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## **An Evaluation of Music Courses in Undergraduate Audio Engineering Program in Shanxi, China Using the CIPP Model**

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### **Abstract**

Music courses are essential in undergraduate audio engineering programs to cultivate students' musical understanding and provide necessary knowledge for professional audio engineers. This study applied the Context, Input, Process, and Product (CIPP) model to evaluate the music courses of audio engineering programs in Shanxi Province, China. An exploratory sequential mixed-methods approach was utilized in this study with a questionnaire as the dominant method (n = 300), leaving the qualitative data set to provide a supportive role. The findings revealed that most participants tend to be satisfied with the context and process evaluation, while the teachers' professional quality needs to be enhanced in the input aspect. The study suggested the modification of the syllabi to correspond to the students' abilities and admission requirements. Overall, the music courses were somewhat lacking in meeting the students' needs to combine music knowledge and recording technology. Universities could promote comprehensive and intelligent teaching infrastructure to support these elements as well. The findings also revealed strategies to improve the status and quality of music education in the audio field.

**Keywords:** Evaluation, Music Courses, Audio Engineering Program, CIPP Model

## **Introduction**

Audio engineering has become an essential component of modern music due to the development of advanced audio techniques (Horning, 2004). After the explosion of audio education in the 1980s, undergraduate audio engineering education became crucial for music promotion (Tough, 2009). It cultivates students' professional abilities to produce balanced, harmonious, and creative music. Graduates can be engaged in sound design, music recording, sound reinforcement, and audio production (Terrell, 2001).

Generally, the music courses in audio engineering programs aim to improve students' applicative abilities, including critical listening, score reading, music creativity, comprehension, and music literacy (Sanders, 1993). A qualified audio engineer should be able to read scores quickly, analyze a composition, and set the correct microphone position simultaneously. He can distinguish even the slightest difference in any part during the recording process and make adjustments immediately in post-production. The same is true in live performances. The audio engineer's rapid response guarantees harmonious sound reproduction, partly based on his reliable musical foundation (Perlman, 2004). Students in audio engineering programs do not require high creative or performance ability. Rather, these programs emphasize fast response speed and wide application ranges, distinct from the general music courses serving music performance and composition (Sanders, 1993). Although general music curricula prescribe the requirements of music history, theory, performing, and creative skills, a comprehensive set of standardized music courses need to be established. These courses need to focus on preparing students for the realities of working in the audio engineering fields. Subsequently, the accomplishment and efficiency of current music courses in audio engineering program need to be verified and evaluated.

Undergraduate audio engineering education is developing rapidly in China. According to the latest official data from the Ministry of Education of the People's Republic of China (MEPRC),

nearly 40 universities and colleges offered audio engineering programs in 2020, with an average annual enrollment of 1,200, tripled from 2000 (MEPRC, 2000 & 2020). After sorting out the admissions regulations over the past three years, most applicants are now required to master numerous music theories and play one or two instruments proficiently. In fact, the researcher observed that the learning content is partially repeated when studying in universities, and personal music abilities did not seem to provide sufficient advantages in the professional study process. The Audio Professional Committee of China holds meetings annually to carry out academic and technical discussions to promote professional knowledge exchange and improve education. Despite the emphasis on audio technology, there is a lack of literature and empirical studies about music education in the sound production field in China. The researcher realized that at the Communication University of Shanxi (CUSX), China, for instance, the music curriculum for the audio engineering program is constantly being revised and reformed, meaning it is still in the exploratory stage.

This study assesses the music courses in audio engineering programs in Shanxi, China. It aims to evaluate how the courses meet training needs and fulfill audio engineer qualifications. The findings are expected to provide references and suggestions for music education that may better serve the changing nature of the audio industry.

## **Literature Review**

Audio engineering is a conventional method to preserve music as auditory art, contributing more options to audiences (Moylan, 2012). Walzer (2017) showed that audio engineering is experiencing significant changes due to audio technological advances, which increases practitioners' demands. Slaten (2018) further explained that modern audio needs skill diversification if an individual is to survive in the current audio environment. It is possible to train fully qualified engineers in an academic setting with musically and technically rigorous programs to achieve objectives. From as early as the 1990s, scholars have pointed out



the significance of formal audio education for the development of audio industry and the training of entry-level employees (Lighter, 1993). The courses in this program will emphasize a more comprehensive understanding of music, acoustics, physics, mechanics, and related fields to change the dichotomy state (Walsh, 1996; Terrell, 2001).

Many researchers see a strong correlation between music education and the development of the audio industry. For example, Sanders (1993) found that, although studio managers cited a wide variety of criteria used in selecting and hiring a recording engineer, among the most prominent was a substantial ‘musical background’. Sanders’ study also revealed that professional recording engineers also ranked musical knowledge as one of their most critical occupational skills. Alan Kefauver, the Peabody Conservatory of Music director at Johns Hopkins University, stated that the best audio engineers he came across were musicians (Walsh, 1996). Ear training courses alone could provide crucial foundational information about melodic, harmonic, and rhythmic dictation (Walzer, 2015). Rege (2008) explained that reading a score to scrutinize the performance of a piece of music is of primary importance in the recording process. Lankford (2020) further indicated that the musical literacy of an audio engineer affects the quality of audio engineering. However, the existing research only proposes the needs of the industry. There is no unified standard or scientific evaluation of existing music courses for audio engineering programs.

Upon analyzing the syllabi of various audio engineering programs in China, music courses commonly include music theory, music history, keyboard, sight-singing, ear training, harmony, musical forms and structure, and score reading. These courses aim to develop and improve students’ music abilities to serve the audio industry better (MEPRC, 2020). The main teaching objectives are to learn about music history, to master necessary keyboard skills, to build the correct harmony conception, to improve the accuracy of pitch and rhythm, to learn about the structure of notes, to learn about the formulation of music, and to master the ability to read

the spectrum. These objectives are consistent with research on the professional preparation of sound engineers proposed by Sanders (1993). Still, these objectives are general. As Slaten (2018) indicated, the purposes of audio education often occurred significant discrepancies between what studios were looking for and what the schools were delivering. The music courses of the audio engineering program lacked the cultivation of audio application in the field, as emphasized by He et al. (2018), which makes music education in audio engineering indistinguishable from general music education. Furthermore, these goals are insufficient to develop students' ability to adapt to new technologies, which Lankford (2020) suggested as a must-have for audio engineers in the latest technology era.

An evaluation study of the music courses is needed to provide essential information for audio engineering programs. Scholars such as Hunkins & Ornstein (2016) have defined course evaluation as a process of gathering data to decide whether to accept, change, or eliminate aspects of education. It is also used to examine the success or failure of the educational program, compare objectives and products, and assess outcomes and values (Stufflebeam & Shinkfield, 1985). The Context, Input, Process, and Product (CIPP) model is one of the most widely used evaluation models and is especially appropriate in the educational field for its efficiency, comprehensibility, practicality, and reliability (Stufflebeam & Coryn, 2014). The context evaluation aims to provide a rational reason for a selected program or curriculum to be implemented. The input evaluation includes information about strategy, planning, and design programs. The process evaluation serves to monitor and explain the entire education process that occurs. Lastly, the product evaluation measures program achievements and provides information on expected and unexpected impacts (Stufflebeam & Coryn, 2014). Wright (2013) indicated that the CIPP model is an effective model used to enhance and assess the quality from each angle. However, Halimah and Hadjar (2018) pointed out one weakness of the CIPP model: it is too concerned with the ideal learning process rather

than regular practice. This model also requires the consideration of more time and resources (Worthern, Sanders, & Fitzpatrick, 1997).

In this research, the CIPP evaluation model was feasible for the course evaluation and involved four evaluation steps: context, input, process, and product. Within this framework, the study attempted to answer the following research questions (RQs):

RQ1: What are the current levels of music courses that achieve the expected objectives in the audio engineering programs in Shanxi, China using the CIPP model?

RQ2: To what extent does the input of the music courses in the audio engineering programs help achieve educational requirements using the CIPP model?

RQ3: To what extent does the process of the music courses in the audio engineering programs influence students' acceptance of knowledge using the CIPP model?

RQ4: To what extent do the music courses meet both the educational needs of audio engineering students and the developmental requirements of the music industry in Shanxi, China using the CIPP model?

## **Method**

This section explains the research design, subjects, instruments, and data analysis procedures used in this evaluation study and the measures to ensure their reliability and validity.

### ***Research Design***

This study selected an exploratory sequential mixed-methods approach to deeply evaluate and analyze the music courses in audio engineering programs in Shanxi, China. This research was based on Daniel Stufflebeam's CIPP evaluation model.

According to Cresswell et al. (2003), the explanatory design as a sequential descriptive design consists of two steps, first the quantitative research and then the qualitative phase, which aims to explain or enhance the quantitative results. While this study used a student questionnaire as the primary quantitative method for data

collection, interviews were also used to obtain in-depth feedback and further exploration.

The four dimensions of the CIPP model correspond to the four research questions in this study: in the context evaluation, the aim was to analyze the achievement of the music courses' objectives in the audio engineering program. These results provided references to evaluate the courses' goals and design improvement strategies. The input evaluation next assessed the preparedness factors of the music courses and explained the relevance of the students' characteristics and the music courses' quality. These findings helped improve vocational training and modify enrollment requirements. Then, the process evaluation examined the whole teaching process in the music courses. It provided an overview of the courses' implementation as well and helped teachers find inquiries in the teaching process through their intuition. Finally, the product evaluation described the acquisition of music knowledge of students. These results provided the outcomes evaluation and practical suggestions for the music courses to better serve the audio industry.

### ***Subjects***

In an explanatory design, the qualitative phase has priority in the participant selection model, and the purpose of the quantitative phase is to identify and purposefully select participants (Creswell & Garrett, 2008). In this research, the target population in the quantitative phase consisted of all the undergraduate audio engineering students in Shanxi. After the data collection and preliminary analysis, twelve music educators related to the audio engineering field were invited for interviews to provide more information.

According to the latest official statistics from MEPRC, there are currently about 4,000 undergraduates majoring in audio engineering (MEPRC, 2020). Public data from the Shanxi Provincial Education Department (2021) shows that, until 2021, there were 327 audio engineering undergraduates in Shanxi Province, ranking second only to Beijing (MEPRC, 2020). The

latest National College Undergraduate Education and Teaching Quality Report (MEPRC, 2020) showed that Shanxi's audio engineering educational level is higher than average, which has certain representativeness as a research object.

After obtaining permission from the two recording departments, questionnaires were distributed to all audio engineering undergraduates in Shanxi. Three hundred students effectively responded in a simple random manner (i.e., 92% of the population). The sample size was more than necessary (Yamane, 1973). As a member of the Audio Professional Committee of China, the researcher met the conditions to invite twelve music lecturers and audio professors to participate in the interviews. They all have extensive teaching experiences in audio engineering departments and were eager to share their perspectives.

### ***Research Instruments***

A student questionnaire and interviews were used to answer the RQs.

**Student Questionnaire.** One researcher-designed questionnaire was used as this study's primary measurement. The researcher did an extensive review of the CIPP model by analyzing related research studies, books, journals, and articles. The questionnaire was further developed after reviewing official MEPRC evaluation documents and the syllabus content of audio engineering programs at various universities and colleges. Additional items were created based on the interviews to obtain extensive opinions. A five-point Likert scale ranging from 1 being "do not agree at all" to 5 being "strongly agree" was utilized to present the respondents' personal perspectives.

Three music lecturers and two audio professors from the Communication University of China (CUC) and the Beijing Film Academy (BFA) assessed the questionnaire's validity based on their rich teaching experience. Interviews were used to complement the questionnaire and obtain more opinions. The raters also gave their observations for amendments and proposals. Based on their views, the questionnaire was revised in detail, and

the number of items increased to 66. Items with irrelevant content, unclear wording, ambiguous meaning, poor phrasing of statements, and the overall preliminary design were revised. The reliability of the questionnaire's internal consistency was measured using Cronbach's alpha for the four factors of context, input, process, and product. Table 1 shows the Cronbach's alpha reliability coefficients.

Table 1. Cronbach's alpha reliability coefficients of the questionnaire

Factors	Cronbach's Alpha
Context Evaluation	.77
Input Evaluation	.74
Process Evaluation	.93
Product Evaluation	.91

The reliability coefficients of the four contents ranged from .74 to .93, and that of the instrument was .91, indicating that the questionnaire showed homogeneity and a high degree of reliability.

**Interviews.** Stufflebeam and Coryn (2014) specified that using mixed-methods in data collection can enhance result validity by allowing researchers to obtain more valid information. The five reviewers in this study assessed the suitability and relevance of the items to the investigated subject to achieve the required validity and reliability. Combined with the preliminary findings from the questionnaire, the researchers revised several questions and improved clarity based on the professors' recommendations.

To obtain more information, face-to-face and telephone interviews were conducted with twelve music teachers and audio professors from CUSX, Shanxi University (SXU), CUC, BFA, and the Communication University of Zhejiang (CUZ). Each interview lasted 40–45 minutes. The interviews involved a concise summary of the research and several semi-structured questions about the

context, input, process, and product evaluations. The questions also asked for their views about the primary data and their perspectives on career development. These questions enabled the participants to verbally express and elaborate on their views and experiences with implementing music education in the audio engineering field.

### ***Data Analysis Procedures***

Descriptive statistics are the fundamental method by which music education researchers can analyze their data to report participants' characteristics and thereby the generalizability of the sample to the overall population or their particular context (Joshua, 2018). In this research, descriptive statistics were thus used as the primary procedure. The multiple regression analysis to answer RQ 2 determined whether a significant relationship exists between the education level and input variables. The seven independent variables consisted of the students' music learning background, course structure, teaching facilities, the music teachers' level, learning methods, learning attitudes, and credit requirements, which were derived from Shanxi's 2020 enrollment requirements and the 2016 Evaluation of Undergraduate Education Handbook issued by MEPRC. The dependent variables were the achievement aspects of music education in the audio engineering program. The information from the interviews supplemented and improved RQ 4.

### **Results**

The researcher analyzed the questionnaire data to answer the four questions about the context, input, process, and product evaluation. The qualitative data obtained from the interviews were included to support the conclusion.

**RQ1:** *What are the current levels of music courses that achieve the expected objectives in the audio engineering programs in Shanxi, China using the CIPP model?*

The purpose of RQ1 is to evaluate the rationality and achievement of the objectives in music courses in undergraduate audio engineering programs in Shanxi.

The data were collected and evaluated based on three aspects, Overall Goals Evaluation (item 1), Teaching Goals Evaluation (item 2–9), and Ability Goals Evaluation (item 10–16), according to the Handbook of Undergraduate Education Evaluation Standard (2021) issued by MEPRC and the music courses’ syllabus of audio engineering program in Shanxi. In addition, 13 items relating to barriers were also presented to determine the main factors restricting development.

The descriptive statistics using means and standard deviations are summarized in Table 2. The mean score of agreeing on all the objectives was 4.27 (SD=.98). The means ranged between 3.95 and 4.37, and standard deviations were .93 and 1.13. The data implies that the aims and objectives stated in the syllabus of music courses were positively evaluated. Only one ability goal, Instrument playing ability, achieved the mean rating below 4 (3.94). Based on their lower means, objectives of 5, 11 & 14 in terms of musical performance and composition deserve attention.

Table 2. Context evaluation

Scale	Item Statement	Mean	Std. Deviation
Overall Goals Evaluation	1. To what degree have the music courses in the audio engineering programs achieved the overall objectives?	4.25	.74
Teaching Goals Evaluation	2. To acquire knowledge of music concepts	4.33	1.03
	3. To understand the notation system and writing skills	4.33	.94
	4. To read and notate music	4.33	.99
	5. To obtain skills of singing or playing instruments	4.20	1.03
	6. To evaluate music performances and compositions	4.32	.96
	7. To explore sound effects of various instruments	4.32	.99
	8. To understand audiences’ feelings	4.33	.99
	9. To improve recording ability	4.37	.95



Ability Goals	10. Music reading ability	4.25	1.03
Evaluation	11. Instrument playing ability	3.94	1.13
	12. Symphony understanding ability	4.25	1.03
	13. Music analysis ability	4.35	.93
	14. Composition ability	4.06	1.10
	15. Music evaluation ability	4.34	.97
	16. Recording application ability	4.29	.96
<i>Total (N=300)</i>		4.27	.98

The 13 items shown in Table 3 were derived from the Handbook of Undergraduate Education Evaluation Standard issued by MEPRC (2021). Means and standard deviations were utilized in this part.

The results in Table 3 show that item (13), the lack of support from schools, was an essential factor that ranked first among the 13 items relating to barriers to achieving the objectives with a weighted mean score of 3.22 (SD=1.41). The following item (12) noted the lack of facilities (mean=2.94, SD=1.48). Items 8, 2, and 7 had the three lowest mean scores, showing that the music education objectives were slightly affected by personal learning attitudes and abilities. The lack of dependable support from the institutions and the lack of opportunities for experimentation and application in the music curriculum have significantly impacted the achievement of music courses' objectives.

Table 3. Context evaluation: means and standard deviations of barriers

Barrier Statements	Mean	Std. Deviation
1. The music curriculum is not useful to me	2.21	1.39
2. I have already learned the content	2.02	1.30
3. I don't like the teacher	2.18	1.41
4. Music courses are boring	2.20	1.36
5. I can't follow fully without fundamental music skills	2.14	1.31
6. The class is too large	2.27	1.37
7. The music courses lack coherence and cohesion between them	2.04	1.27
8. The music courses lack coherence and cohesion with my ideal job	1.95	1.24
9. The length of music curriculum are insufficient	2.67	1.40
10. It is not viewed as a serious core academic curriculum	2.22	1.25
11. The examination is too difficult to get the credits	2.34	1.30
12. The music classes lack recording facilities	2.94	1.48
13. The music classes lack support from the schools	3.22	1.41

**RQ2:** *To what extent does the input of the music courses in the audio engineering programs help achieve educational requirements using the CIPP model?*

RQ2 relates to the relationship between the music teaching achievement level and the input factors in the music courses in audio engineering programs. Descriptive statistics used means and standard deviations to describe the respondents' attitudes about the courses' readiness level. Following that, the Pearson correlations and multiple regression analysis was employed to determine whether a significant relationship exists between the education level and the input variables.

Table 4 shows seven input items derived from the enrollment requirements (2018) of the participating universities and colleges and the evaluation system of undergraduate education issued by MEPRC (2021). Means score and standard deviations were used to

describe the students' evaluation of the music courses' input factors.

Table 4. Input evaluation: means and standard deviations

Item Statement	Mean	Std. Deviation
1. Music learning background	4.05	1.09
2. Structures of music courses	4.19	.98
3. Teaching facilities	3.92	1.06
4. Professional teachers	4.15	.96
5. Teaching and learning methods	4.11	.99
6. Learning attitudes	3.98	1.04
7. Credit requirement	2.75	1.51
<i>Total (N=300)</i>	3.88	1.02

As shown in the table above, the impact of inputs on the music courses was positive. Students have very positive attitudes concerning the structure of music courses, with a mean value of 4.19 (SD=.98). The general mean of students' responses to the contribution inputs was 3.88, with a standard deviation of 1.02. The data indicated that the students believed the inputs contribute to achieving the educational requirements. However, some students had negative emotions. They had only passing the exam as their primary learning aim (M=2.75, SD= 1.51).

As can be seen in Table 5, Pearson correlations were computed to determine the relationships between the 7 Input factors and the output level of the music courses. The results indicated that there are positive and significant correlation between the variables.

Table 5. Input evaluation: Pearson correlations

	1.Music learning background	2.Structures of music courses	3.Teaching facilities	4.Professional teachers	5.Teaching and learning methods	6.Learning attitudes	7.Credit requirement
Product Evaluation							
Pearson Correlation	.313**	.453**	.445**	.480**	.521**	-.147*	.518**
Sig.	.000	.000	.000	.000	.000	.011	.000
N	300	300	300	300	300	300	300

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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

The regression analysis was essential to examine the correlation and impact of input components on the overall evaluation of courses. In this section, the achievement evaluation of the music courses (one subscale of the product evaluation survey) was used as the dependent variable. Meanwhile, the seven input factors were used as the independent variables.

Table 6. Input evaluation: model summary of regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.597 <sup>a</sup>	.357	.341	.786

a. Dependent Variable: The achievement of the music curriculum in the audio engineering program

Table 7. Input evaluation: ANOVA of regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.999	7	14.286	23.125	.000 <sup>b</sup>
	Residual	180.387	292	.618		
	Total	280.387	299			

a. Dependent Variable: The achievement of the music courses in audio engineering programs

b. Predictors: (Constant), learning background, courses structure, facilities, professional teacher, learning methods, personal attitudes, and credit requirement

As indicated in Table 6 the Model R Square value is 0.357, which means that the independent variable can explain 35.7% of the variance in the composite score of the dependent variable. ANOVA data (Table 7) showed that the model was significant in explaining the variance in the composite score of the effectiveness evaluation ( $F=23.125, P=0.000<0.05$ ).

