hegel (1807/1949), Kant (1781/1946), and Vico (1725/1968). Philosophically, this essence relies on an epistemology that stresses subjectivism and relativism, the concept that while reality may exist separate from experience, it can only be known through experience, resulting in a personally unique reality. This theory states that people actively construct or make their own knowledge through their experiences as learners by which they use their previous knowledge as a foundation and improve their knowledge with new things that they learn. Individual experiences make their learning unique to them too.

Von Glasersfeld (1995) proposed essential epistemological tenets of constructivism, which are attributed to knowledge, followed by cognition. Knowledge is not passively accumulated, but rather, is the result of active cognizing by the individual. Cognition is an adaptive process that functions to make an individual's behavior more viable given a particular environment. Cognition organizes and makes sense of one's experience, and is not a process to render an accurate representation of reality.

Thus, constructivism acknowledges the learner's active role in the personal creation of knowledge, the importance of experience (both individual and social) in this knowledge creation process, and the realization that the knowledge created will vary in its degree of validity as an accurate representation of reality. These four fundamental tenets provide the foundation for basic principles of the teaching, learning, and knowing process as described by constructivism. As will be seen, however, these tenets may be emphasized differently, resulting in various "degrees" or "types" of constructivism.

In a constructivist approach, educators and teachers must comprehend that their students bring their own unique experiences to the classroom every day as their background and their previous knowledge impact on how they learn. The basic constructive principle of learning states that knowledge is constructed where knowledge is built upon other knowledge. Students use their previous knowledge, experiences, beliefs and insights to get or learn more knowledge or as a foundation for continued learning. People also learn to learn, as they learn. This equates to learning involves constructing meaning and systems of learning. For example, when students learn how to write essays, they also learn how to improve their grammar, vocabulary and sentence construction as well. This means that, what we learn now, gives a better understanding of all relevant components in learning and for the future. Learning is also an active process. Learning involves sensory input to construct meaning. Learners need to do something in order to learn as learning is not a passive activity. Learners need to engage in the world so they learn and develop themselves in their own way. Students also need to engage in discussions, workshops and other active learning process as they cannot just sit and expect to be told things and learn. They become active learners than being passive in their lives. Learning is also a social activity where we connect to everyone in our lives. Teachers and educators must bear in mind that involving peers in their students' lives will make students to be actively involved in learning. This will make students to be mentally engaged with their peers as they do various social activities together.

Learning is also contextual as what we learn are things that surround us in our lives. Students learn what they believe in and already know in their lives. Knowledge is also personal in a way that the theory of constructivism is based on one's own experiences and beliefs as knowledge becomes a personal affair as each person will have their own prior knowledge and experiences. Thus, they ways people learn are all different. In constructivism theory, learning exists in mind and as such hands-on experience and physical actions are vital elements but not enough. Learners need to engage their mind in learning and not only their hands where mental experiences are needed to retain knowledge. It cannot be denied that motivation is key to learning. Without motivation, students will not learn. Educators need to find the best ways to engage and motivate learners o activate their minds and help them to learn. Thus, motivation is pivotal for learners to associate their past experience and make connections for new learning. (PHILO-notes, 2020)

### **Information Processing Theory of Learning**

This learning theory differs in many ways in our lives. This theory gives importance to internal processes that occur when training is learned and retained. Information processing by learners happen when a message or stimulus in the form of sound, smell, touch or pictures is received by receptors such as eyes, ears, nose and skin and stored in short term memory and recorded in the long-term memory later. A search process happens in the memory, during which time a response to the message or stimulus is organised. The response generator organizes the learners' response and tells the effectors which are the muscles what to do. The next step happens when feedback provides the learners with an evaluation of the response given. Information on observation can come from another person or the learners' observation of the results of his or her own action. A positive evaluation of the response provides reinforcement that the behaviour is desirable and should be stored in long-term memory for use in similar situations. (Greg Learning, 2019). Sensory memory (SM) is a temporary storehouse of information; it retains visual information for ½ seconds and auditory information for three seconds. SM collects information through senses. It is selective in nature in the sense that it stores only the desired information and ignores the remaining. If a certain information is considered pertinent by sensory memory, it retains this information for a short while and then forwards it to the short-term memory for further processing. In case, if it feels that the received information is irrelevant it neglects it and lets it go out of its storage. Sensory

memory is generally influenced by attention and automaticity. It is also believed that each of the five senses has its own memory for processing relevant information. However, it is assumed that they are not much different from each other and their way of operation is the same. Short-term memory (STM) is also a temporary storage of information but its duration is comparatively longer than SM, usually it retains information for about 15 to 30 minutes. STM is often viewed as the active or conscious part of our memory, that is, it consists of that information which is ready either for instant use or for further processing and onward submission to long-term memory. It gets its input from sensory memory. This memory is maintained through practice and elaborative rehearsal. It stores 5 to 9 chunks of information at a time. STM has two other counterparts namely Auditory loop which processes auditory information and Visual-spatial Checkpad which processes visual information.

Long-term memory (LTM) has unlimited capacity of storing information. It is a permanent type of storage in the sense that information once stored in it remains there forever. It stores various types of information namely declarative, procedural and imagery. Information exists there in dormant form until we call them back to sort-term memory. The quality of LTM depends upon two processes, the storing process and the retrieval process. The more similar the two processes are the less effort is required to retrieve information from LTM.