Table 8. Input evaluation: regression coefficients

Model	Unstandardized		Standardized	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.422	.264		5.380	.000
1. Students' music learning background	-.021	.055	-.023	-.375	.708
2. Structures of music courses	.081	.074	.082	1.089	.277
3. Teaching facilities	.100	.058	.110	1.730	.085
4. Professional teachers	.046	.077	.046	.600	.549
5. Teaching and learning methods	.220	.072	.224	3.056	.002*
6. Students' learning attitudes	.241	.061	.260	3.976	.000*
7. Credit requirement	-.020	.031	-.031	-.638	.524

Table 8 shows the results of the multiple regression analysis and indicates that two variables were statistically significant in explaining the input evaluation of the music courses in audio engineering programs. The students' attitudes with an unstandardized beta=0.241 ( $t=3.976, p=0.000 <0.01$ ) means that the students' initiative and enthusiasm are necessary for music learning. The regression data for the teaching and learning methods is 0.220 ( $t=3.056, p=0.002 <0.01$ ), meaning that full understanding of the music teaching and learning strategies has a significant positive impact relationship with the achievement of the music courses. The other independent variables have no impact relationship with achievement ( $p$ -value is not significant). The item of students' music learning background was the least important factor.

**RQ 3:** *To what extent does the process of the music courses in the audio engineering programs influence students' acceptance of knowledge using the CIPP model?*

RQ3 relates to the teaching approaches and strategies used in the music courses in audio engineering programs, measured using descriptive statistics. The five process evaluation aspects—teaching methods (7 items), teachers' characters (6 items), teaching materials (6 items), course coherence, and feedback—were derived from the Evaluation System of Undergraduate Education issued by MEPRC (2021).

Table 9. Process evaluation

Scale	Item Statement	Mean	Std. Deviation
Teaching Methods Evaluation	1. Demonstration	4.13	.97
	2. Recording practice	4.31	.90
	3. Group practice	4.07	.95
	4. Discussion	4.11	.98
	5. Performance	4.15	1.01
	6. DAW* utilization	4.21	.97
	7. Homework	3.97	.97
Total (N=300)		4.14	.96
Teachers' Characters Evaluation	1. Education background	3.86	1.19
	2. Gender	2.61	1.41
	3. Age	2.73	1.41
	4. Personality	3.30	1.38
	5. Recording skills	4.03	1.06
	6. Strict attitude	4.30	.96
Total (N=300)		3.47	1.24
Teaching Materials Evaluation	1. Instruments	4.16	.96
	2. Music notes	4.22	.94
	3. Textbook	4.06	.98
	4. Albums	4.16	.96
	5. Recording devices	4.10	.99
	6. Multimedia	4.06	1.04
Total (N=300)		4.13	.98
Courses Coherence Evaluation	Rational and close coherence between music courses	4.02	.95
Feedback Evaluation	Appropriate feedback and response	4.02	.99

\*DAW: Digital audio workstation

An analysis of items relating to the music teaching process in undergraduate audio engineering programs is shown in Table 9. Means and standard deviations were used to describe the students' evaluation of the whole learning process.

The items relating to the teaching process in music courses were evaluated highly. As can be seen from the table above, the teaching methods were successful in achieving the goal of education ( $M=4.14$ ). Based on the students' perspective, the recording practice best affects the learning process (mean=4.31,  $SD=.89$ ). Using the digital audio workstation in class seems like a better strategy, with mean=4.21,  $SD=.97$ . Other items, such as music performance, demonstration, discussion, and group work with mean=4.11. This showed that some generally used teaching strategies have no association with exceptional performance in music courses in undergraduate audio engineering programs. Homework, a conventional teaching strategy, has a low evaluation in this part (mean=3.97,  $SD=.97$ ). This does not mean that after-school jobs are useless but music teachers should consider their content and quality.

The students believed that the teachers' rigorous teaching attitude was the most significant factor affecting the learning effect of the music courses (mean=4.30,  $SD=.96$ ). In addition, if the teacher has guaranteed professional knowledge of recording (mean=4.03,  $SD=1.06$ ), it would increase students' professional learning. The data also showed that the teachers' age (mean=2.73) and gender (mean=2.61) have little effect on students' learning effectiveness.

The teaching materials evaluation showed that the mean of students' answers regarding the extent of the contribution to meeting the teaching requirements were high ( $M=4.13$ ,  $SD=.98$ ), indicating that achieving the objectives of audio engineering programs was successful.

The data showed that the music courses were well connected (mean=4.02). It also showed that the teachers provided students with smoother communication and feedback conditions (mean=4.02), which helped teachers understand the students'

learning situation and to make timely adjustments and improvements.

**RQ 4:** *To what extent do the music courses meet both the educational needs of audio engineering students and the developmental requirements of the music industry in Shanxi, China using the CIPP model?*

The purpose of RQ4 is to assess the general and professional outcomes of the music courses in audio engineering programs. Table 10 shows the descriptive statistics of means and standard deviations.

Table 10. Product evaluation

Scale	Item Statement	Mean	Std. Deviation
General outcomes	To what extent do you agree that the music courses can improve the musical recording level and music industry development	4.22	.94
Professional outcomes	To what extent do you agree that the professional skills below have been improved after learning music courses		
	1. Imagination and creativity	4.18	.95
	2. Spirit of teamwork	4.05	.99
	3. Improve the level to perceive, perform, and respond to music	4.31	.90
	4. Understanding of music	4.39	.83
	5. Ability to make the aesthetic judgment in music	4.32	.90

Table 10 shows that the mean score was 4.22 with a SD of .94 for general outcomes evaluation. The data indicates that most students indicated positive attitudes regarding the professional results of music learning with no abnormal value in the data and with means ranging from 4.05–4.39. Overall, the data shows that the music courses have had a significant and profound influence on students’ future audio work, with a mean value higher than 4.

Twelve music teachers and audio professors participated in the interview. The qualitative results related to the following areas.



### **Music educational needs:**

Most participants believed that students do moderately well in acquiring knowledge and skills in the music courses. Five agreed that students understand music theory better than music practice due to the lack of time to practice and lack of exposure, as discussed in the context and process evaluation. Seven believed that the music learning time was insufficient and the teaching objectives were more uncertain. They suggested building a music curriculum system that emphasizes music application ability in the music recording field, distinct from the general music education. Three emphasized that music courses should be combined with proficient knowledge of audio engineering to enhance the students' professional level. Five of them mentioned that students with music learning backgrounds regularly scored better.

### **Audio engineering professional requirements:**

All the lecturers agreed that after taking the music courses, the students demonstrated some change in their recording ability and efficiency. Ten emphasized that the students had a deeper understanding and better communication with the music composers and performers after taking the courses. At the same time, learning the concepts, structure, composition, and analysis methods of musical works were also of great significance in improving students' creativity.

### **Career and social needs:**

Music education for audio engineering students is essential and effective (Sanders,1993). The participants admitted that the music courses are beneficial for enhancing the competitiveness of students in the music industry. However, two explained that promoting the music industry development in China was not apparent. The more significant purpose of the music courses is still to enhance students' professional quality.

## **Discussion**

**RQ1:** The students agreed that the music courses' objectives can all be reasonably achieved per the context evaluation. The learning purpose is precise, with the courses required to be

accurate and practical. In this study, the purpose of the context evaluation was to correctly evaluate the degree of completion of the music courses in formulating teaching goals, clarifying teaching plans, and ensuring teaching order rather than summarizing the students' perspectives. However, the music teaching arrangements should be based on the characteristics of the recording profession and be more specific for students. Combining the music courses' teaching goals with recording technology, appropriately adjusting the teaching content, emphasizing the practical applications, and simplifying the course content to achieve the teaching tasks better will make the courses more practical. The training of critical listening and reading skills should be emphasized among the goals of music lessons as well.

**RQ 2:** Regarding the findings relating to RQ2, the overall analysis revealed that the preparation provided by the music courses is helpful. However, not all factors had an impact on rationality and necessity.

Based on the analysis of input elements, understanding the structure of music courses is of great help in learning. This finding is consistent with Rage (2008), who conveyed that clearly understanding teaching objectives can help students better understand what they have learned. Music teachers should have specific audio knowledge to better grasp teaching and combine music knowledge with recording practice. However, the finding indicates that the excellent music learning backgrounds and music literacy are undue for the fresh, contrasting with the enrollment requirements. Equipment as an appropriate teaching component in the recording profession is not a major influencing factor either, indicating that utilizing various facilities in class is only an additional and not fundamental factor.

Based on the students' perspectives, most students maintain a positive attitude toward music learning, but some also show negative and passive emotions. The linear regression data showed that a music learning background is not as important as other factors. Simultaneously, the element that most influences the courses' rationality is the students' strong learning desire to learn.

**RQ 3:** The results of the data analysis related to process evaluation provided information about the teaching process. The significant findings mainly concerned the combination of traditional teaching methods, professional recording techniques, and students' attention to achievements. The general issues of the teaching process are not much different from other related research. Based on the mean scores, the students seemed to indicate that they prefer practical lessons over general strategies. At the same time, they have a higher acceptance of teaching methods combined with recording technology, which also fully reflects the uniqueness of audio engineering programs.

In terms of teacher characteristics, students attach importance to teachers' teaching attitudes and professional knowledge rather than general factors such as gender and age. This result provides reference for cultivating music instructors or lecturers in recording departments. Teachers should consider integrating and connecting music courses and professional knowledge, such as whether and how they should be linked. The data also showed that good information feedback and interaction could promote the effect of course learning. Specifically, the course results should indicate students' musical comprehensive abilities more objectively in place of written tests, which can be rigid and limited.

**RQ 4:** Product evaluation is an excellent way to provide information on a program's sustainability and transferability (Stufflebeam, 2003). Based on the analysis of the survey results, the achievement of the music courses is obvious. The music courses have a decisive guiding role in training students to improve their music ability, enhancing the efficiency and quality of recording work, enriching students' imagination and creativity, and promoting awareness of teamwork. However, the objective in the syllabi to improve students' music appreciation and aesthetic abilities through music courses were not relevant to the actual needs of the undergraduate audio engineering students. Some statements from the interviews received a medium or low

evaluation, such as those about improving the students' recording ability and improving the music industry.

## **Conclusion**

According to the results, most students tend to support all four CIPP evaluation components to a high degree. In particular, the following can be said: (1) The teaching objectives of the music courses in audio engineering programs should be more precise. This aligns with Walzer (2015), who stated that critical listening and fast reading abilities should be emphasized as the fundamentals of sound properties. (2) It is necessary to adjust admission standards and consider whether music performance is an essential admission requirement. The findings emphasize the examination of applicants' musical insights and passion. (3) Teachers should design a more effective course system for music education. The researcher suggests setting up open and elective music theory courses that invite students of different music levels to enroll. More experimental music courses in the professional program can also replace scattered and time-consuming music courses. (4) It is necessary to strengthen the construction of the music teaching team. Music lecturers with high music literacy and professional recording abilities should be cultivated to join the audio engineering teaching group. (5) Consistent with Rege (2008), who argued for accentuating technology integration in music classes, the music courses in the audio engineering program should include integrated strategies, such as combining music ability training with recording practice or holding classes in studios and music halls. (6) Due to the dramatic developments of audio technology, it is recommended that colleges and universities provide more support in terms of funds, teaching equipment, training venues and teaching strategies.

## **Recommendations for Future Research**

Based on the research results revealing the extent of music education development, the researcher suggests that future studies

can compare music courses and similar curricula in the audio engineering programs of other countries. Furthermore, the researcher recommends conducting a study to design a music curriculum for audio engineers that meets the various developmental needs of the music industry. Future research should also include comparative studies between music and other professional courses in audio engineering programs to improve the rationality and efficiency of this education field.

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**The Revitalization of *Zapin Sebat* in Sarawak by Majlis Seni Sarawak (MSS)**

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**Abstract**

This article examines the revitalization of *Zapin Sebat* by the Sarawak Arts Council (Majlis Seni Sarawak, MSS), a cultural agency under the Ministry of Tourism, Creative Industry, and Performing Arts (MTCP). *Zapin Sebat*, a Malay folk dance in Sarawak, derived its name from the place of origin, Kampung Sebat Melayu, Sematan. Since the early 1980s, the villagers gradually ceased to practice this *Zapin* due to the aging factor of the practitioners and/or beholders, as well as urbanization and migration. Upon realizing the critical situation of this dance form in the early 1990s, the Sarawak government decided to protect and revitalize the dance. This study utilizes a qualitative approach that focused on dance ethnography. This study also utilizes the participation-observation method and incorporates auto-ethnography. The main objectives of this article are to study the historical background and to investigate the initiative of *Zapin Sebat*'s revitalization by MSS. This article also examines the changes that have taken place when *Zapin Sebat* transitioned from the village to the proscenium stage during the revitalization process. The revitalization meets the state government's demands and preferences regarding the style and form while retaining as much of the former structure of *Zapin Sebat*. This article posits that *Zapin Sebat* is alive as a revitalized form as a result of the initiative that was undertaken by MSS and firmly stands as a marker of the *Melayu Sarawak* identity.

**Keywords:** Majlis Seni Sarawak, Revitalization, *Zapin Sebat*, Sarawak

## **Introduction**

*Zapin Sebat* originated from Kampung Sebat Melayu in Sematan, Sarawak. It is believed that Baiee Drahman was the creator of this dance. *Zapin Sebat* has lost its popularity and is no longer being practiced by the Kampung Sebat Melayu community since the late 1980s. This is due to the urbanization and settlement of the inhabitants in the town in search of better living, indirectly has embarked the slow disappearance of *Zapin Sebat* in the village. Kampung Sebat Melayu is located in the rural area that is far from Kuching, where most of the villagers settled in. The aging factor of the beholder also led to this predicament. The beholder of *Zapin Sebat*, Baiee Drahman and most of the villagers who have practiced this dance form were unable to teach the young generations as they were all above sixty years old. According to Jimah Drahman, the younger sister of Baiee Drahman, she said,

*Dah dalam ujung tahun 1980an kedakya, Zapin tok dah sik di main agik oleh dak abang kamek dengan cdak lain, apa cdak nya udah sik kongang gik nak betandak ngan ngajar cdak mudak-mudak. Nak mudak-mudak semua dh kerja, dah nikah kakya alu pindah, pulang kampung pun kadang-kadang jak. Mun sik raya sik balit. Tambah gik juak xda nembiak mudak nok maok betandak. Nasib bait ada cdak MSS atang kampong mok belajar Zapin Sebat, bruk ya lah abang kmk ngingat balit tarian dan ngajar cdak nya (Jimah Drahman, personal communication, 18 February 2019). [Trans. *Zapin* was no longer practised by my late brothers in the late 1980s since most of them were too old to teach the younger ones. Younger generations have grown up and established their own careers. They only return to the village on a few occasions. Meanwhile, since the practise has been discontinued, the younger children have not been exposed to*

this tradition. MSS came to our village to learn *Zapin* from the beholder, which was fortunate.]

Jimah Drahman shared the status of *Zapin Sebat* in the late 1980s that has shown that the aging factor of the beholder has contributed to the decline of *Zapin Sebat* in Kampung Sebat Melayu in Sematan. Another informant, Kamaruddin Mohe, also shared about the situation of *Zapin Sebat* in the village. He said,

*“Dalam tahun 1980an gia, rami sidak orang kampung berpindah dri kampung pegi ke Kuching atas sebab kerja. Ada juak yang pindah kerna bernikah ngan org kampung lain alu pindah juak. Dahya tinggal org lamak-lamak jak. Selain ya, suro lamak kampong tok tempat cdak beZapin dolok pun dah di ruboh kakya cdak molah masjid besar gik”*. (Kamaruddin Mohe, personal communication, 18 February 2019) [Trans. In the 1980s, most of the villagers move out to Kuching for work, while some of them also left to the other village as they were married with someone from other villages, they must follow their spouses. Other than that, *surau*, the place where they used to practice *Zapin*, now has been demolished in a way for them to build a bigger and much more comfortable mosque.]

Based on the conversation above, *Zapin Sebat* was discontinued in Kampung Sebat Melayu in the 1980s, and those situations mentioned above have led to the decline of *Zapin Sebat* dance tradition in the village. It declined as there were no successors from the younger generation. The youths in the village were reluctant to carry on the tradition. Furthermore, space posed as another problem for the continuation of the tradition. The *surau* was being upgraded to a new mosque, hence, dance was not permitted in the space. It was kept solely as a site of prayer. Another factor that was also cited as a challenge to the tradition is that experienced village folks began to take on full-time jobs, hence, had very little time to practice the form. Consequently, this dance tradition was discontinued.

While the dance lost its rural patronage and signalled a dying tradition, the Sarawak state, in the form of Majlis Seni Sarawak (MSS), a cultural agency under the Ministry of Tourism, Creative Industry and Performing Arts (MTCP), made efforts to preserve *Zapin Sebat* by restoring the village version in the early 1990s. MSS organized a *Zapin Sebat* workshop with Baiee Drahman in Kampung Sebat Melayu, and here, we address it as a revitalization program since the workshop is the initial step towards revitalizing the dance tradition.

This revitalization program was one of the efforts to meet the requirements for touristic purposes and axiomatically reflecting it in the culture of the *Melayu* Sarawak community. It assigned the responsibility to MSS in exerting centralized control over the arts and culture within Sarawak's communities. Through this initiative, the government has sought to revitalize and centralize the performing art traditions in Sarawak.

Every ethnic group in Sarawak has its own distinctive stories, cultural values, rituals, traditions, and cultures. Such ethnic groups are popular with different kinds of dance traditions. Almost all dance traditions are still actively being practiced in the villages at longhouses or houses. According to King (1990), Sarawak is a multicultural society consisting of more than thirty ethnic groups that hold their own dance traditions such as *Ajat Indu* of the Iban, *Datun Julud* of the Kenyah, *Mengarang* of the Melanau, *Nopeng* of the *Melayu Sarawak* and many more. Nevertheless, some of the dances mentioned above and a few others are no longer being practiced by the community in its place of origin, rather, it is performed actively outside the place of origin, including *Zapin Sebat*. These dance traditions are neglected by the beholders of tradition, master-teachers, practitioners, and villagers since the practice of *Zapin Sebat* has been discontinued.

To prevent old traditions from dying, the state, through government agencies such as MSS, is keen to restore and preserve the traditions for touristic purposes, and also represent the state for national dance competition. The main objective of establishing the cultural agency under the Ministry of Tourism, Creative Industry,

and Performing Arts (henceforth, MTCP) is to revive these dances and present these in different settings/spaces, such as proscenium stages and other stages for tourists and state functions. While the beholders were incapable to continue the art forms, the state continued to believe that there is hope for these dances if they are refashioned and promoted according to current needs for the continuation of the tradition for future generations. Therefore, this article investigates the historical background and government's initiatives to protect *Zapin Sebat* from being lost. Besides, this article also examines changes in the transition of *Zapin Sebat* from the village to the proscenium stage during the revitalization process by MSS.

### **Research Methodology**

This study utilizes a qualitative approach that focuses on dance ethnography. Research data were collected through fieldwork as primary resources and also the secondary resources were also referred to support the study on *Zapin Sebat*. Before conducting fieldwork, the library's secondary resources were always referred to and accessed all materials about the *Melayu Sarawak* community's history, socio-cultural, and performing arts in online sources. This study utilizes emic and *etic* approaches, where we positioned ourselves as practitioners-researchers-scholars who examine and analyse the findings of this study. This study uses the combination of anthropological and choreological approaches to study the dance configuration as a culture. The observation of the performances of *Zapin Sebat* is crucial, therefore, this study also applies the participation-observation approach to embody the dance movements, and to learn the compositions, as well as the structure in the movement and in the performance of *Zapin Sebat*. The first author has incorporated his auto-ethnography in this writing since he has embodied the experience of *Zapin Sebat*.

This study aims to be a critical discourse about the historical background and the revitalization of *Zapin Sebat*. Thus, secondary resources are fundamental for framing the history of the

performing arts of *Melayu Sarawak*, specifically *Zapin*, in understanding the previous scholars' perspectives. Most of Sarawak's *Zapin* tradition is believed to come from the former kingdom or Sultanates of Sambas in the Southwest corner of Kalimantan and Sultanate of Brunei all along the coastal region of Sarawak to the Westcoast of Sabah back in the 15<sup>th</sup> century. Both are Malay kingdoms that are also interconnected to each other in the lineage of *Melayu Sarawak*. In addition, the first emergence of *Zapin* in the court was in Sumatra and Kalimantan (Mohd Anis Md Nor, 1993). Even though some of the views are not clearly stated about the exact period of emergence of *Zapin* in Sarawak, this study managed to trace the temporality, genealogy, and theories to support *Zapin Sebat*.

The fieldwork was conducted from 2018 - 2019 at two main locations that include Kampung Sebat Melayu in Sematan and the office Majlis Seni Sarawak in Kuching. The beholder, Baiee Drahma, passed away, however, the first author has met and interviewed another key family member, Jimah Drahma, the younger sister of the beholder. The first author also interviewed Kamaruddin Mohe and a few villagers who live in the village. Meanwhile, during the fieldwork at MSS, the first author attended additional rehearsals that needed all the dancers including himself to practice *Zapin Sebat*. The first author observed and participated in dance rehearsals. Throughout the dance rehearsals, the first author witnessed and participated to learn and to master the dance form before going into analysis and to write about it. Besides attending the dance rehearsals, the first author attended a meeting with the organization committee. This meeting gave a fresh insight to know the people including the administrative staff, choreographers, trainers, musicians, and singers.

Sharkawi Amit, the current Chief Executive Officer of MSS, was also interviewed for this project. He was one of the important persons in *Zapin Sebat*'s revitalization program when it was first initiated in the early 1990s with other MSS' dancers. Some of the dancers and trainers who were involved during the revival program

are Rahamah Mohamad Ekbar, Jamilah Razali, and Mastuyah Bakery. They were also interviewed for this research.

Apart from interviewing the current dancers and choreographers of MSS, Rezzuandy Penyarang, Helmi, Sharifah Sapura Wan Hamid, and Adzhar Julaihi, the former dancers and choreographers from MSS were also interviewed to get further information on how *Zapin Sebat* continued to be practiced in present day. During the fieldwork in Kuching, the first author watched a performance by MSS, and learned about MSS's version of *Zapin Sebat* from Rezzuandy. This study also used the approach of participation-observation by participating in *Zapin Sebat* workshop by MSS in Bintulu conducted by Sharkawi Amit and his trainers, Jamilah and Mastuyah. He stated that *Zapin Sebat* by MSS is not the same as the village's version as it is more standardized and must follow the sequence arranged by MSS. The *Zapin Sebat* workshop was conducted in Dewan Sri Kenyalang at Universiti Putra Malaysia Kampus Bintulu. It targeted local and international students from Indonesia in October 2018.

### **The Historical Background of *Zapin Sebat* in Sarawak**

According to Mohd Anis Md Nor<sup>i</sup> (1993), *Zapin* derives from the *zafana* dance tradition of the Arabs from Hadhramaut, Southern Arabia, in which groups of men danced at weddings. Migration from Hadhramaut to Malaysia resulted in a Malay adaptation, *Zapin Melayu*, which refined the movements of *Zapin Arab* in accordance with South-East Asian aesthetics. Some of the examples are *Zapin Sebat*, *Zapin Sindang*, and *Zapin Kuching* of the *Melayu* Sarawak, and *Zapin Suara Siam* of Tidung people in Tawau, East Coast of Sabah, *Zapin Pekan* and *Zapin Raub* of Pahang, *Zapin Melayu Johor*, and *Zapin Pekajang* of Johor. *Zapin* was first performed in Johor, the earliest state to carry out research and effort in conserving and revitalizing the *Zapin*.

*Zapin* functioned mainly as an entertainment during its early emergence in Sarawak with other arts forms such as *bergendang*<sup>ii</sup>, *bermukun*<sup>iii</sup>, and *nopeng*<sup>iv</sup>. These are usually performed and danced in wedding celebrations, wedding engagements, and thanksgiving

ceremonies. Based on the interview with a key informant, Sharkawi Amit, the *Zapin* tradition in Sarawak was generalized under the umbrella of *Zapin Asli Sarawak* (Sharkawi Amit, personal communication, 25 May 2019). There are five forms of *Zapin* that have been named based on their place of origins, such as *Zapin Sebat*, founded by Baiee Drahman from Kampung Sebat Melayu in Sematan, *Zapin Simanggang* founded by Basri Anyut from Kampung Hilir in Simanggang, *Zapin Saratok* founded by Daud Ule from Kampung Melango Lamak in Saratok, *Zapin Sindang* founded by Nawi from Kampung Sindang in Kota Samarahan and *Zapin Kuching* founded by Kushairi @ Kombok from Kampung Badarsah in Kuching (Mohd. Hafzal Aziz, 2016).

*Zapin* in Sarawak emphasizes footwork as they are dominant compared to arm movements (Sharkawi Amit, 2000). The technique focuses on the feet movement, the control, and placement of body weight, and also the body posture. Arm movements are also important and complement the movement of the feet and body. *Zapin Sebat* symbolizes movements being hit by the sea waves whilst on a schooner. The uniqueness of *Zapin Sebat* is that the movements are not grounded. The dance movements require dancers to control their body weight, and to balance their bodies while executing the dance motifs. The arm movements have specific meanings in the dance. For example, the arm movements in *Zapin Sebat* depict the movements of pedalling the schooner horizontally to the sides in circular pathways. This movement is derived from the everyday life of the people in the village. They used to travel on a schooner in the sea. The traveling or maritime migration of the Malay people also contributed to the emergence and spread of the *Zapin* tradition.

Most of Sarawak's *Zapin* tradition can be traced back to the former kingdom or Sultanates of Sambas in the Southwest corner of Kalimantan and Sultanate of Brunei along the coastal region of Sarawak to the west-coast of Sabah back in the 16<sup>th</sup> century. The first emergence of *Zapin* in the court was in Sumatra and Kalimantan (Mohd Anis Md Nor, 1993). Malays in Sambas is proud of the refining movements of *Zapin* that are very much



associated with the metaphors of the sea, metaphors of the river, and matters connecting them with the nature. The movements in *Zapin* imitate the flora and fauna. For example, it features, among others, *sembada*' (a kind of insect found in the sand near the coastal area), *nyiur melambai* (waving of the coconut leaves), and *susun sirih* (arranging of the betel leaves). Sambas tradition has contributed significantly to the invention of *Zapin Sebat* by Baiee Drahman. He learned *Zapin* from Wan Ismail, a *Zapin* master-teacher who hailed from Sambas and settled in Sematan. Wan Ismail is believed to have learned one of the *jepin* forms of West Kalimantan that existed after the spread of Islam to the Sultanate of Sambas, during the reign of Raja Tengah in the 16<sup>th</sup> century (Sharkawi Amit, 2000). Abdul Muin Ikram (1998) also mentioned that the traders and settlers from Arab introduced *jepin* in West Kalimantan as they spread Islam in the 16<sup>th</sup> century. Therefore, the connection of the historical background of *Zapin* tradition by the Sultanate of Sambas and the emergence of *Zapin* in Sarawak is depicted in the narrative of *Zapin Sebat*.

In the early years, *Zapin* played a central role as an important social entertainment in Malay weddings. *Zapin* was also formerly a part of religious celebrations associated with *Maulud Nabi*<sup>v</sup>, and also part of the entertainment after *Isya*'s prayer. In the village, *Zapin Sebat* was performed by invited performers and wedding guests on the main veranda of the house or in a big tent in the courtyard of the house. The performers were exclusively male because women were not allowed to perform the dance. This was a customary practice to preserve social courtesy and female modesty. Women were not allowed to dance in public. However, they were allowed to play musical instruments as accompaniments such as *gendang* (Malay drums). Based on the personal communication with Hajah Jimah, she said,

*Dolok abang kamek, abang Baiee dengan abang-abang kamek nok lain jak yang betandak Zapin. Daknya betandak atas kapet, ditengah suro, kmk dengan beberapa orang agik perempuan lain bermain gendang jak sik betandak, cdak nya*

*laki jak betandak* (Jimah Drahman, personal communication, 18 February 2019). [Trans. In the olden days, my brother, Baiee together with the other brothers performed this *Zapin*. They were dancing in the middle of a rug in the *surau*. Few women played instrument such as, *gendang* (Malay drums), including myself].

Based on the statement above, men “*betandak*” *Zapin*, including Baiee Drahman and his brothers. “*Betandak*” can be also regarded as “playing *Zapin*” on a standard size rug in the middle of *surau* with the accompaniment of the music ensemble. The music ensemble in the performance of *Zapin Sebat* consisted of *gendang* and *tar* or *hadrah* played by the women. However, *gambus*, a pear-shaped instrument derived from the Middle Eastern ‘ud, was played only by men. This demonstrates the patriarchal power in the performance of *Zapin*. *Zapin Sebat* was presented in the form of *main* or ‘play-performance’, a tradition that was popular from the 1940s to the late 1970s. Mohd Anis Md Nor (2001) theorized “play-performance” as a specific structured movement system in which everyone participates within the performative space. He explained that *Zapin* structured movement system is a “play-performance” in which all could participate that is a recreational product, rather than a process. It involves the sharing of space and the interaction of community members who are both performers and spectators. *Main* could also mean performing musical instruments (*musicking*) and performing structured movement systems likened to playing a game of dance (Mohd Anis Md Nor, 2001, pp. 238). The practitioners of *Zapin Sebat* practice in the village before the revitalization by MSS considered performing *Zapin Sebat* as a game or play, *main*.

*Zapin Sebat* performance was also commonly held during wedding celebrations. It served not only as an occasion for socializing and public viewing but also as an opportunity for any male members in the community to participate and *bermain Zapin*. The participatory dance required the ability to engage and remember the sequences of dance motifs performed. The dancers

had the freedom to join, remain, or leave the dance space at any time during the repetitive cycles of dance motifs. Dancers would dance together in pairs of male-male, displaying dance motifs and juxtapositions of dance sequences while females remain as musical accompanists.

### **The Revitalization of *Zapin Sebat* by Majlis Seni Sarawak (MSS)**

This section details the revitalization of *Zapin Sebat* by MSS in the early 1990s. This study acknowledges the role of MSS in the state of Sarawak as a cultural agency that control the arts, culture, and heritage of Sarawak. Revitalization is defined as a process that happens when any dance traditions are orally transmitted through teaching or rote learning. Revitalization of a dance tradition by a person or a group of performers would also entail personal or group biases, preferences, and tolerances towards certain styles or forms (Mohd Anis Md Nor, 2001). While revitalizing any dance forms, personal biases happen while considering few preferences in qualifying the dance movements taken from the beholder that will undergo a few processes during the revitalization. The preferences may come from the organization that initiates the revitalization and it must follow their demands, for example, to fulfil their visions or missions in preserving traditional dances to represent the community or its own organization. This can be observed in *Zapin Sebat*'s revitalization by MSS. Towards certain tolerances in the styles or form, *Zapin Sebat* may be communal or personal, but the traditions are flexible towards any adaptation and change as time passes. Revitalizing a dance form also includes the re-staging variant versions of the dance forms that were appropriated for the staged performances in the last few decades. When *Zapin Sebat* is performed by different generations, it presents a new cultural meaning while it retains the past in the present.

Upon the revitalization of *Zapin Sebat*, MSS restructured the dance into a new revitalized dance form for stage performance. The revitalization serves as means for fundamental development of

the performing arts in Sarawak as well as in planning for the future of the performing arts and to safeguard the dance tradition. The revitalized version of *Zapin Sebat* has developed and has been performed actively within Sarawak during state occasions, tourism platforms, and dance competitions. It has also spread to Peninsular Malaysia after it was first performed in 1998 at the Festival *Zapin Nusantara* organized by the government of Johor Darul Takzim through Yayasan Warisan Johor (YWJ).

Sharkawi Amit also mentioned that MSS went to Kampung Sebat Melayu in Sematan to do fieldwork and revitalize *Zapin Sebat* in the early 1990s (Sharkawi Amit, personal communication, 25 May 2019). After the decline of *Zapin Sebat in the village*, Sharkawi had seen the potential in this dance tradition to be a marker of the state identity. Hence, MSS exercised control over *Zapin Sebat*.

*“Masa bengkel ya kamek orang belajar gerak Zapin Sebat dengan Haji Baiee. Masa ya nya agik sihat alhamdulillah dapat ngajar macam ney gerak Zapin tok. Masa ya Zapin tok lom ada nama, hanya ditungguh Zapin ajak. Udah lekak bengkel ya baruk MSS netap nama Zapin Sebat sempena nama kampung Haji Baiee, Kampung Sebat Melayu.”* (Rahamah Akbar, personal communication, 20 May 2019). [Trans. During the workshop, we learned the movements or dance motifs of *Zapin Sebat* with the beholder, Baiee Drahman. He was still able to teach this dance tradition to all of us. *Zapin Sebat* does not have any specific name as it was given a name after the village of Baiee Drahman, Kampung Sebat Melayu, by MSS.]

Based on the statement above by one of the dancers, MSS had a fruitful workshop session with the late Baiee Drahman. During that time, he was able to teach and transmit the movements to the dancers as well as the history of *Zapin Sebat*. Sharkawi Amit also said,

*“Kamek yang telah menyusun cerita ataupun naratif dlm Zapin Sebat berdasarkan apa yang telah dicerita dan dipadai oleh Haji Baiee. Nya nyerita ngan kamek lekakya kamek nyusun agik supaya cerita nya tek agik kacak susunannya dan sesuai dengan struktur sebuah Zapin”* (Sharkawi Amit, personal communication, 25 May 2019). [Trans. I am the one who rearranged the plot or narrative of *Zapin Sebat* based on what was told and narrated by the beholder, the late Baiee Drahan to suit the structure of a *Zapin* performance.]

Based on the above information, MSS gained trust from the beholder to preserve the *Zapin Sebat* dance tradition. MSS attained the power and access in giving a name to this *Zapin* after its origin since it was not known as *Zapin Sebat* previously. It was a name invented by MSS. MSS has also formed a structure for *Zapin Sebat*.

*“Zapin Sebat dolok sekda gerak perempuan, jadi disebabkan dlm KPS ada penari perempuan serta bila mana persembahan maok duak-duak gender ada atas pentas, jadi gerak perempuan diolah semula ngekot gerak-gerak dak laki tetapi lebih sesuai dengan perempuan pun gayalah”* (Mastuyah Bakery, personal communication, 20 May 2019). [Trans. Originally, there were no specific dance motifs of *Zapin Sebat* for women as they were not allowed to dance. To fulfil the demand of KPS to include women in *Zapin Sebat* performance, dance movements for female dancers were created following the dance movements of the male, but in a way more graceful style.]

*“Kamek orang, iaitu KPS dolok betandak Zapin Sebat ditambah dengan penari perempuan. Mula-mula dolok tarian tok sekda perempuan, ditandak oleh dak laki jak”* (Adzhar Julaihi, personal communication, 22 May 2019). [Trans. We, represented KPS, performed *Zapin Sebat* with the addition of female dancers. It did not include female dancers of the olden days.]

Other than that, the inclusion of female dancers is also one of the changes that MSS has made in the revitalization of *Zapin Sebat*. Traditionally, the performers of *Zapin Sebat* were exclusively male but contemporary *Zapin* practices or performances allow participation of women.

*“Zapin Sebat tok dolok lagunya makey dak gendang dengan hadrah jak. Dalam masa sama, lagu Ros Kalas tengah nait juak, jadi lagu tok digubah ngekot rentak Zapin pakey ngiring persembahan Zapin Sebat”* (Mastuyah Bakery, personal communication, 20 May 2019). [Trans. *Zapin Sebat* was performed with the music ensemble that only included *gendang* and *hadrah*. At the same time, *Ros Kalas* was a hit and MSS recomposed this song following the rhythms of *Zapin* to accompany the performance of *Zapin Sebat*.]

MSS also invented the movements specifically for females based on the dance motifs of the males to fulfil the demands to have both genders performing *Zapin Sebat* on stage. In addition to this, MSS also created a special song to accompany the performance of *Zapin Sebat* entitled, *Roskalas*, sung by Safar Gafar, a singer, and a former dancer of KPS. By analyzing the statements from the informants and practitioners of *Zapin Sebat* from MSS, this study observed that the revitalized version is now under the guardianship of MSS. MSS reconstructed and restructured *Zapin Sebat* to meet the requirements of stage performance. The state is the new gatekeeper of this tradition since the community of Kampung Sebat Melayu has not preserved *Zapin Sebat* in the village.

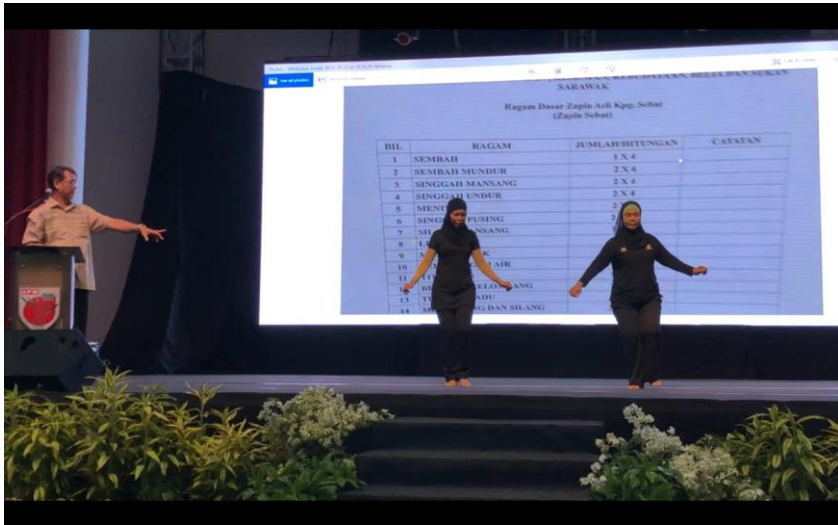


Figure 1: A lecture and demonstration of *Zapin Sebat* conducted by MSS during the Festival Tari Borneo in UPM Kampus Bintulu in October 2018.  
(Source: Author 1)

Referring to Figure 1, MSS has conducted a lecture and demonstration (lec-dem) on *Zapin Sebat* during the Festival Tari Borneo (Borneo Dance Festival) in UPM Kampus Bintulu in October 2018. Sharkawi Amit, who conducted the lecture with two demonstrators, Jamilah and Mastuyah, said,

*“Setiap persembahan Zapin Sebat mesti ngekot nya mpun susunan ragam dengan struktur persembahan yang telah ditetapkan sepertimana yang kita akan pelajari dalam bengkel kita hari ini”* (Sharkawi Amit, personal communication, 18 October 2018). [Trans. *Zapin Sebat* performance must follow the correct sequence of dance motifs and structure of the performance that you will learn in today’s workshop.]

The situation above shows the power of MSS as the new gatekeeper of *Zapin Sebat*. It was observed that *Zapin Sebat* has a ‘system’ codified by MSS following the specific sequence. Table 1 below shows the sequence and dance motifs of *Zapin Sebat* by MSS based on the narrative that depict a series of chronological actions of a honey trader through his journey that begin at the coastal area of Sambas, West Kalimantan to Sematan, Sarawak. The narrative continues with a series of actions that happens in the schooner and ends with the arrival at the destination (Mohd. Hafzal Aziz, 2016). Each dance motif has its own meaning that is related to the narrative of *Zapin Sebat*.

<b>Dance Motifs (<i>Ragam</i>) of <i>Zapin Sebat</i></b>	
1.	<i>Sembah</i> (homage/salutation)
2.	<i>Sembah mundur</i> (homage while stepping backward)
3.	<i>Singgah mansang</i> (drop by while stepping forward)
4.	<i>Singgah undur</i> (drop by while stepping backward)
5.	<i>Meniti</i> (walking cautiously)
6.	<i>Singgah pusing</i> (drop by while turning)
7.	<i>Silang mansang</i> (crossing legs while stepping forward)
8.	<i>Menjengkek</i> (lifting one foot off the floor, slightly higher than the medial malleolus of the tibia)
9.	<i>Lembadak</i> (beach bugs)
10.	<i>Bermain gigi air</i> (playing at the seafont)



11.	<i>Titi papan</i> (walking cautiously on a wooden plank)
12.	<i>Bermain gelombang</i> (playing with the sea waves)
13.	<i>Tumpah madu</i> (spill the honey)
14.	<i>Mendayung dan silang berpaksi</i> (rowing and cross-handing)
15.	<i>Kaut/nait layar/hulur labuh/sebaya danseng</i> (scooping/pulling the mainsail/releasing the anchor)
16.	<i>Waina tahtim</i> (the coda or final section in <i>Zapin</i> performance)

Table 1: The sequence and dance motifs in the narrative of *Zapin Sebat*  
(Source: Author 1)

*Zapin Sebat* tok sebenar-benarnya mesti ngekot susunan nok telah disusun oleh MSS berdasarkan apa yang telah disusun oleh Sharkawi ngekot cerita oleh nya daripada pengasas, Haji Baiee. Mun mana-mana persembahan sik ngekot susunan tok, sik boleh gik dah tarian ya diberik nama *Zapin Sebat*. Kerna *Zapin Sebat* adalah tarian nya udah kedak ya, mun diubah or sik ngekot susunan ya, dah sik sama gik dah jalan ceritanya (Jamilah Razali, personal communication, 20 May 2019). [Trans. Any performances of *Zapin Sebat* must follow its sequence that has been rearranged by Sharkawi Amit based on what has been arranged by the beholder, Baiee Drahman. If the performance does not follow the correct order or changed, then the dance cannot be identified as *Zapin Sebat* as the narrative is not the same anymore.]