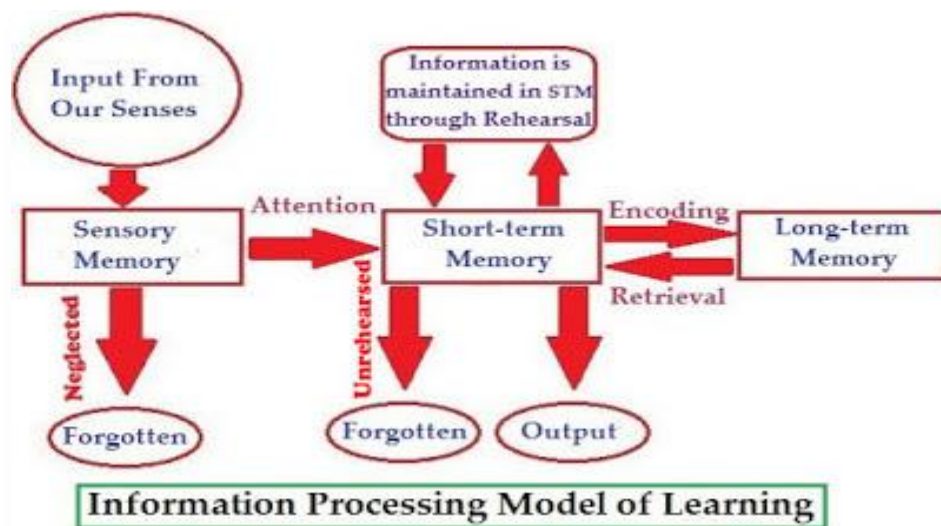


Figure 1: Information Processing Model of Learning

### 3. Conclusion

The review has brought together the prime differences and research by various scholars in the implementation of behaviourism, constructivism and information processing theories in instructional design practice activities. Behaviourism studies individual's observable and measurable behaviours that are repeated until they become automatic in which it creates measurable learning outcomes, uses tangible rewards and guide students in mastering a set of predictable skills or behaviours. In constructivism, the learner is in control over his or her own learning, owing to pose good problems, create group learning activities and guide the process of knowledge construction. Finally, the information processing theory observes new behavioural pattern and focuses on how to learn. It factors in the learner's characteristics that promote the process of information. In addition, it also analyses which tasks are appropriate for effectively and efficiently processing and information.

### References

- Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives, Handbook 1: the cognitive domain*. New York: McKay.
- Bloom, B. (1976). *Human characteristics and school learning*. New York: McGraw-Hill
- Dewey, J (1938). *Experience and education*. New York: Macmillan.
- Fosnot, C. T. (1996), *Constructivism: Theory, perspective, and practice*, New York: Teachers College Press.
- Gagne, R.M. (1956). *The world of grown-ups*. New York: Elsevier
- Gregg Learning. (2019, July 21). *Information Processing Theory* [video]. You Tube. <https://youtu.be/0m7P8KSaOTk>
- Hegel, G. W. (1807/1949). *The phenomenology of mind* (J.B. Baillie, Trans.). London: Allen Unwin.
- Kant, E. (1946). *Critique of pure reason* (J. M. D. Meiklejohn, Trans.). New York: Dutton. (Original work published 1781)
- Organizational Behavior, Global Edition, 17th Edition. **Stephen P. Robbins**, San Diego State University. Timothy A. Judge. ©2017 |Pearson
- Pavlov, I. P. (1897/1902). *The work of the digestive glands*. London: Griffin.
- PHILO-notes. (2020, September 2). *What is Constructivism?* [video]. You Tube. <https://youtu.be/6Y2sU18vWb4>
- Skinner, B.F. (1953). *Science and human behaviour*. New York: Free Press.
- Steffe, L. P., & Gale, J. (Eds.) (1995). *Constructivism in education*. Hillsdale, NJ: Earlbaum
- Vico, G. (1968). *The new science* (T. G. Bergin & M. H. Fisch, Trans.) (3rd rev.ed.). Ithaca, NY: Cornell University Press. (Original work published 1725)
- Von Glasersfeld, E. (1995). A constructivist approach to teaching. In L. P. Steffe & J. Gale, *Constructivism in education* (pp. 3-16). Hillsdale, NJ: Erlbaum.

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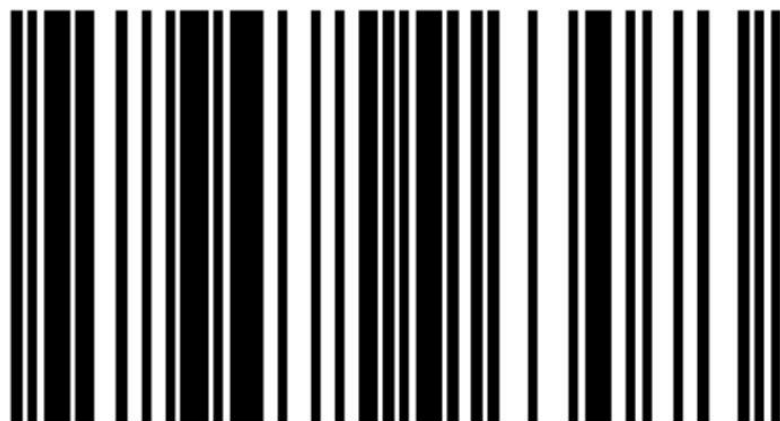
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