Based on the statement above, MSS structured a sequence of dance motifs for *Zapin Sebat* that should be followed by practitioners who wished to perform *Zapin Sebat*. This subverts the original

aesthetics of the village *Zapin Sebat*. Since it was conceived as a *main* or ‘play-performance’, this new move by MSS deviates from the original form. The notion of *main* or playing the *Zapin* as a structured movement system is an act of ‘play-performance’, a recreational product rather than a process. Nevertheless, the revitalized version is a recreational product or choreographed/structured form of *Zapin*. As *main* or play, it is a performance where everyone can participate. In this sense, *Zapin Melayu* involves sharing space brought to life by the interaction of community members who are both performers and spectators (Mohd Anis Md Nor, 2001, p. 238). Departing from this format, MSS revitalized *Zapin Sebat* to be performed on proscenium stages and to fulfil the requirements of public performances and competitions. It also fulfils the demands of the state government.

Today, *Zapin Sebat* has become a popular folk-dance tradition in Malaysia, representing the community of *Melayu Sarawak*. The dance tradition has shifted from the Kampung Sebat Melayu in Sematan, Sarawak into mainstream Malaysian folk culture. The contemporary performances of *Zapin Sebat*, owed much to the social and cultural events before and after its gradual decline in the village. *Zapin Sebat* has emerged as a dance to be viewed/performed rather than participated. Changes and adaptations in dance style and the influence of the other forms of *Zapin* have altered the dance tradition into a new dance form associated with urban popular culture.

*“Persembahan Zapin Sebat kinek tok dah dikoreograf baru, kebanyakan ngambik ragam Zapin Sebat MSS, tapi susunan dengan gaya nya masih sik ngekot susunan dan gaya Zapin Sebat. Tarian nya dah sik tentu arah ngekot ceritanya nok betol. Contoh nya tek, gerak kita mendayung dipolah awal2, nak kah sik ngenak ngan ceritanya, mendayung dipolah selepas nya nait atas sekonyer”* (Mastuyah Bakery, personal communication, 20 May 2019). [Trans. The performance of *Zapin Sebat* is more of a choreographed performance. They performed the same movements with MSS’ version, but the

structure and style are not the same and the sequence is a mess compared to the narrative. For example, rowing dance motifs are danced at the beginning which is not the same with the narrative, and it does not make sense as the rowing motifs are danced right after getting into the schooner.]

The revitalized version of *Zapin Sebat*, to a certain extent, is a choreographed folk dance. It requires a certain number of pre-arranged sets of dance motifs and movement phrases, which are performed repeatedly in a sequence, or a cycle, or a symmetrical interchange. The dance motifs can be the same but may change the cultural context behind the creation of *Zapin Sebat* and this has to do with the issue of structure in a dance form. Kaeppler (1998) defined a structure is shaped by its form and style, is a slippery term. As such, *Zapin Sebat*'s dance motifs are deconstructed through the identification of *kinemes*, which are the minimal units of movements that recognized as basic units of the dance by the beholders of tradition. For example, the minor motives in *Zapin Sebatsuch* as *mansang* (forward), *undur* (backward), *pusing* (turn), and *silang mansang* (moving forward with a crossing of the legs), are the recognized *kinemes*<sup>vi</sup> in *Zapin Sebat*.



Figure 2: Musicians are seated at the back of the dance space. A performance by MSS in 1998 during Festival Tari Kebangsaan (FTK)

(Source: Author 1)



Figure 3: Musicians are seated at the back of the dance space. A performance by MSS in Rumah Sarawak in 2015  
(Source: Author 1)

*“KPS dolok betandak di peringkat kebangsaan ngembak dak pemuzik juak atas pentas, sak persembahan lebih menarik dan juak maok mengangkat tarian tok ke atas pentas sepertimana sebuah persembahan Zapin dipersembahkan. Ada orang belagu ada orang betandak”* (Sharifah Pura Wan Hamid, personal communication, 22 May 2019). [Trans. KPS performed at the national level together with a music ensemble. The performance was performed like how it is being performed in the village. There are musicians, there are dancers (*betandak*)]

The revitalized version of *Zapin Sebat* is performed for the audience and is presentational. It is devoid of spontaneity, not participatory. Figure 2 shows the revitalized version of *Zapin Sebat* for a national competition represented by Sarawak in 1998 and Figure 3 shows the performance of *Zapin Sebat* in Rumah Sarawak. Both were performed by MSS dancers.

The constant demand for something new or exciting in the performances of *Zapin Sebat* has led to some distinctive changes in

the dance form and style. However, this does not allow the choreographers and performers to break away from the basic nuances of *Zapin Sebat* dance, which had been the emblem of *Zapin* form in the village. The village form of *Zapin Sebat* has ceased to be important and is nearly forgotten or unknown by younger *Melayu* Sarawak today, especially the narrative and signifier behind its creation. *Zapin Sebat* has eventually succumbed to newer styles of performance as a result of newer expressions of contemporary performances together with the new performance spaces and purposes of the performance.

*Zapin Sebat*'s performance in new spaces has established new perspectives between arts and tradition. The shift of the performance space from communal to a proscenium stage has transformed the dance into a highly polished form. The adaptability of *Zapin Sebat* to newer performance spaces and purposes of performing has been streamlined into contemporary performances. Tari *Zapin* that are widely performed for dance showcases, final year evaluations, or dance competitions for various reasons.

## **Conclusion**

The revitalization of *Zapin Sebat* began in the early 1990s when MSS sent its people to Kampung Sebat Melayu to learn with Baiee Drahan, the beholder of *Zapin Sebat*. The dance was brought back to MSS. The revitalization of *Zapin Sebat* prioritizes the government's demands and preferences towards the style and forms. MSS had to fulfil the Sarawak state government's demands in introducing the dance and axiomatically represent the state. While retaining as much of the former structure in the performance of *Zapin Sebat*, MSS has altered the village version of *Zapin Sebat* for preservation and revitalized the form for mass/urban entertainment. The efforts of revitalizing this dance tradition have given importance to preserving it as the state's cultural heritage, as a tradition of the *Melayu Sarawak*.

<sup>i</sup> Mohd Anis Md Nor is the pioneer of the study of *Zapin* music and dance in South East Asia and has published widely on the said topic.

<sup>ii</sup> playing traditional Malay drums

<sup>iii</sup> singing the Sarawak Malays quatrains

<sup>iv</sup> a dance of *tandak* by the male

<sup>v</sup> Prophet Muhammad's birthday

<sup>vi</sup> Kinemes are the basic components in a dance tradition. Kinemes may have several allo-kines which vary physiologically but are considered the 'same' or a 'variation' of a kineme by 'native speakers' of the dance tradition.

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## **The Effects of Music Arousal Level and Tempo on Risk-Taking and EEG Mental State During *In-Between* Card Gameplay Among Introverts and Extroverts**

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### **Abstract**

This study examines on the differential effects of the arousal level and tempo of music on risk-taking and EEG mental state during *In-Between* card gameplay among introverts and extroverts, by aiming to determine whether the gameplay task would yield significant differences between music arousal conditions, music tempo conditions within each arousal group, and the overall data between both extroversion groups. 10 introvert and 10 extrovert male participants between ages 18-29 were recruited, and played *In-Between* while wearing the NeuroSky MindWave Mobile EEG instrument. The interventions were no-music, high-, and low-arousal music with tempi manipulations of 100%, 175%, and 75%. Overall risk-taking were highest during HA175% and LA100% respectively, presumably due to cognitive overwhelm and potential over-comfortability. Differences in risk-taking were insignificant between both personality traits, although introverts generally took marginally-higher risks. The EEG data indicated that extroverts possess higher optimal arousal tolerance than introverts in general, and that the detrimental effects of over-arousing stimuli were greater towards introverts. With the findings corroborating Hebb's optimal arousal hypothesis in risk gameplay, further studies may consider replications of different music emotional valences with additional task difficulty and deceptive-based risk gameplay.

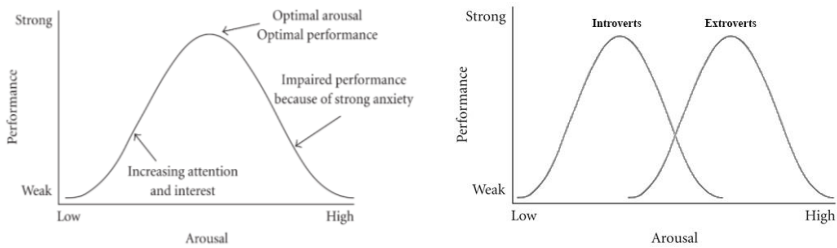
**Keywords:** Extroversion, Music Arousal Level, Music Tempo, Risk-Taking, EEG Mental State.

## Introduction

Among the music components used in determining the differential effects of music, music tempo has been one of the most commonly-used musical component, as tempo has been classified as a “fundamental music aspect” (Griffiths, 2015; Arboleda, Arroyo, Rodriguez, & Arce-Lopera, 2022). Nonetheless, past studies have noted that the sole manipulation of a single musical component is inadequate to validate the psychological effects of music (Bramley, Dibben, & Rowe, 2016), thus the current study accounted the manipulation of a second music component: music arousal level. According to Bartlett (1996), high-arousal (HA) music is described as “highly-rhythmic in faster tempo”; and low-arousal (LA) music as “smooth and melodic in slower tempo” (Iwanaga, Ikeda, & Iwaki, 1996; Lundqvist, Carlsson, Hilmersson, & Juslin, 2009). Hence, music arousal level can be assumed as “the tendency for the music intensity to arouse listeners”.

This study explores on the effects of music arousal level and tempo among personality traits during *In-Between* card gameplay. The Hebbian version of the Yerkes-Dodson law (also known as Hebb’s optimal arousal hypothesis or Hebb’s OAH) stated that in a condition whereby task difficulty is constant, task performance is maximized during optimal arousal levels; whereas overly-high and -low arousal levels shall potentially cause anxiety and inertness respectively, both of which shall hinder task performance (Hebb, 1955; Diamond, Campbell, Park, Halonen, & Zoladz, 2007). However, the optimal arousal level of an individual is also dependent on one’s personality trait. Optimal arousal levels of introverts were discovered to be generally lower than extroverts (Mistry, 2015). During exposure to moderately-high arousal stimuli, task performance of introverts may be weakened but strengthened for extroverts; and vice versa during an exposure to moderately-low arousal stimuli. Figure 1 presents Hebb’s OAH and its difference between introverts and extroverts.

Figure 1: Hebb’s OAH (left) (Adapted from Diamond et al., 2007); and between Introverts and Extroverts (right).



### Background of Extroversion-Introversion (E/I)

Extroversion-introversion (E/I) is a personality dimension which distinguishes the contrasting traits of the “socially-assertive” with the “socially-reserved” (Jung, 1923). Introverts are regarded to be “shy but with an abundant ‘intramural universe’” (Brown, 2015, p.10); while extroverts are perceived to be “outgoing and gregarious” (Dasgupta, 2018, p.57). Jung (1923) also proposed that both traits may coexist within an individual but with one being more dominant than the other, but with dependence on various fundamental functions e.g. thinking, feeling, intuition, and sensation. Introverts and extroverts were found to have greater likelihoods to “escape overstimulation” and “seek stimulation” respectively (Ellis, Abrams, & Abrams, 2009, p.63). This correlates well with Hebb’s OAH, as introverts generally have lower optimal arousal levels than extroverts (Diamond et al., 2007; Mistry, 2015).

German-born-British psychologist Hans Jürgen Eysenck (1916-1997) has been widely known for his psychological and intelligence research theories, with his works being the most referenced among the psychology field at the time of his demise (Rushton, 2001). A great number of studies have employed Eysenck’s works as the fundamental groundwork for their studies in differentiating task performance among extroversion through memory (Furnham & Bradley, 1997; Furnham & Allass, 1999); cognitive (Daoussis & McKelvie, 1986; Moradi et al., 2019); and

reasoning tasks (Furnham & Allass, 1999; Cassidy & MacDonald, 2007; Dobbs, Furnham, & McClelland, 2011). Nevertheless, the current study employed the *Eysenck Personality Questionnaire – Revised Short Form* (EPQR-S) (Eysenck, Eysenck, & Barrett, 1985), which physiosociologically classifies subjects into personality trait groups (Dhelim et al., 2021).

### **The Effects of Music on Arousal Among Introverts and Extroverts**

Arousal is classified as a psychophysiological reactivity of excitement triggered by a response towards a stimulus (Eysenck, 1982; Matthews & Amelang, 1993; Coull, 1998), detected in the cerebral cortex of human brains (Matthews, 2004, p.869). The three psychological processes of music are thoughts, arousal, and emotions (North, Hargreaves, & Krause, 2009); and this was represented in Berlyne (1971) whereby softer slower-tempo music lowers arousal levels, whereas louder faster-tempo music heightens arousal levels.

Mistry (2015) found that extroverts generally performed better in cognitive task performances with music, while introverts were better off without. Extroverts have been noticed to have their comprehension task performance less-detrimented than introverts during exposure to pop music (Furnham & Bradley, 1997). Cassidy and MacDonald (2007) did a similar study using negative HA music, positive LA music, and without music, and presented that despite having introverts generally outperforming extroverts, performance of introverts were hindered during the HA music due to distractions in accordance with Hebb's OAH. However, the HA music used in this study was "aggressive" unlike the calm and positive LA music. It has been also found that arousal levels were increased during gameplay (Leary & Dickerson, 1985), not just by the music stimulus per se but also the excitement of the gameplay task (Wulfert, Roland, Hartley, Wang & Franco, 2005).

Levy (2015) investigated the effects of background music on video gameplay performance between extroversion traits, and pointed out that videogames accelerates background music tempo

during higher-level gameplay situations, mainly to uplift excitement levels during the climax point of gameplay. However, this contradicts Hebb's OAH as the increased gameplay difficulty and music tempo adds on arousal and cognitive load to the players which potentially decreases quality of task performance. Thus, the current study intended to determine the legitimacy between the conventional method and Hebb's OAH in application to card gameplay involving risky decisions.

### **The Effects of Music on Decision-Making**

Decision-making is a psychophysiological process in opting an action course leading to differential outcomes (O'Sullivan, 2011, p. 2–3); which can be divided into subcategories of risk-taking and intertemporal choice. Risk-taking is a form of decision-making with uncertain outcomes, whereas intertemporal choice is a form of decision-making during a certain period of time pertaining to its costs and outcomes (Fujikawa, Kobayashi, & Foo, 2012). It was found the extroverts generally possess greater positive judgements of future outcomes, whereas neurotics generally have greater negative judgements of future outcomes, thus concluding that music affects the correlation between personality trait and mood through its emotional context which further impacts arousal levels and decision-making (Vuoskoski & Eerola, 2011). Conclusions regarding the effects of music arousal level and tempo remain disputed among being in favour of faster-tempo music which induces greater risk-taking (Fujikawa et al., 2012), both faster- and slower-tempo music (Mentzoni, Laberg, Brunborg, Molde, & Pallesen, 2014), and slower-tempo LA music (Israel, Lahav, & Ziv, 2019). Nonetheless, the current study attempted to rectify this dispute through measuring risk-taking extents with EEG readings, of which shall justify how risk-taking behaviours were affected by the different music arousal and tempo conditions and the application of Hebb's OAH within the relationship.

## **EEG – NeuroSky MindWave Mobile**

With concurrent neuroscientific research in the field of music psychology (Thaut & Hodges, 2011), the current study additionally incorporates electroencephalography (EEG) to determine arousal levels via brainwave activity data. EEG is a process in measuring electrical brainwave activity through a brain-computer interface (BCI) (Robbins & Stonehill, 2014, p.5-6), detected through EEG electrodes placed on the user's head which monitors neural activity within human brains (Ellis, Abrams, & Abrams, 2009).

In light of this, the current study utilized the NeuroSky MindWave Mobile EEG instrument to measure mental state. Since its inception in 2009, it is a commercial, mobile, simplified, non-invasive EEG instrument which allowed EEG research to be executed conventionally at any location and at any time. The MindWave contains two patented technologies: ThinkGear™ serves to process the data, while eSense™ interprets and characterizes the data, by simplifying raw and noisy brainwave data into comprehensible figures (Phinyomark, Limsakul & Phukpattaranont, 2009; Sudirman, Koh, Safri, Daud, & Mahmood, 2010; Gandhi et al., 2011), which are attention and meditation (Att/Med) levels (NeuroSky, 2017). In terms of EEG incorporation on the effects of music, Teixeira, Tomé, Roseiro, and Gomes (2018) which utilized the MindWave to determine how music affects attentiveness during online video gameplay found overly-arousing music to hinder gameplay task performance, evidently corroborating Hebb's OAH. Hence, the current study attempted to replicate said corroboration of Hebb's OAH through EEG measurements in an offline risk-taking gameplay task.

## **The Current Study**

The gaps identified from the line of research were: the dispute between the application of Hebb's OAH against the conventional method as pointed out by Levy (2015) towards gameplay tasks (risk-taking gameplay for the current study); and the unresolved conclusions on the effects of music arousal level

and tempo towards risk-taking (Fujikawa et al., 2012; Mentzoni et al., 2014; Israel et al., 2019).

Therefore, the current study examined on how different music arousal levels and tempi affect *In-Between* card gameplay risk-taking and EEG mental state among introverts and extroverts. The current study attempted to determine the effects of music arousal level and tempo towards risk-taking in a gambling task, and how Hebb's OAH could be applicable within the relationship through EEG brainwave activity monitoring as suggested by the findings of Teixeira et al (2018). The significance of this study is primarily to provide and strengthen evidences on how music can affect the psychophysiological state of individuals, which consequently affect their risk extents. Upon successful corroboration of Hebb's OAH, data of this study could contribute proof whereby manipulations of music arousal level and tempo are able to exhibit significant beneficial and/or detrimental effects on risky decision-making via neuroscientific EEG brainwave monitoring of attention and meditation levels, of which provides knowledge for gameplay industries in selecting the most optimal background music in maximizing gameplay performance qualities.

### **Limitations**

Music familiarity and preference were not accounted in this study. In accordance with studies which were executed in public areas i.e. supermarkets (Milliman, 1982), dining areas (Milliman, 1986; Caldwell & Hibbert, 2002), casinos (Noseworthy & Finlay, 2009), retail outlets (Hussain & Ali, 2015), and open spaces (Meng et al., 2018), the selected music were only focused on intended variables of tempo, arousal, and pleasurability, without specifically accounting familiarity of consumers or passerbys. Preference was not accounted as all selected music were of positive emotional valence. Consequently, the current study only placed focus on risk-taking and EEG parameters during gameplay, without accounting subjects' self-report evaluations as preference of music was a disregarded variable. In terms of demographics, this is a laboratorial study which only comprised of male subjects between



ages 18-29 within Klang Valley, Malaysia, hence the data is unable to fully represent the general population. Lastly, this study only involved play money, as the usage of real money would potentially cause financial burdens among subjects which shall breach research ethics, despite the involvement of real money shall increase excitement levels during gameplay and yield contrasting data. In light of this, as *In-Between* is a card game which does not involve direct competition against opponents, competition was induced by having gift prizes (worth up to RM50) for three participants with the highest winnings.

## **METHOD**

### ***Design***

This is a within-subject, quantitative-experimental study consisting of two active independent aspects internally compared among three variables: (i) music arousal level (no-music, HA, LA), and (ii) tempo within HA and LA music (100%, 175%, 75%); two attribute aspects (extrovert and introvert); and two dependent variables (gameplay risk-taking and EEG mental state). Therefore, the four research questions of this study are: -

- RQ1: Will there be significant differences in gameplay risk-taking within and between introverts and extroverts among the music arousal level conditions?
- RQ2: Will there be significant differences in gameplay risk-taking within and between introverts and extroverts among the HA and LA music tempo conditions?
- RQ3: Will there be significant differences in gameplay EEG mental state within and between introverts and extroverts among the music arousal level conditions?
- RQ4: Will there be significant differences in gameplay EEG mental state within and between introverts and extroverts among the HA and LA music tempo conditions?

### ***Hypotheses***

Based on the research questions, the four null hypotheses of this study are: -

- H01: There will be no significant difference in gameplay risk-taking within and between introverts and extroverts among the music arousal level conditions.
- H02: There will be no significant difference in gameplay risk-taking within and between introverts and extroverts among the HA and LA music tempo conditions.
- H03: There will be no significant difference in gameplay EEG mental state within and between introverts and extroverts among the music arousal level conditions.
- H04: There will be no significant difference in gameplay EEG mental state within and between introverts and extroverts among the HA and LA music tempo conditions.

### ***Subject Recruitment***

Based on G\*Power analysis, the a priori required sample size was 16 ( $f=.25$ ,  $\alpha=.05$ ,  $1-\beta = .95$ ) with 2 groups and 15 measurements of EEG data in every 1-minute interval for each 15-minute gameplay timeframe, hence rounded-up to 20 to attain the closest group of tens. The 20 voluntary participants were recruited through non-probability purposive criterion-i quota and snowball sampling methods. This study was only open to males between ages 18-29. Only males were selected in order to control influences of gender differences (Zhang & Fu, 2014); whereas the age group of 18-29 was found to possess “higher propensities” and “higher spending tendencies” in gambling (Ferris, Stirpe, & Ialomiteanu, 1996; Basham & White, 2002, p.43). The final mean age of participants in the current study was  $M=22.95$  ( $SD=2.012$ ).

Extroversion (E/I) level of participants were determined through the *Eysenck Personality Questionnaire – Revised Short Form* (EPQR-S) (Eysenck, Eysenck, & Barrett, 1985, p.29). As the current study only encompasses the extroversion (E/I) dimension,

only the 12 items relevant to E/I were extracted and used (see Appendix). With a total of 12 points, all “Yes” responses, and “No” for Items 11 and 12, earns the respondent 1 point. Respondents whom scored 6 points and below are classified as “introverts”, whereas respondents whom scored 7 points and above are classified as “extroverts”. Despite “6” being labelled as “ambivert”, this study considers this total point as introverts as well due to practicality reasons. This test was continuously run until 10 introverts and extroverts were recruited. These participants then voluntary took part as subjects upon written consent, and all personal details of participants were kept confidential and anonymous. The mean E/I response scores among shortlisted introverts and extroverts were  $M=4.30$  ( $SD=0.68$ ) and  $M=10.10$  ( $SD=1.37$ ) respectively. Internal reliability of the E/I responses in this study yielded an acceptably-high Cronbach’s alpha coefficient of  $\alpha=.846$ .

**Music Conditions**

The song list and tempi manipulations of HA and LA music groups are presented in Table 1.

Table 1: HA and LA Music Selections.

Artist	Song Title	100% Tempo (BPM)	175% Tempo (BPM)	75% Tempo (BPM)
<b>HA MUSIC PLAYLIST</b>				
Sheppard	“Coming Home”	143	250.25	107.25
Hillsong Young and Free ft. Lecrae	“This Is Living”	128	224	96
Avicii	“The Nights”	126	220.5	94.5
Sagan ft. Roman Polonsky	“Music”	126	220.5	94.5
Pentatonix	“Sing”	155	271.25	116.25
Sigala ft. John Newman and Nile Rodgers	“Give Me Your Love”	125	218.75	93.75
<b>LA MUSIC PLAYLIST</b>				
Jesse Ruben	“This Is Why I Need You”	80	140	60
The Paper Kites	“Arms”	75	131.25	56.25
John Mayer	“Badge and Gun”	65	113.75	48.75
Hollow Coves	“These Memories”	77	134.75	57.75
Chase McBride	“Days Move Easy”	87	152.25	65.25
Pläsi	“Now and Then”	77	134.75	57.75

The music selections among the HA and LA music were in-line with Barlett’s (1996) arousal descriptors. Familiarity and

preference of the music were unconcerned, despite the songs being potentially unfamiliar (non-mainstream in Malaysia), and that the emotional contexts of the songs are all positive. The songs are in 4/4-time and sung by male singers in English. Lyrical music was chosen, as music with lyrics were reported to be the most common song choices among adolescents and young adults (Wanamaker & Reznikoff, 1989; Anderson, Carnagey, & Eubanks, 2003; Cassidy & MacDonald, 2007). Participants had no knowledge on the selected music prior to the experiment, as various previous research on background music or soundscapes carried out their experiments without subjects having prior knowledge on the music selections nor concerning on their music familiarity (Caldwell & Hibbert, 2002; Noseworthy & Finlay, 2009; Meng et al., 2018).

Tempi of HA and LA songs range between 125-155 ( $M=133.833$ ,  $SD=12.384$ ) and 75-87 ( $M=76.833$ ,  $SD=7.167$ ) respectively, with a mean difference of  $M=57$  ( $SD=8.173$ ). Subsequently, the HA and LA songs are manipulated from their original tempo (100%) to a fastened 175% and slowered 75%. From 100% to 175%, the mean tempo increase for both HA and LA playlists are  $M=100.375$  ( $SD=9.288$ ) and  $M=57.458$  ( $SD=5.100$ ) respectively with a difference of  $M=42.917$  ( $SD=6.406$ ). Correspondingly, from 175% to 75%, the mean tempo drop for both HA and LA playlists are  $M=133.833$  ( $SD=12.384$ ) and  $M=76.833$  ( $SD=7.167$ ) respectively with a difference of  $M=57$  ( $SD=8.173$ ).

### ***In-Between* Gameplay Procedure**

The task was to play *In-Between*, a popular card game known in the West as *Acey Deucey*, but more commonly known as *In-Between* or *Tiang* (“goalpost” in Malay) in Malaysia and Singapore. *In-Between* is fun party card game involving high-risk and high-ROI, commonly played among families and friends particularly during the Chinese New Year festive season. *In-Between* was chosen for this study as it is a genuine self-competing game of luck which is easily understandable and does not require

any prior skills and strategies to play. Henceforth, playing skills were not applicable for this gameplay task.

Rob (2013) provided a detailed analysis on its probability calculations. According to the three mentioned outcomes, Table 2 presents the mathematical formulae of the outcome probability,  $P$ , and payoffs,  $Q$ . Values of the first two cards are represented as  $x$  and  $y$ , with  $z$  as the gap between  $x$  and  $y$ , and  $\$$  as the betting amount.

Table 2: Probabilities and Payoffs.

Outcome	Probability, $P$	Payoff, $Q$
$A$	$P(A) = \frac{(y-x)-1}{13} = \frac{z}{13}$	$Q(A) = \$$
$B$	$P(B) = \frac{(13-z)-2}{13} = \frac{11-z}{13}$	$Q(B) = -\$$
$C$	$P(C) = \frac{2}{13}$	$Q(C) = -2\$$

\*Card values: A(1), 2, 3, 4, 5, 6, 7, 8, 9, 10, J(11), Q(12), K(13).

As the original gameplay involves real money, only play money was used to avoid financial burdens. This game usually involves only one deck of standard French playing cards, but four decks were used in this study to minimize probability predictions, as there are only four cards of all 13 values in a standard deck. With RM100 play money allocated to each player during each music condition, all players start with an initial contribution into the ante at the beginning of each round. All players were dealt with two cards, and may opt to “play” or “pass” after looking at their cards. Cards were closed and placed aside should the player choose to “pass”. Should players choose to “play”, the player announces his betting amount which can be either equal to or lower than the amount in the ante, and is dealt with a third card. There will be three outcomes: [ $P(A)$ ] the player wins the bet when the value of the third card is between  $x$  and  $y$ ; [ $P(B)$ ] the player loses the bet when the value of the third card is outside of  $x$  and  $y$ ; and [ $P(C)$ ] the player loses double the bet when the value of the third card is the same with either  $x$  and  $y$  (classified as “*kena tiang*” or

“colliding onto the goalpost” in Malay). Hence, there are no perfect winning chances in this game.

### ***Experimental Procedure***

Instruments used in this study were four decks of French playing cards, EPQR-S to determine subjects' personality trait, the originally-formed risk ratio to measure gameplay risk-taking, and the NeuroSky MindWave Mobile EEG instrument to measure gameplay EEG mental state. The experiments were carried out in the morning before lunchtime in a large air-conditioned room, in two groups of 5 introverts and 5 extroverts. There were seven conditions: no-music (NM, control condition), HA100%, LA100%, HA175%, LA175%, HA75%, and LA75%. The sequence was arranged as such to provide maximum tempo contrasts while transitioning among one another. Subjects wore the MindWave throughout, and sat further apart around a larger round table to minimize connection obstructions. Subjects installed two apps into their smartphones: *Effective Learner* (NeuroSky<sup>®</sup> Dev) and *eegID* (Isomer Programming LLC). The MindWave was paired with subjects' smartphones via *Effective Learner*. A short icebreaking session was executed to allow participants to know one another better. Participants were briefed on the gameplay procedure, and were given two minutes to practice and warmup. The music conditions were played in the mentioned sequence with each gameplay session lasting 15 minutes. The songs were played through speakers at equalized volumes at an optimal level. With seven conditions, the process of the experiment lasted approximately 2.5 hours. EEG recordings of the MindWave were recorded through the *eegID* app and transferred to a master device for tabulation and analysis.

### ***Data Analysis Procedures***

This study consisted of two gameplay measurement aspects: gameplay risk-taking, and EEG mental state. All data were analyzed through one-way analysis of variance (ANOVA) and

paired samples t-test via the SPSS statistical analysis software, with the significance threshold positioned at  $p < .05$ . One-way ANOVA was used to compare among three data groups for musical arousal level conditions (no-music, HA100%, and LA100%), and among the tempo conditions within HA and LA music groups (100%, 175%, and 75%); while paired samples t-test were used to compare internal differences between each condition group, and all data between introverts and extroverts.

Gameplay risk-taking was measured based on an originally-formed “risk ratio” equation – ratio of percentage of betting amount from the players’ remaining money against the winning probability of the bet,  $P(A)$ . The equation is inversely proportional, as a lower risk ratio indicates a greater betting risk whereas a higher risk ratio indicates a lower betting risk.

$$\text{Risk Ratio} = \frac{\text{Winning Probability } [P(A)]}{\left( \frac{\text{Betting Amount (RM)}}{\text{Remaining Amount (RM)}} \right)}$$

As shown in Table 3, the winning probability,  $P(A)$ , is calculated by dividing the gap between the first two cards,  $z$  by 13, thus the  $P(A)$  values of all possible card value gaps,  $z$ , are indicated in Table 3.

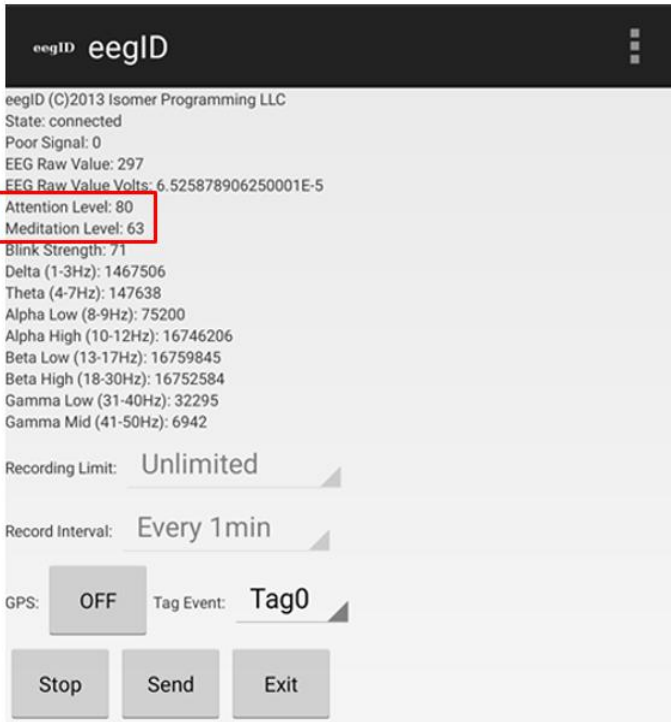
Table 3: Winning Probability of Card Value Gaps [ $P(A)$  of  $z$ ].

$z$	$P(A)$	$z$	$P(A)$
0	.0000	6	.4615
1	.0769	7	.5385
2	.1538	8	.6154
3	.2307	9	.6923
4	.3077	10	.7692
5	.3846	11	.8462

Gameplay EEG mental state was measured via the Att/Med levels as detected and presented by the NeuroSky MindWave Mobile. EEG data were recorded through the  *EEGID*  app which were saved into a .csv file, and transferred to a master device for

analysis on Excel and SPSS. Figure 2 presents the *eegID* app with a red box indicating the Att/Med value readings.

Figure 2: *eegID* application.



The Att/Med levels are measured from lowest to highest in a scale of 1-100, with 0 indicating poor connection. The Att/Med levels measure “mental concentration” and “calmness” respectively. Higher values on both levels indicate that the user is highly attentive and calm, while lower values on both levels indicate that the user is distracted and anxious, potentially caused by an overly-high arousal stimulus (NeuroSky, 2017). The data was set to be recorded at every 1-minute interval with unlimited recording limit during all seven 15-minute conditions.



## Findings

In summary, risk-taking were highest generally during HA175% and LA100%, both of which had the lowest Att/Med and highest meditation readings respectively, presumably theorized to be due to cognitive overwhelm and over-comfortability respectively. Differences between introverts and extroverts were insignificant, despite introverts consistently taking marginally-higher risks than extroverts. EEG Att/Med findings corroborated Hebb’s OAH, as extroverts were found to be consistently more tolerable towards high arousal stimuli than introverts, whereas over-arousing stimuli elicited greater hindrance towards introverts compared to extroverts.

## Gameplay Risk-Taking

Within the music arousal level condition group and HA/LA music tempo manipulation groups, findings of risk ratio among introverts and extroverts are tabulated and analyzed in Tables 4 to 6.

Table 4: Risk Ratio among Introverts and Extroverts – Music Arousal Levels.

INTROVERTS						EXTROVERTS									
Conditions	N	M	SD	SE		Conditions	N	M	SD	SE					
NM	10	3.58	2.50	.79		NM	10	4.31	1.94	.61					
HA (100%)	10	5.05	1.94	.61		HA (100%)	10	6.66	2.47	.78					
LA (100%)	10	1.83	1.76	.56		LA (100%)	10	3.08	.86	.27					
		<b>3.49</b>	<b>2.42</b>	<b>.44</b>				<b>4.69</b>	<b>2.36</b>	<b>.43</b>					
ANOVA		SS	df	M <sup>2</sup>	F	Sig.	ANOVA		SS	df	M <sup>2</sup>	F	Sig.		
Between Groups		51.83	2	25.91	5.92	.007	Between Groups		65.92	2	32.96	9.34	.001		
Within Groups		118.25	27	4.38			Within Groups		95.28	27	3.53				
<b>Total</b>		<b>170.08</b>	<b>29</b>				<b>Total</b>		<b>161.20</b>	<b>29</b>					
t-test		M	SD	SEM	t	df	Sig.	t-test		M	SD	SEM	t	df	Sig.
NM-HA		-1.47	3.93	1.24	-1.19	9	.266	NM-HA		-2.34	4.07	1.29	-1.82	9	.102
NM-LA		1.74	3.54	1.12	1.56	9	.154	NM-LA		1.23	2.22	.70	1.75	9	.114
HA-LA		3.22	1.78	.56	5.73	9	<.001	HA-LA		3.57	2.31	.73	4.90	9	.001

In Table 4, the ANOVA revealed significant differences in risk ratio within the music arousal level condition group for both introverts and extroverts, but significant differences in risk ratio was only between HA100%-LA100%, and that the difference in risk ratio between NM-HA and NM-LA were insignificant ( $p>.05$ ). Risk ratio was found to be highest during HA100% and lowest

during LA100%, which deduces that risks taken were highest during LA100% and lowest during HA100%.

Table 5: Risk Ratio among Introverts and Extroverts – HA Tempo.

INTROVERTS						EXTROVERTS							
Conditions	N	M	SD	SE		Conditions	N	M	SD	SE			
HA100%	10	5.05	1.94	.61		HA100%	10	6.66	2.47	.78			
HA175%	10	3.29	1.95	.62		HA175%	10	4.39	1.69	.53			
HA75%	10	5.68	4.74	1.50		HA75%	10	6.43	2.05	.65			
		<b>4.67</b>	<b>3.22</b>	<b>.59</b>				<b>5.83</b>	<b>2.27</b>	<b>.41</b>			
ANOVA	SS	df	M <sup>2</sup>	F	Sig.	ANOVA	SS	df	M <sup>2</sup>	F	Sig.		
Between Groups	30.58	2	15.29	1.53	<b>.235</b>	Between Groups	31.22	2	15.61	3.56	<b>.042</b>		
Within Groups	269.78	27	9.99			Within Groups	118.42	27	4.39				
<b>Total</b>	<b>300.35</b>	<b>29</b>				<b>Total</b>	<b>149.63</b>	<b>29</b>					
t-test	M	SD	SEM	t	df	Sig.	t-test	M	SD	SEM	t	df	Sig.
HA100%-175%	1.76	2.58	.81	2.16	9	<b>.059</b>	HA100%-175%	2.27	2.28	.72	.34	9	<b>.012</b>
HA100%-75%	-.63	4.04	1.28	-.49	9	<b>.636</b>	HA100%-75%	.23	2.10	.66	-2.59	9	<b>.741</b>
HA175%-75%	-2.38	3.82	1.21	-1.98	9	<b>.080</b>	HA175%-75%	-2.04	2.50	.79	-.74	9	<b>.029</b>

In Table 5, the ANOVA showed significant differences in risk ratio only among extroverts ( $p=.042$ ) and insignificant among introverts ( $p=.235$ ). Among extroverts, the t-tests showed that risk ratio differences were significant except between HA100%-75% ( $p=.741$ ); while the t-test results showed insignificant differences between all conditions among introverts ( $p>.05$ ). Hence, among extroverts, risk ratio was lowest during HA175% and highest during HA100%, in which the greatest and lowest risks were taken during HA175% and HA100% respectively.

Table 6: Risk Ratio among Introverts and Extroverts – LA Tempo.

INTROVERTS						EXTROVERTS							
Conditions	N	M	SD	SE		Conditions	N	M	SD	SE			
LA100%	10	1.83	1.76	.56		LA100%	10	3.85	.86	.27			
LA175%	10	2.80	1.65	.62		LA175%	10	4.45	5.20	1.65			
LA75%	10	3.88	2.05	.65		LA75%	10	3.99	2.78	.88			
		<b>2.84</b>	<b>1.96</b>	<b>.36</b>				<b>3.84</b>	<b>3.37</b>	<b>.62</b>			
ANOVA	SS	df	M <sup>2</sup>	F	Sig.	ANOVA	SS	df	M <sup>2</sup>	F	Sig.		
Between Groups	20.96	2	10.48	3.13	<b>.06</b>	Between Groups	9.61	2	4.81	.40	<b>.670</b>		
Within Groups	90.39	27	3.35			Within Groups	319.72	27	11.84				
<b>Total</b>	<b>111.35</b>	<b>29</b>				<b>Total</b>	<b>329.33</b>	<b>29</b>					
t-test	M	SD	SEM	t	df	Sig.	t-test	M	SD	SEM	t	df	Sig.
LA100%-175%	-.97	2.55	.81	-1.204	9	<b>.259</b>	LA100%-175%	-1.36	5.86	1.85	-.735	9	<b>.481</b>
LA100%-75%	-2.05	2.90	.92	-2.229	9	<b>.053</b>	LA100%-75%	-.91	2.62	.83	-1.102	9	<b>.299</b>
LA175%-75%	-1.08	3.31	1.05	-1.028	9	<b>.331</b>	LA175%-75%	.45	6.24	1.97	.227	9	<b>.825</b>

In Table 6, the ANOVA revealed significant differences in risk-taking among the LA music tempo condition group only among introverts ( $p=.06$ ), but insignificant ( $p=.67$ ) among extroverts. The t-test showed insignificant differences in risk ratio

( $p > .05$ ) among all. Hence, risk ratio among the LA music tempo conditions could not be compared.

Table 7: Risk Ratio between Introverts and Extroverts.

INTROVERTS					EXTROVERTS				
Conditions	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>	Conditions	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
NM	10	3.58	2.50	.79	NM	10	4.31	1.94	.61
HA100%	10	5.05	1.94	.61	HA100%	10	6.66	2.47	.78
HA175%	10	3.29	1.95	.62	HA175%	10	4.39	1.69	.53
HA75%	10	5.68	4.74	1.50	HA75%	10	6.43	2.05	.65
LA100%	10	1.83	1.76	.56	LA100%	10	3.08	.86	.27
LA175%	10	2.80	1.65	.62	LA175%	10	4.45	5.20	1.65
LA75%	10	3.88	2.05	.65	LA75%	10	3.99	2.78	.88

Table 8: Risk Ratio t-test Comparisons between Introverts and Extroverts.

Conditions	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>df</i>	Sig.
NM	-.74	3.48	1.09	-.67	9	<b>.519</b>
HA100%	-1.61	3.64	1.15	-1.40	9	<b>.196</b>
HA175%	-1.10	3.30	1.04	-1.05	9	<b>.320</b>
HA75%	-.76	6.27	1.98	-.38	9	<b>.712</b>
LA100%	-1.25	1.71	.54	-2.32	9	<b>.046</b>
LA175%	-1.64	6.00	1.90	-.87	9	<b>.410</b>
LA75%	-.12	3.94	1.25	-.09	9	<b>.927</b>

Table 7 shows the risk ratio between introverts and extroverts, while Table 8 shows the t-test comparisons between introverts and extroverts among all conditions. All risk ratio differences were insignificant except during LA100% ( $p = .046$ ). However, a trend is noticed whereby overall risk ratio of introverts were consistently marginally-lower than extroverts in all conditions, showing that introverts took consistent marginally-greater risks than extroverts.

### Gameplay EEG Mental State

Within the music arousal level condition group (NM, HA100%, LA100%) and within HA and LA tempo manipulation conditions, findings of Att/Med levels among introverts and extroverts are presented in Tables 9 to 11.

Table 9: Att/Med among Introverts and Extroverts – Music Arousal Levels.

INTROVERTS					EXTROVERTS								
Conditions	N	M	SD	SE	Conditions	N	M	SD	SE				
<b>Attention</b>					<b>Attention</b>								
NM	10	47.65	4.30	1.36	NM	10	71.36	4.12	1.30				
HA (100%)	10	42.09	3.35	1.06	HA (100%)	10	77.39	4.78	1.51				
LA (100%)	10	67.95	3.86	1.22	LA (100%)	10	64.71	3.93	1.24				
		<b>52.57</b>	<b>11.90</b>	<b>2.17</b>			<b>71.15</b>	<b>6.70</b>	<b>1.22</b>				
<b>Meditation</b>					<b>Meditation</b>								
NM	10	53.23	6.62	2.09	NM	10	63.24	8.32	2.63				
HA (100%)	10	42.70	5.90	1.87	HA (100%)	10	56.13	6.14	1.94				
LA (100%)	10	69.44	3.09	.98	LA (100%)	10	76.61	4.34	1.37				
		<b>55.12</b>	<b>12.35</b>	<b>2.25</b>			<b>65.33</b>	<b>10.66</b>	<b>1.95</b>				
ANOVA	SS	df	M <sup>2</sup>	F	Sig.	ANOVA	SS	df	M <sup>2</sup>	F	Sig.		
<b>Attention</b>						<b>Attention</b>							
Between Groups	3,705.81	2	1,852.91	124.48	<.001	Between Groups	804.57	2	402.28	21.81	<.001		
Within Groups	401.89	27	14.89			Within Groups	498.12	27	18.45				
Total	<b>4,107.704</b>	<b>29</b>				Total	<b>1,302.68</b>	<b>29</b>					
<b>Meditation</b>						<b>Meditation</b>							
Between Groups	3,629.61	2	1,814.81	61.75	<.001	Between Groups	2,163.83	2	1,081.92	25.85	<.001		
Within Groups	793.49	27	29.39			Within Groups	1,130.27	27	41.86				
Total	<b>4,423.10</b>	<b>29</b>				Total	<b>3,294.10</b>	<b>29</b>					
t-test	M	SD	SEM	t	df	Sig.	t-test	M	SD	SEM	t	df	Sig.
<b>Attention</b>							<b>Attention</b>						
NM-HA	5.56	4.71	1/49	3.74	9	.005	NM-HA	-6.03	6.48	2.05	-2.94	9	.016
NM-LA	-20.30	4.57	1.45	-14.03	9	<.001	NM-LA	6.65	6.01	1.90	3.50	9	.007
HA-LA	-25.86	5.56	1.76	-14.71	9	<.001	HA-LA	12.68	7.66	2.42	5.24	9	.001
<b>Meditation</b>							<b>Meditation</b>						
NM-HA	10.54	11.64	1.97	2.86	9	.019	NM-HA	7.11	8.46	2.67	2.66	9	.026
NM-LA	-16.21	6.23	2.56	-8.23	9	<.001	NM-LA	-13.37	9.77	3.09	-4.33	9	.002
HA-LA	-26.74	8.10	2.67	-10.44	9	<.001	HA-LA	-20.49	7.39	2.34	-8.77	9	<.001

In Table 9, the ANOVA revealed extremely significant differences ( $p<.001$ ) among the music arousal level conditions., with the t-tests showing significant differences throughout ( $p<.05$ ). Thus, Att/Med of introverts were highest during LA ( $M=67.95/69.44$ ,  $SD=3.86/3.09$ ), followed by NM ( $M=47.65/53.23$ ,  $SD=4.30/6.62$ ), and lowest during NM ( $M=42.09/42.70$ ,  $SD=3.35/5.90$ ). Att/Med level comparisons differed among extroverts, whereby the attention levels were highest during HA ( $M=77.39$ ,  $SD=4.78$ ), followed by NM ( $M=71.36$ ,  $SD=4.12$ ), and the lowest during LA ( $M=64.71$ ,  $SD=3.93$ ); whereas the meditation levels were highest during LA ( $M=76.61$ ,  $SD=4.34$ ), followed by NM ( $M=63.24$ ,  $SD=8.32$ ), and lowest during HA ( $M=56.13$ ,  $SD=6.14$ ).

Table 10: Att/Med among Introverts and Extroverts – HA Tempo.

INTROVERTS						EXTROVERTS							
Conditions	N	M	SD	SE		Conditions	N	M	SD	SE			
<b>Attention</b>						<b>Attention</b>							
HA100%	10	42.09	3.35	1.06		HA100%	10	77.39	4.78	1.51			
HA175%	10	21.93	4.73	1.50		HA175%	10	44.25	6.01	1.90			
HA75%	10	54.24	3.99	1.26		HA75%	10	67.56	5.82	1.84			
		<b>39.42</b>	<b>14.11</b>	<b>2.58</b>				<b>63.07</b>	<b>15.12</b>	<b>2.76</b>			
<b>Meditation</b>						<b>Meditation</b>							
HA100%	10	42.70	5.90	1.87		HA100%	10	56.13	6.14	1.94			
HA175%	10	21.30	6.09	1.93		HA175%	10	35.19	5.97	1.89			
HA75%	10	47.40	7.20	2.28		HA75%	10	63.32	8.63	2.73			
		<b>37.13</b>	<b>13.11</b>	<b>2.39</b>				<b>51.55</b>	<b>13.90</b>	<b>2.54</b>			
<b>ANOVA</b>	<i>SS</i>	<i>df</i>	<i>M<sup>2</sup></i>	<i>F</i>	<i>Sig.</i>	<b>ANOVA</b>	<i>SS</i>	<i>df</i>	<i>M<sup>2</sup></i>	<i>F</i>	<i>Sig.</i>		
Between Groups	5.327.96	2	2,663.98	161.51	<.001	Between Groups	5,791.94	2	2,895.97	93.62	<.001		
Within Groups	445.39	27	16.50			Within Groups	835.21	27	30.93				
Total	<b>5,773.32</b>	<b>29</b>				Total	<b>6,627.15</b>	<b>29</b>					
<b>Meditation</b>						<b>Meditation</b>							
Between Groups	3,870.50	2	1,935.25	46.88	<.001	Between Groups	4,720.19	2	787.10	25.83	<.001		
Within Groups	1,114.68	27	41.29			Within Groups	1,330.10	27	30.47				
Total	<b>4,985.18</b>	<b>29</b>				Total	<b>5,600.30</b>	<b>29</b>					
<b>t-test</b>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>	<b>t-test</b>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
<b>Attention</b>							<b>Attention</b>						
HA100%-175%	20.17	5.89	1.86	10.84	9	<.001	HA100%-175%	33.13	5.47	1.73	19.15	9	<.001
HA100%-75%	-12.15	6.73	2.13	-5.71	9	<.001	HA100%-75%	9.83	8.04	2.54	3.87	9	.004
HA175%-75%	-32.31	6.23	1.97	-16.41	9	<.001	HA175%-75%	-23.31	6.14	1.94	-12.01	9	<.001
<b>Meditation</b>							<b>Meditation</b>						
HA100%-175%	21.40	7.51	2.37	9.01	9	<.001	HA100%-175%	20.93	9.15	2.89	7.24	9	<.001
HA100%-75%	-4.70	9.29	2.94	-1.60	9	.144	HA100%-75%	-7.19	11.51	3.64	-1.98	9	.079
HA175%-75%	-26.10	4.72	1.49	-17.48	9	<.001	HA175%-75%	-28.13	7.85	2.48	-11.34	9	<.001

In Table 10, highly significant differences ( $p<.001$ ) were demonstrated overall, except with insignificant differences in Att/Med consistently found between HA100%-75% ( $p>.05$ ). Hence, Att/Med of introverts were highest during HA75% ( $M=54.24/47.40$ ,  $SD=3.99/7.20$ ), followed by HA100% ( $M=42.09/42.70$ ,  $SD=3.35/5.90$ ), and lowest during HA175% ( $M=21.93/21.30$ ,  $SD=4.73/6.09$ ). Similarly, Att/Med comparisons differed among extroverts, whereby the attention levels were highest during HA100% ( $M=77.39$ ,  $SD=4.78$ ), followed by HA75% ( $M=67.56$ ,  $SD=5.82$ ), and lowest during HA175% ( $M=44.25$ ,  $SD=6.01$ ); whereas meditation levels were highest during HA75% ( $M=63.32$ ,  $SD=8.63$ ), followed by HA100% ( $M=56.13$ ,  $SD=6.14$ ), and lowest during HA175% ( $M=35.13$ ,  $SD=5.97$ ).

Table 11: Att/Med among Introverts and Extroverts – LA Tempo.

INTROVERTS							EXTROVERTS						
Conditions	N	M	SD	SE	Conditions	N	M	SD	SE				
<b>Attention</b>					<b>Attention</b>								
LA100%	10	67.95	3.86	1.22	LA100%	10	64.71	3.93	1.24				
LA175%	10	44.17	8.99	2.84	LA175%	10	58.15	3.08	.97				
LA75%	10	63.51	7.09	2.24	LA75%	10	60.99	6.05	1.91				
		<b>58.54</b>	<b>12.47</b>	<b>2.28</b>			<b>61.28</b>	<b>5.15</b>	<b>.94</b>				
<b>Meditation</b>					<b>Meditation</b>								
LA100%	10	69.44	3.09	.98	LA100%	10	76.61	4.34	1.37				
LA175%	10	47.50	6.10	1.93	LA175%	10	59.03	5.97	1.89				
LA75%	10	68.29	5.79	1.83	LA75%	10	65.78	6.08	1.92				
		<b>61.74</b>	<b>11.41</b>	<b>2.08</b>			<b>67.14</b>	<b>9.09</b>	<b>1.66</b>				
ANOVA	SS	df	M <sup>2</sup>	F	Sig.	ANOVA	SS	df	M <sup>2</sup>	F	Sig.		
<b>Attention</b>						<b>Attention</b>							
Between Groups	3,196.80	2	1,598.4	32.85	<.001	Between Groups	216.04	2	108.02	5.27	.012		
Within Groups	1,313.90	27	48.67			Within Groups	553.82	27	20.51				
Total	<b>4,510.70</b>	<b>29</b>				Total	<b>769.87</b>	<b>29</b>					
<b>Meditation</b>						<b>Meditation</b>							
Between Groups	3,050.14	2	1,525.0	57.01	<.001	Between Groups	1,574.20	2	787.10	25.83	<.001		
Within Groups	722.32	27	26.75			Within Groups	822.68	27	30.47				
Total	<b>3,772.45</b>	<b>29</b>				Total	<b>2,396.87</b>	<b>29</b>					
t-test	M	SD	SEM	t	df	Sig.	t-test	M	SD	SEM	t	df	Sig.
<b>Attention</b>							<b>Attention</b>						
LA100%-175%	23.78	8.23	2.60	9.14	9	<.001	LA100%-175%	6.55	4.85	1.53	4.27	9	.002
LA100%-75%	4.45	6.65	2.10	2.12	9	.064	LA100%-75%	3.72	7.06	2.23	1.67	9	.130
LA175%-75%	-19.33	9.92	3.14	-6.17	9	<.001	LA175%-75%	-2.83	6.11	1.93	-1.47	9	.177
<b>Meditation</b>							<b>Meditation</b>						
LA100%-175%	21.94	7.63	2.39	9.15	9	<.001	LA100%-175%	17.59	6.01	1.90	9.25	9	<.001
LA100%-75%	1.15	6.65	2.41	.48	9	.646	LA100%-75%	10.83	7.26	2.30	4.72	9	.001
LA175%-75%	-20.79	6.01	2.10	-9.25	9	<.001	LA175%-75%	-6.75	5.31	1.68	-4.02	9	.003

In Table 11, the ANOVA revealed significant differences ( $p < .05$ ), with all t-test results being generally significant, except between LA100%-75% for Att/Med among introverts and attention levels among extroverts ( $p > .05$ ). Henceforth, Att/Med of introverts were highest during LA100% ( $M=67.95/69.44$ ,  $SD=3.86/3.09$ ), followed by LA75% ( $M=63.51/68.29$ ,  $SD=7.09/5.79$ ), and lowest during LA175% ( $M=44.17/47.50$ ,  $SD=8.99/6.10$ ). However, Att/Med levels of extroverts were consistent this time, as the readings were highest during LA100% ( $M=64.71/76.61$ ,  $SD=3.93/4.34$ ), followed by LA75% ( $M=60.99/65.78$ ,  $SD=6.05/6.08$ ), and lowest during LA175% ( $M=58.15/59.03$ ,  $SD=3.08/5.97$ ).

Table 12: Att/Med between Introverts and Extroverts Among All Music Conditions.

INTROVERTS					EXTROVERTS				
Conditions	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>	Conditions	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
<b>Attention</b>					<b>Attention</b>				
NM	10	47.65	4.30	1.36	NM	10	71.36	4.12	1.30
HA100%	10	42.09	3.35	1.06	HA100%	10	77.39	4.78	1.51
HA175%	10	21.93	4.73	1.50	HA175%	10	44.25	6.01	1.90
HA75%	10	54.24	3.99	1.26	HA75%	10	67.56	5.82	1.84
LA100%	10	67.95	3.86	1.22	LA100%	10	64.71	3.93	1.24
LA175%	10	44.17	8.99	2.84	LA175%	10	58.15	3.08	.97
LA75%	10	63.51	7.09	2.24	LA75%	10	60.99	6.05	1.91
<b>Meditation</b>					<b>Meditation</b>				
NM	10	53.23	6.62	2.09	NM	10	63.24	8.32	2.62
HA100%	10	42.70	5.90	1.87	HA100%	10	56.13	6.14	1.94
HA175%	10	21.30	6.09	1.93	HA175%	10	35.19	5.97	1.89
HA75%	10	47.40	7.20	2.28	HA75%	10	63.32	8.63	2.73
LA100%	10	69.44	3.09	.98	LA100%	10	76.61	4.34	1.37
LA175%	10	47.50	6.10	1.93	LA175%	10	59.03	5.97	1.89
LA75%	10	68.29	5.79	1.83	LA75%	10	65.78	6.08	1.92

Table 13: Att/Med between Introverts and Extroverts Among All Music Conditions.

Conditions	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>df</i>	Sig.
<b>Attention</b>						
NM	-23.71	6.87	2.17	-10.91	9	<.001
HA100%	-35.29	5.01	1.58	-22.27	9	<.001
HA175%	-22.33	4.07	1.29	-17.34	9	<.001
HA75%	-13.32	3.54	1.12	-11.90	9	<.001
LA100%	3.25	5.44	1.72	1.89	9	.092
LA175%	-13.98	11.09	3.51	-3.99	9	.003
LA75%	2.52	10.06	3.18	.79	9	.449
<b>Meditation</b>						
NM	-10.01	9.76	3.09	-3.24	9	.010
HA100%	-13.43	8.55	2.70	-4.97	9	.001
HA175%	-13.89	8.68	2.75	-5.06	9	.001
HA75%	-15.92	11.15	3.53	-4.52	9	.001
LA100%	-7.17	5.62	1.78	-4.04	9	.003
LA175%	-11.53	6.96	2.20	-5.24	9	.001
LA75%	2.51	9.96	3.15	.80	9	.446

The mean Att/Med levels of introverts and extroverts during all conditions are shown in Table 12, and t-test comparisons between introverts and extroverts are shown in Table 13. Most of the comparisons are fairly significant, except during LA100% ( $p=.092$ ) for attention and LA75% ( $p=.449/.446$ ) for both Att/Med.

Findings showed that introverts generally had significantly lower Att/Med levels compared to extroverts, except during the mentioned conditions with insignificant differences whereby the Att/Med levels of introverts were marginally higher than extroverts. Hence, Att/Med levels of introverts were generally highest during LA100%, while Att/Med levels of extroverts were generally highest during HA100%/LA100% respectively. Att/Med levels were lowest during HA175% overall.

## **Discussion**

There were significant differences among both introverts and extroverts, however only between HA100% and LA100%, and not between HA-NM and LA-NM conditions. Comparing between introverts and extroverts, the only significant difference found was during LA100%. Hence, H01 can only be partially rejected, as significant differences in gameplay risk-taking were found, but limited to only between HA100%-LA100% within introverts and extroverts, and only LA100% when comparing between introverts and extroverts. Among the HA tempo conditions, the only significant difference found was among extroverts between HA100%-175% and HA175%-75%, while all other comparisons within introverts and extroverts were insignificant; whereas all differences were insignificant within the LA music tempo conditions. Thus, H02 may only be marginally rejected as there were only significant risk-taking differences among extroverts within the HA music tempo conditions.

All Att/Med of both personality traits showed significant differences among the music arousal level conditions. However, comparisons of Att/Med levels between introverts and extroverts were significant during NM and HA100% but not during LA100%. Thus, H03 can almost be totally rejected, due to the exceptional insignificant difference during LA100%. The differences in Att/Med levels were mostly significant among introverts and extroverts, except in the meditation levels among both introverts and extroverts between HA100%-75%; both Att/Med of introverts between LA100%-75%; and attention levels of extroverts between



LA100%-175% and LA100%-75%. Differences between introverts and extroverts were significant among all HA music tempo conditions, but insignificant during LA100% and LA75% for attention levels, and LA75% for meditation levels. Nonetheless, this partially rejects H04 as well.

Findings deduced that lower-arousing stimuli may prompt greater risk-taking extents compared to higher-arousing stimuli, which opposed to Bramley et al. (2016) and corroborated Mentzoni et al. (2014) and Israel et al. (2019) which found slower-tempo LA music to cause greater risk-taking than faster-tempo HA music, but this only applies within the music arousal level condition group, as risk-taking was still greater during LA100% than LA75%. Within the HA music tempo group, risk-taking was highest and Att/Med levels were lowest overall during HA175% for both introverts and extroverts, as the music can be perceived as “overly-arousing” which could have potentially sparked anxiety, loss of focus, and cognitive overwhelm which caused higher risk-taking (Salamé & Baddeley, 1982; Hallam, Price, & Katsarou, 2002; Diamond et al., 2007). However, risk-taking and Att/Med levels were surprisingly highest during LA100%, and that only during this condition whereby introverts showed significantly higher risk-taking than extroverts. This study could not form an explanation as for this occurrence, but one theory could be formed whereby comfortability of the music could have been an extraneous factor (Lynar, Cvejic, Schubert, & Vollmer-Conna, 2017). The high attentiveness and relaxation during LA100% may have shown that comfortability or preference of music may potentially lead to greater risk-taking. Therefore, this speculation needs to be further validated as a number of external factors may have coincidentally prompted greatest extents of risk-taking during LA100%. One of the factors may be due to the sequence of music conditions, as LA100% was the third intervention after NM and HA100% whereby game players were first exposed and gaining initial adaptation to the LA100% music which may potentially cause loss of focus due to their attention shift to identifying the potentially unfamiliar music. The second speculation could be due to the

consistent low  $z$  that the players received coincidentally during LA100%, in which a long streak of unwinnable games could have prompted the sudden high risks as a relief from their temporal boredom accumulated from the unplayable rounds.

## **Conclusion**

In general, findings were in accordance with Hebb's OAH as an optimally-arousing music stimulus exerts utmost beneficial effects on gameplay mental and task performance; whereas an overly-arousing music stimulus shall result in cognitive overload and anxiety which subsequently detriment gameplay mental and task performance qualities, and this detrimental effect shall be more severe among introverts than extroverts, albeit differences being rather insignificant in this study. Therefore, this study suggests LA100% to be the most optimal music for the gameplay task as Att/Med were consistently highest during this music condition. However, the proposed theory of an increased music comfortability of this music condition which led to increased risk-taking extents can be further studied. Future studies may examine on the differential effects between positive and negative music emotional valences to determine the beneficial and/or detrimental impacts of both music towards risk-taking and gameplay experience. As only play money was used, the usage of real money may have presented a different set of results, thus suggesting the use of real money in future research carefully without breaching research ethics. Future studies may replicate this study on a gameplay task involving strategy and social-inclination skills (i.e. poker), whereby data can be retrieved through competition between opposing personality traits.

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**Research Ethics Declaration**

This study was approved by the University of Malaya Research Ethics Committee (UMREC) under reference code UM.TNC2/UMREC-783.

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**Appendix – Extroversion Dimension Questionnaire in  
Eysenck Personality Questionnaire –  
Revised Short Form (Epqr-S)**

Table A1: E/I Questions in the EPQR-S (Eysenck, Eysenck, & Barrett, 1985, p.29).

No.	No. (EPQR-S)	Item	+1 Point	0 Point
1	3	Are you a talkative person?	YES	NO
2	7	Are you rather lively	YES	NO
3	11	Do you enjoy meeting new people?	YES	NO
4	15	Can you usually let yourself go and enjoy yourself at a lively party?	YES	NO
5	19	Do you usually take the initiative in making new friends?	YES	NO
6	23	Can you easily get some life into a rather dull party	YES	NO
7	27	Do you tend to keep in the background on social occasions?	NO	YES
8	32	Do you like mixing with people?	YES	NO
9	36	Do you like plenty of bustle and excitement around you?	YES	NO
10	41	Are you mostly quiet when you are with other people?	NO	YES
11	44	Do other people think of you as being very lively?	YES	NO
12	48	Can you get a party going?	YES	NO

## **From the Stanislavsky System to the Possible World Box Theory Approach, in *The Year of Magical Thinking* Production**

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### **Abstract**

Application of the possible World box theory in performing a bereaved character who psychologically cannot cope with the truth of losing her husband in *The Year of Magical Thinking* production aims to demonstrate the technique of using The Possible World Box theory in training and acting. The Possible World Box theory is a cognitive theory by Nichols, S., & Stich, S which in this study used as an auxiliary method that mentally helps the actor stop immersing in the role, while using the Stanislavski system, or even other acting techniques that deal with actor believes or provoking the actor's emotions. In this study methods such as interview, observation, archive, script analysis, and training processes were utilized to gather information and apply the 'Magic If', 'Emotional Memory' method, and 'Possible World Box' theory for developing Joan character in *The Year of Magical Thinking* script written by Joan Didion. The result of this study will show how actors can make themselves mentally skilful by using the Possible World Box theory while applying Stanislavski methods, specifically 'magic if' and 'emotional memory'. Besides, the study indicates, character and script analysis as well as effective exercises to find the right way of using the Possible World Box theory in order to stop actors from immersing themselves in the character and strengthen their minds by improving the capacity of their mental function.

**Keywords:** Possible World Box, magic if, emotional memory, The Year of Magical Thinking.

## Introduction

This research is an experimental study. The actor in this study works as the research tool who examines and deeply practice all the methods and steps of acting; on and off stage, regarding all knowledge and information obtained from the theoretical part of the study, and finally presents all her achievements from the experience of applying the chosen acting methods academically. The actor develops and perform Joan's character in the Year of Magical Thinking play while examines the application of the Possible World Box theory as an auxiliary method on the acting field to prevent from immersing in the character. Cognitive scientists Shaun Nichols and Stephen Stich claim up with a theoretical model the Possible World Box. Base on this theory the Possible World Box contains anything we neither desire nor believe but we simply think. Samuel kampa (2019) extended the Possible World Box theory to the acting craft where method actors train to become 'one' with their role and they fully immerse in a character. The actor in this research practically use this method to examine the theory from the acting perspective. I see many artists in the theatrical and cinematic family believe that Stanislavski's system is the best method to practice, because it literally push actors to play naturally and create a believable character. According to Moor "the system by turning on the subconscious mechanisms helps actor to live the experience of the character as if they were his own" (1984, p. 42). In this study, Stanislavski acting methods including the 'magic if' and the 'emotional memory' has been utilized in order to create believable emotions to perform Joan's character. Besides, the Possible World Box theory practiced along with 'magic if' and 'emotional memory' techniques with the aim of having an experimental and practical review on efficiency of applying the Possible World Box theory in acting. Therefore, the study involves practical acting techniques and applying Stanislavski's methods to get into the Joan character, the main and only character of The Year of Magical Thinking monodrama.

*The Year of Magical Thinking* written by Joan Didion is an ineffaceable illustration of loss and grief. Joan Didion wrote the

story of the abrupt and unanticipated loss of her husband and dealing with the severe illness of her daughter into a powerful one-woman play. The script is chosen because it contains deep and heavy emotions so the beneficial applicability of the Possible World Box can be proven after working on a dramatic play that requires the actor to accept the challenge of truly believe the harmful feelings of a bereaved character as it is her own feelings. *The Year of Magical Thinking* was on the stage of Cultural Centre at UM university on 18<sup>th</sup> and 19 April 2020. A one hour and a half monodrama which directed by Nik Aqil.

### **Literature review**

Stanislavski provided a route map for exploring what he called that conscious road to the gates of the unconscious, which is the foundation of modern theatre; and it is a map that no actor, even today, can afford to ignore (Michael Billington, 2009). According to Mroczka (2013), the magic if is a highly effective tool for actors. When actors start to ask themselves ‘if’ questions about the character that they are playing, they can discover completely new elements that can be used anytime, they approach the creation or rediscovery of a role.

This literature review examines the importance of utilizing Stanislavski’s ‘magic if’ and ‘emotional memory’ methods in portraying a believable acting performance. Additionally, it illustrates the fact that, actors need fully assessing the risks involved such as losing the self or immersion in the roles when they practice Stanislavski’s methods. From the Stanislavsky viewpoint, in order to make the audience believe in the character, an actor should display authentic emotions. The actor should immerse himself in a role to such an extent that he actually feels the emotions of the character. The actor should achieve this state by delving into the psychology of the character (Elly A. Konijn, 2000). Alex Yates mentioned in his article *The Definitive Guide to the Stanislavski Acting Technique* emotional memory has a dangerous reputation and that some high-profile actors merge their personal lives with that of their characters live in psychologically

unhealthy ways (2018). According to Brian Timoney, toward the end of his time, Stanislavski began to doubt the safety of Emotional Memory. The method was exhausting and could have negative side effects if the actor drew on bad memories without a therapist or counsellor. There is a danger that you might go to a dark place, as Heath Ledger is infamously rumoured to have done (2016). Despite above facts, the importance of using emotional memory technique needs to be considered. Herbert Blau an American director and theoretician of performance believes that Stanislavsky's emotion memory, is a pretext, if not subtext, for reflections on the vicissitudes of directing, most particularly as it confronts the one inescapable emotion, stage fright, which may be seen, rather, as an existential condition without which there would be no theatre (2005, p. 65-70).

In year 2003 Cherly McFarren, in her doctoral thesis interrogates the wisdom and ethics of training techniques that intentionally enable acting students (consciously or unconsciously) to tap into trauma as a resource for the development and enactment of characterisation. Mark Seton, a researcher in the Department of Theatre and Performance Studies at the University of Sydney, mentioned in his article, actors may often prolong addictive, co-dependent and, potentially, destructive habits of the characters they have embodied (2008). In studying the acting process, it is important to separate illusion from reality. Every drama school knows that illusion can become a dangerous reality. Beginning actors have experienced problems, even trauma; because they can no longer separate fiction from reality, says. In some fairly extreme cases, some actors have required psychiatric treatment konijn (2000). Additionally, a Performer suffering from performance anxiety shows the same neurological effects found in those experiencing a traumatic event, says David Grand (2003). Regarding above matters Mark Seton (2008) suggests ways to address these psychological issues that actors deal with as they involve in practicing acting methods such as 'emotional memory' or 'magic if'. Seton believes in practical terms, this matter requires two concurrent processes: enabling actors to prepare themselves

more wisely as they construct an embodied performance, and, providing support for actors, in the cool-down and aftermath, with the space and interpersonal resources to incorporate the experience of their performance in a resilient manner (2008). Furthermore, there are important advice about applying Stanislavski's acting system that can help actors to overcome these psychological and mental issues. For example, about practicing 'emotional memory', Stanislavski asks that you do not assault the subconscious. Memories are preferable to present situations, as they are more controllable (Timoney, 2016). According to Konijn, emotion memory (although effective) needs to be controlled or an actor could lose themselves in their own emotions when they are supposed to be feeling the characters. This would take away the actual acting, and it becomes about self-indulgence for the actor (2000). In acting Study, besides 'emotion memory', the 'magic if' is one of the important concepts that is connected to the Stanislavski's method or system. Tannenbaum believed that, by placing themselves in their character's situation, the actor gains a better understanding of the given circumstances facing the character. Moreover, by analysing how he or she would respond if they, themselves, faced those circumstances, the actor can take more actions that are truthful when perform the role. Of critical importance in using, the 'magic if' in the actor's work is exploring with absolute honesty what the actor would actually do in the often-unusual circumstances the author has given. What would you really do if you were robbed at gunpoint? Is there a hero in there or a coward? Says Harry Governik the artistic director of Theatre Group (2019).

Perviz Sawoski a professor in the Theatre department at Santa Monica College mentioned in her article the Stanislavski System Growth and Methodology, Stanislavski constantly shifted his views, always trying to find more ways that are efficient for the actor to perform. This is why he was hesitant to publish his work for a long time. If he were alive today, it is most likely that he would have continued to change his views. Thus, while understanding his System, it is important to refrain from fossilizing

his ideas. The System can be viewed as a process in actor training, a learning tool for the actor, and not as a dogma to be followed with blind faith (2012). In this study, we look into a cognitive solution inspired from the possible world box theory, which I explain in further chapters about it, for reducing the risk of immersion in the role or any other mental problems actors might experience. In fact, the method following above scientist suggestion and aid to enable actors to prepare themselves more wisely as they construct an embodied performance and, providing support for actors, in the cool-down and aftermath.

## **Methodology**

This research experienced and studied ways of applying the Possible World Box through the observation method, interview, archive method and practical test on and off stage. The importance of applying this theory in developing and playing a role effective, while avoiding the immersion in the character is proven. There are found beneficial information by the researcher through the experience of applying the Possible World Box theory, ‘magic if’ and ‘effective memory’ in the process of transformation to Joan character. In addition, to get into the role Heath Ledger’s Joker method acting also has been used to help looking deeply to the behaviour of the character.

In this study, Stanislavski’s methods help to find out how to ask questions, do research and experiment in finding the right way to answer questions related to Joan Didion character. Based on what Albert Pia mentions in the book *Acting the Truth*, Stanislavsky does not believe that the actor truly believe in the events that take place on stage, but the actor can believe in the possibility of the event. Thus, Stanislavski’s ‘magic if’ emphasizes that the actor raises questions about the character or position of the character in the script. Questions like ‘what would I do if’ or ‘in that situation, how would I react if’ (2006, p. 24).

On the other side, Heath Ledger’s Joker acting method highly assists to get deeply prepare for playing Joan role by concentrating on different angle of the character in a quiet space

and building up different style of talking, laughing, walking or other aspects of Joan character and embodying these aspects. According to Troy Francis (2020), Heath locked himself away in his London hotel room for around a month, writing a character diary and constantly experimenting with different voices.

To get into the Joan's character, I have done the same method Heath had been through. Since the day producing *The Year of Magical Thinking* starts, a room had been rented for acting rehearsals, I have spent a whole day in that room for a month and I backed home only at night for sleep. During this time, I worked up on building up Joan character inside me. 'If you want to effect large-scale personal change you need to disassociate yourself, albeit temporarily, from those others who are apt to bring you back down to earth, reminding you who you 'really are'' says Francis (2020).

Besides Stanislavski and Joker method acting, Samuel Kampa's article assists in finding a convenient way to avoid actors from immersion in the character. According to Samuel Kampa a PhD candidate in philosophy at Fordham University, two cognitive scientists Shaun Nichols and Stephen Stich claim up with a theoretical model the Possible World Box. Base on this theory the Possible World Box contains anything we neither desire nor believe but we simply think. For example, if we believe a rabbit can talk our possible world box contains a rabbit can talk (Kampa, 2019).

Samuel extended the Possible World Box theory to the acting craft where method actors train to become 'one' with their role and they fully immerse in a character. He mentioned in his article, when you are fully immersed in a character, your cognitively attend particularly to statements your character would subscribe. Your attention is fixed particularly on your Possible World Box, and your Possible World Box contains only the beliefs and desires of your character (Kampa, 2009). Goldstein (2014), an assistant professor of psychology says, it is helpful for an actor to first distinguish what acting is from what it is not, and then determine the process involved in performing.



Along with applying the above methods, an interview conducted with a professional psychotherapist to collect beneficial information about the mental situation and behaviours of a person who experiences deep grief by the loss of a spouse, as the main subject of the play is the loss and grief.

The experiment of applying the Possible World Box and Stanislavski system in *The Year of Magical Thinking* performance involves exercises related to 'emotional memory' and 'magic if' methods and processed with creating and working on three different Possible World Boxes. In the rehearsals related to the 'emotional memory' and 'magic if' methods, there observed obstacles such as delving too deep into unpleasant memories or facing traumatic stress while answering questions such as, what would I do if someone I loved suddenly die front of me?, and other 'if' questions related to Joan's circumstances.

To overcome the above obstacles, applying the Possible World Box assists perfectly as an auxiliary lever in preparing the mind to handle difficult situations that the character experience in the play by training subconscious mind to attend positive aspect of the given circumstances in *The Year of Magical Thinking* play and positive qualities of the character. To use the Possible World Box theory in acting field as a prevention tool from immersing in the character, the actor needs to logically review the character's situation and find new interpretations and positive ideas base on the negative feeling or character's circumstance. Thus, later the actor can replace these new ideas with the negative thoughts by practicing them in the created Possible World Box. Practicing these positive created ideas and interpretations in the 'Possible World Box' comfort the mind after dealing with negative emotions and difficult situations that the actor experienced on the stage with playing a harrowing role or any other stressful character. Additionally, this helps the actor to reduce the pressure of constantly carrying the negative feelings caused by replacing oneself with a sorrowful and neurotic character like Joan in *The Year of Magical Thinking* drama. Designed ideas and interpretations practiced in the Possible World Box after applying

acting techniques and after *The Year of Magical Thinking* performance is done to avoid losing the sense of self or delving too deep in the role. Because the present article is based on the author's experience, I will use the first person in expressing and analysing the text. I as a researcher and actor of the project work on every practical test on efficacy of using the possible world box method along with practicing other acting methods. I attempt to work practically on what Samuel kampa and other acting professionals mentioned in their books and articles, and bring all knowledge and information I gathered into the practical work, on and off stage, throughout the time, theatre group of *Magical Production* were working on producing *the Year of Magical Thinking* theatre. In further chapters, I explain the result of these studies and practices.

## **Discussion**

The greatest accolade given to actors is often that of bravery and risk taking rather than technical competency (Mark Seton, 2008). It is a controversial matter, if the humans' mind as an actor can handle two personalities (thoughts, beliefs, ideas, emotions), truly embody the character and delving into the role; but then immediately after the performance back to their own personality (thoughts, beliefs, ideas, emotions) and do not lose the sense of self when involve in the acting training techniques. Research papers in psychology published in year 2019 has provided some concrete evidence, and results suggest that their roles changes actors' sense of self profoundly (Christian Jarrett, 2019). However, Samuel Kampa (2009) provides the solution for this psychological issue by extending the Possible World Box theory to the acting craft. Possible World Box according to Shaun Nichols and Stephen Stich (2003) is part of the basic architecture of human mind that contains anything we simply think. Based on the possible world box theory Kampa (2009) suggest that if actors distinguish their own possible world box from the character, and during their acting rehearsals they focus on both (their own and the character) possible world box, this helps the method actors do not lose themselves or literally

forgot who they are. According to experience and studies, I believe training the actor's mind to develop this ability to handle two personalities consciously by using a practical technique such as possible world box, which helps the actors avoid the immersion in the role, even can open a door for actors to experience individual development gradually by playing different roles. Psychological research on double or plural states of consciousness reveals that specific experiences, for example disassociating feeling from behaviour, are characteristic features of double consciousness. The feeling of becoming involved with often-fierce character-emotions and being in control of them simultaneously described as double consciousness. There is a perception of being removed from oneself, watching oneself act Konijn (2000). In fact, the actor knows that he is not the character; however, he does act as the character. The perception of the difference between the feeling and the emotion is seen to be a trait of double consciousness. From psychological view, double consciousness is also known as depersonalization. As Debbie Ford a self-help author states in the book *Dark Side of the Light Chasers*, "all of us as a human have all the contrasting features within us. We must acknowledge and embrace all that we are, good and bad. This takes us to a new position of the level of consciousness where the heart is receptive to the whole of existence and the whole of humanity" (1998, pp. 30- 31). The theatre scholar Fink says an actor is able to experience feelings of depersonalization when he/she is acting. 'Stanislavski's description of the depersonalization experienced on stage is similar to examples of depersonalization drawn from the psychological research ' (Fink [1980: 24). Toney Greco, an acting instructor who has Philip Seymour Hoffman among his student, in an interview with the *Indiewire* (2014) says when an audience sees a great role, it should make them question their own lives when an actor takes on a great role, it should make them question their lives. They change. In this paper, I share the experience of practicing the Possible World Box theory as a helpful technique for actors to prevent losing the sense of self or delving too deep into the character while practicing acting techniques. Additionally, I

explain how the Possible World Box theory assist in applying the teaching of the brilliant Russian instructor Konstantin Stanislavski more efficiently since the theory helps to reduce the risk of traumatic stress that can be caused by practicing Stanislavski's acting system. As I mentioned earlier because the present article is based on the author's experience, I will use the first person in expressing and analysing the text. (See Figure 1).

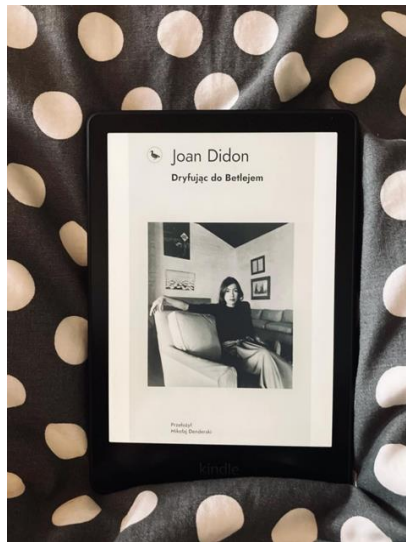


Figure 1. “Grief turns out to be a place none of us know until we reach it. We anticipate (we know) that someone close to us could die, but we do not look beyond the few days or weeks that immediately follow such an imagined death. We misconstrue the nature of even those few days or weeks. We might expect if the death is sudden to feel shocked. We do not expect this shock to be oblitative, dislocating to both body and mind. We might expect that we will be prostrate, inconsolable, and crazy with loss. We do not expect to be literally crazy, cool customers who believe their husband is about to return and need his shoes.” —Joan Didion, *The Year of Magical Thinking*, Prolific writer Joan Didion (Liz O. Baylen / For TheTimes 2022). Image has been taken from @joandidon (November 2021), Instagram for #joandidon.

The acting process in *The Year of Magical Thinking* production was an impressive journey of discovery, reengineer, and recalibrate Joan Didion's character. I decided to go where this great role will take me; then I come out of Joan's character a changed person. I believe the line that separate my real self from my stage- self became less specified, as I goes deeper into the character. As I go further in the script and character analysis, I find more in common traits and qualities with the script character. Joan had a strong attachment to her family, and so did I. Joan was a controller person and always struggle to control the living condition of her loved ones, and so did I. Joan was a perfectionist and tried to do her best in any condition, and so was I. (See Figure 2).

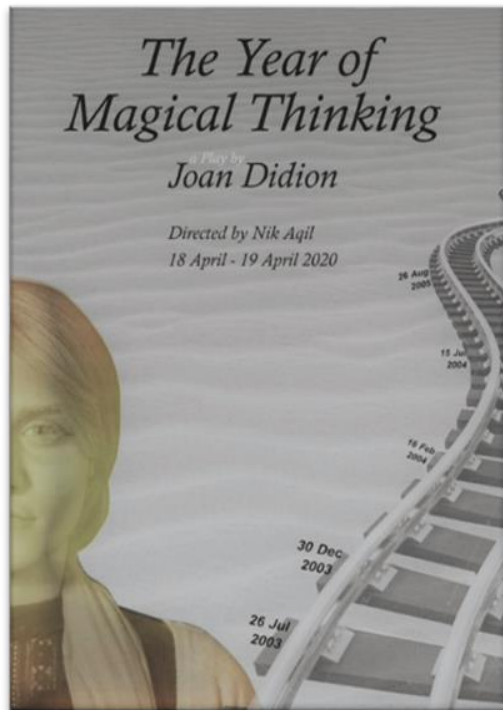


Figure 2. Poster for *The Year of 'Magical production'* has been made in 2020, April 18 by Amir Sedgh Kia.

All these similarities I detect, accomplished me to get into the Joan character easier and thoroughly understand the feelings and desires of the role. Although, training process to become 'one' with the Joan character result in some ill-effects on my mind for a short time. In fact, the process of acting to perform a play with a penetrating account of personal terror and bereavement was difficult but also it was an extraordinary experience. Joan Didion written the 'Year of Magical Thinking' as a journey into a place that none of us can fully imagine until we have been there. In the existential psychotherapy, the book written by American psychotherapist Irvin Yalom, four ultimate concerns of life introduce that include death, isolation, meaninglessness, and freedom. If we look meticulously, in The Year of Magical Thinking performance, the actor needs to face all these four fears and ultimate concerns of life, from the time Joan's husband died, to the moment she feels the life is meaningless without her family and she stuck in the swamps of destructive feelings and existential anxiety.

First step to get emotionally closer to Joan Didion and get into the role was applying the 'magic if' exercises. To practice the 'magic if' technique, I required to raise up questions related to the position of Joan's character in the play. Some questions I came up with are as follows.

- ✓ What would I do if everything in my life goes out of my control even though I struggle a lot to manage it? How would I react if my husband suddenly suffocates and die in front of me? How would I react if doctors tell me my husband and my daughter cannot continue to live anymore?

I tried to answer above questions by imagining myself in a set of fictional circumstances and envision the consequences of finding myself facing the situation that my husband die in front of me. In fact, deep inside in my subconscious, these unexpected and unpleasant events were my huge fears, but now I was pushing myself to face my fear on the theatre stage. It seemed impossible for me to bear the unbreathable pain of a loved one's death; by thinking about this difficult situation, I felt isolated, broken, and

alone and I burst into tears. Nevertheless, it was all my individual feelings as a result of imagining myself in that difficult situation. Thus, I work out on building up different reactions related to different kind of personalities. For example, getting shocked as a useless person and stare at the inanimate body of my loved one or becoming nervous and screaming for help, denying the reality and laughing at the death body of my beloved husband and say are you making a joke? Practicing to embody all these created reactions in that terrifying imaginary situation may assist in indicating believable character and helped me portray a bereaved person perfectly, although, I knew practicing this technique constantly could construct destructive feelings, which leads me to suffer from severe depression or immersing in the role. However, to act naturally I supposed to do the ‘magic if’ exercise in acting rehearsals.

### **Applying The possible world box I**

To prevent from immersion in the role, I worked out on applying the Possible World Box theory. Cognitive scientists Nichols & Stich claim that the behaviour that is seen in pretend play is motivated not from a pretend desire, but from a real desire to act in a way that the description being constructed in the Possible World Box (2000, p. 147). According to Samuel kampa if an actor distinguishes his or her own desires and beliefs from the character and not only focus on the Possible World Box contains the characters believes and desires, then the actor can prevent from immersing in the role (2009). Clearly, once I involved in acting process, I spend most of my time to get into the role thus practicing acting techniques leads me to focus more on Joan’s desires and belief.

Regarding to Samuel’s idea, I decided to add a task to my acting process and spend some time to focus on my own beliefs, every time I finish working on magic if technique. I found out, even I in my personal world box have negative belief and thoughts about death of my loved one, which makes it difficult to distinguish the possible world box that contains character beliefs

and desires from my personal world box. Psychologically speaking, I was not mentally prepared enough to handle the loss and grief that existed in the play. Besides, working on the 'magic if' technique intensified my concerns about losing a loved one; my personal possible world box in that situation contains negative thoughts about loss and grief.

Therefore, I worked out on building up a new possible world box. Considering that portraying a bereaving person requires an actor who is mentally strong, and prepared, I constructed a new Possible World Box that contains ideas belongs to my Ideal self. In fact, I created ideas that can hearten, empower, and validate me to honouring the full weight of loss, ideas that assisting in giving strength and courage me to bear painful losses.

I used Journaling as a tool and by logically reviewing Joan's emotions and situation I designed positive ideas. I think on these ideas in a way that the description being constructed in my personal world box. In this manner, by attending to the created ideas in my personal world box, I train my mind to scan and observe my situation in the play logically and positively thus by practicing created ideas I would not lose the sense of self in my imagination or being psychologically affected by playing stressful scenes. One of the ideas I put in the created possible world box is as follows.

- ✓ This world is created by a Creator who is absolute perfection, and this perfect Creator created the world in such a way that everything in this life moves towards perfection, improvement, and evolution. Therefore, everything that happens to me in this life is to lead me to growth and development.

Additionally, I practiced a definition about the loss and grief, which I designed by considering my fear about losing my family, which is as follows.

- ✓ Even though the absence and losing of a loved one will be very painful, but I smile to think how much my loved one will enjoy the other side, as I know death is not the end of our



journey. Death is the next delightful adventure for all of us that will begin someday.

Although at the main time my ‘personal belief box’ about the loss and grief, contains the concept that, life is meaningless if I lose my loved ones or living is painful without my loved ones. However, I have planned that after I practiced the ‘magic if’ I attend to my ‘ideal-self world box’ that contains the created positive ideas, and I disregard my ‘personal belief box’. As a result, practicing these ideas in created ‘possible world box’ helps me increase my capacity and comfort my mind after dealing with negative emotions caused by imagining myself in a set of fictional negative circumstances. Using the possible world box to prepare my mind for applying Stanislavski’s ‘magic if’ was tremendously helpful in this stage of the acting process of *The Year of Magical Thinking* performance.

### **Emotional Memory Practice**

The next activity I was involved in was practicing ‘emotional memory’ to understand the feelings and desires of the role thoroughly. As Stanislavsky suggests, for applying this method, actors required to identify the emotions of the character by remembering their own experience, which involves the same feeling that is described for the character in the play. Regarding Stanislavski’s suggestion on practicing emotional memory, I was required to remember a stressful event in my life or recall an incident in which I lost something important that made me fully hopeless. Then, I had to attempt to act the part in the emotional space of that grief and loss I once felt. Therefore, I recalled all the sweet memories I had with my grandmother then I remembered the moment I saw my grandmother’s inanimate body on the ground, and I knew we no more could create pleasing memories together. Recalling this memory helped me to bring up the expression of Joan feelings to my acting. In fact, I extended my tragic memory of losing my grandmother, to the Joan’s tragic event in the play and I identified with Joan’s character. According to Konijn (2000), research on empathy and identification is important to understand

the 'involvement' of the actor in character-emotions. Identification does not result in feelings of sympathy for another, but in having feelings similar to the emotions, the character presumably has. Identification thus leads to emotions similar to those of the character. I analysed Joan's movements, reactions, language used, and behaviour in different circumstances throughout the script, and realized there are some occasions when Joan's responses and reactions to the events are like that of mine. For instance, When I heard my grandmother is dead, I tried to ignore the reality, like an insane person, I called my folks, and I told them I need to talk with my grandmother, please give the phone to her. In the play, Joan has the same reaction to the death of her husband John, but in a different way, as we see Joan has entered provisional insanity; believe that her actions, for example not giving away John's shoes has the power to bring John back.

Clearly, practicing emotional memory to find the right emotions related to Joan's situation, which required repeatedly recalling the tragic event of losing my loved one with details, could result in psychological damage and diving into my destructive thoughts at that situation. According to Ohikuare what Susan Nolen-Hoeksema said on the effect of ruminating on negative events, this matter has been shown to "consistently predict the onset of depression" in those who engage in it, particularly women (2014).

### **Applying the Possible World Box II**

To prevent mental damage and depression, I got help from the Possible World Box theory once again. I worked out on creating a possible world box that contains positive interpretation for the tragic event of losing a loved one, thus I could look at this tragic event with a new perspective that allows replacing positive emotions with negative ones. Debbie Ford said, "Revising and reviewing every event that caused a person to be frustrated and sad leads the person to realize the blessing that lies in each of these displeased events. No event is painful in itself; the important thing is how we approach it. By choosing our interpretations, we take

control of our live” (1998, p. 147). If we think properly, we can formulate a reasoned and logical perspective for any unpleased events in our life.

In order to find a proper positive interpretation for the tragic event of losing a loved one and replace the negative viewpoint with the positive point in the possible world box, one interview conducted with a psychotherapist Mohsen Mohammadinia. The first question has been asked is, what thoughts and beliefs make a grieving person disappointed and frustrated?

The psychotherapist answered this question as follows,

- ✓ “When a person faces the tragic event of losing a loved one, especially couples who experience losing their spouse, the Psychological Immune System of their brain is activated, and their brain starts to find a way to defend and provide security and peace. The bereaved person passes from five levels. 1) Denial, this cannot be happening to me. 2) Anger, why is this happening? Who is to blame? 3) Bargaining, make this not happen. 4) Depression, I am full of sadness I cannot do anything. 5) Acceptance, I am at peace with what happened. The bereaved individual at first thinks the stability of his life is collapsing and falling apart and feels abandoned and unsecured. To defend against these destructive emotions and tragic event, people first choose denial way, because they want to feel safe; as it can be seen Joan’s mind in *The Year of Magical Thinking* goes the same way and refuse to accept the reality” (Mohsen Mohammadinia, personal communication, February 16, 2021).

The psychologist’s answer for this question helped me scientifically get familiar with the actual reaction of the mind to the loss and grief, which guided me to play Joan’s character more naturally. More importantly, the interview analysis support practicing the possible world box method, which requires us to replace negative interpretations with a positive one. If the bereaved person’s mind is equipped with a positive interpretation or belief about loss and grief, he could cope with the disaster event of losing a loved one easier.

The second question have been asked in this interview session is, -what can help to heal a grieving person and relax his mind?

The answer for above question was as follows.

- ✓ “Considering the feeling of abandonment and insecurity that a person is experienced in this situation, the person by cultivating a belief that strengthens the feeling of security and peace in his mind can ease his sadness. Search for meaning, and positive meaning finding can create a solid inner force to accept this unfortunate event, empower the bereaved individual, and help him come to terms with his loss. If the person can recognize the new capacities, ideals, and relationships come out of this tragedy of loss, he can cope with his grief and prevent mental damage” (Mohsen Mohammadinia, personal communication, February 16, 2021).

As the psychotherapist mentioned in his answers, when a person lost a loved one, he feels abandoned and unsecured, during the emotional memory exercises, I experienced the same feelings. Many negative interpretations about life comes to my mind. Clearly, continuing to think of these negative interpretations after ‘emotional memory’ rehearsal could potentially leads to experience frequent negative emotion and depression. Therefore, by referring to the guides from above interview I used journaling as a tool and designed positive interpretations for the loss and grief.

I chose two interpretations from the list, and I began building them up in the Possible World Box by trying to think of them constantly during my rehearsals.

The first interpretation I chose was the opposite and positive interpretation for the negative description I had about the loss and grief that is as follows.

- ✓ As I look to the event of losing a loved one, I could see that this traumatic life experience led me to a posttraumatic growth that involves affirmative personal growth after experiencing a traumatic event. In fact, I have become more independence, mature, stronger, and self-confident as a

result of losing my loved one. Things that not kill me, make me stronger

Then, I chose the second interpretation regarding the negative feelings such as fear of losing my family or hopelessness I had after acting in different parts of *The Year of Magical Thinking* play in the emotional space of that grief and loss I once felt. The opposite and positive interpretation that could prevent me from suffering an existential anxiety was as follows.

- ✓ The true is that reviewing and recalling difficult situations I experienced at the ‘emotional memory’ rehearsal to get into the role gives me a sense of vulnerability. However, playing Joan Didion’s role helped me realize that acceptance is not easy, but it is the most crucial and the first step for recovering from a loss, just if I accept the reality of my circumstance then, I can begin constructing a life to fit that reality.

To prevent depression and delving too deep into my imagination after practicing the ‘emotional memory’ technique, I take the time and space to separate myself from Joan’s character. Both interpretations in my Possible World Box is constructed by attending to above description after the acting rehearsal. In fact, I disregard my ‘personal belief box’ that contains negative interpretations about the situations I involved in the play. Using emotional memory technique along with applying possible world box strengthen me and led me to portray a grieving and bereavement person without bringing that sadness to my own real life.

In art, we need to be responsive. As Debora Morller Kareman believes, thing you have to get in so then they can get out, and you cannot live the way you do your art or you would be wounded every second (Ohikuare, 2014). There are actors who damaged from immersion in their role and suffer from psychotic problems, depression, insomnia and even committing suicide. A clear example is, Heath Ledger the brilliant actor of *Joker*. One particular myth that attached itself to Ledger was that his death was somehow a result of immersing himself in the character of the *Joker*. The idea is that Ledger’s battle with insomnia was rooted in

some sort of existential angst – an angst borne of ‘becoming’ an abhorrent character (Kampa, 2019).

### **Physical Practices**

Physical practice is also an important part of the preparation for acting performance, which I have worked on. Employing emotional practices to develop and build up the emotional states of the character inside the actor is part of the preparation to get into the role but we need to consider that the first thing viewers will see and value the actor is the physical act that bringing the play character and the actor’s qualities together. Considering this fact, to have a proper physical preparation I took help from the ‘Possible World Box’ for the last time. I used journaling as a tool to work out on the ‘Possible World Box’ of Joan. I set about working out how a person with such manners and beliefs would present herself in public, I list down things such as gait, facial expression stance and so on then I practiced embodying this. Research has shown that, even when the actor thinks about his or her role, the manner in which actors behave in the real world offset afterwards changes for a considerable length of time.

### **Character Analysis**

Furthermore, I searched for Joan’s most important beliefs and desires, and I write down the behaviours of Joan that clearly show her characteristics. Following are part of my findings from studying Joan’s behaviours. I believe there is a hidden pain beyond the writing of *The Year of Magical Thinking*. Joan spent much of the time in which her book takes place struggling to manage and control things she easily cannot. In my perspective, controller is one of the important characteristics of Joan that could help her not give up and overcome all those pains and griefs after John’s death. This characteristic is clearly recognizable in the conversations between Didion and John, when John tell her “must you always have the last word, must you always be right, for once in your life just let it go” (Didion, 2007, p. 8). On the other hand, I found that

Didion is a logical person as we see, throughout the play she tries to prove everything logically by referring to evidence. She even searches her books and tries to find proof for the logicity of her superstitious belief (The Magical Thinking) that bring Joan into insanity for a while. It seems that books are Didion's shelter, but about grief, books could not help Didion to ease her pain. Didion (2007) says, in time of trouble, I had been trained since childhood, read, learn, work it up, and go to the literature. Information was control Given that grief remained the most general of afflictions its literature seemed remarkably spare. Therefore, the matter that she could not get help from her books about her situation made Joan to be more confused and frightened, and her only desire is to find a way to deny the situation she is into it. Joan believed that learning more about what happened to John will somehow help her to control the situation and bring John back. However, Joan had no control over death and life though Joan wrestled with understanding her sorrow.

After studying the character's traits, I worked up to speak, behave and act, as a person with such values and beliefs likes Joan. On the other hand, we cannot deny that it is also important to know about the age and physical appearance of a character to create a true imitation of his or her physical behaviours and body language. In *The Year of Magical Thinking* there are given dates about the time that event takes place in the Joan's life. However, the age of the character is not recognizable unless we search for the age of Joan in reality. Joan Didion in 2020 is 86 years old. As the script says this happened on December 30/2003 when she was 68 years old. Therefore, I practiced walking and talk slowly as an old individual, and picked some habits related to older adults. I have made many observations on group of people from age 60 to 68 years old and I analysed their conversation, body language, and behaviour while working and chatting with their friends. Later I studied and watched some of the Joan interviews in YouTube channel and figure out that Joan appearance is slightly broken, but she is strong as she speaks powerfully. These observations accomplished to imitate the correct style of speech and body

language of the older adults and helped me play as Joan Didion and appreciate Joan Didion's character.

### **Working with the director**

On the other side, the director of the play asked me to carry something heavy such as a heavy bag on my shoulder throughout the rehearsal, to help obtain the proper tempo and rhythm and gesture of a 68 years old woman. The further we went, in rehearsals, I felt that the rhythm of the play becomes very monotonous if I apply slow movements, and as a result, I might lose the audience's attention. Therefore, the director - Nik Aqil-suggested solving the problem by applying a fast tempo in some parts of the play where the character becomes angry or anxious. In addition, the director recommended applying a physical habit, which Joan used to do when she becomes angry or anxious (2021). I listed down some physical habits related to the anger and anxiety, and I chose to start nervously shaking one leg or slowly rub my finger to the other finger in the part that I need to show the anxiety and anger of the character.

Director also suggested working on other emotional training in order to attract the audience attention. This is because the show was one-hour monodrama and I was the only actor who tells the story with a slow rhythm as a 68 year old woman, so there was the possibility that audience become bored. Therefore, the director suggested selecting two emotional and affective scenes of the play. He asked me to look directly into the eyes of one targeted audience, take the audience's hand, make the audience feels sympathy with the character and transfer the feelings to him or her. Director mentioned that the act of looking directly into the audience eyes and telling the dialogue could make the audience more impress and sympathise with the character (2021). According to Konijn (2000), Audiences will deduce the Character's emotions, concerns, and situational meaning from the behaviour exhibited and from information given about the context. The direction the impersonated character-impulse takes - either avoidance or approach - will help the audience interpret the 'emotional



behaviour' so that they will be able to understand the character's actions. In this way, it becomes possible to sympathize with the character. Despite the challenge, I was aware of, I applied the technique and the scene successfully impressed the audience. I realize this matter when in the preview, the targeted audience experienced a catharsis as I took her hand and I said my monologue while I look to her eyes she (the targeted audience) cried and fully sympathise with the character of Joan in the chosen scene.

## **Conclusion**

This study intended to ensure that every process performed is smooth, organized and effective. In the acting journey to play as Joan in *The Year of Magical Thinking*, I experienced ups and down I feel in this prolific way, I scarred, awarded, freed, and changed by the role I played and learned a lot from Joan's character.

Regarding all the knowledge and experiences, I obtained by doing different mental experiment with the possible world box theory throughout the study, I found the possible world box an effective solution for controlling the dangerous immersion in the role. Regarding to the experience and study, opening a new possible world box in mind and practicing our own ideal self-thoughts and believes not only can help actors to handle negative emotions and harrowing roles but also can help them to be psychologically healthier and stronger. Obviously, actors participates in different roles and every time an actor can widen the possible world box of his ideal self, and as the result increase his inner capacity, and strengthen his mind. It is important to know, the best way of avoiding from immersion is when you are acting offstage, you have to remember that it is pretend and onstage you have to forget yourself and become the character, and applying the Possible World Box theory along with any acting techniques you use can be the best way of doing so. I hope that the techniques and methods that have been applied throughout the *Magical Thinking* production lighten a new horizon in the acting field.

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**‘Panorama’ By Michael Veerapen: An Analysis of the Various Compositional Elements and Techniques of a Malay Popular Music Composition of the Late 20th Century**

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**Abstract**

In the 1960s till the early 21<sup>st</sup> Century there was a trend to compose Malay popular music with the many facets available in the jazz style. During the said period, Malay popular Music compositions were heavily infused with a verifying degree of different ethnic styles from the West, such as funk, rock, hip hop and jazz. In addition to that, the sensibilities of Eastern idioms such as the phrasings of the melody, the usage of scales and its eastern scales and also the rhythmic punctuation of the beat and the underlying styles of a particular composition were also utilised by composers of this genre during this said period of time. This paper focuses on identifying the compositional tools as well as the cultural identity and the elements of approach of one of Malaysia’s most prominent composers of the late 20<sup>th</sup> and early 21<sup>st</sup> century, acclaimed music director, composer and jazz pianist, Michael Veerapen. This paper takes a musical dissertation and focuses on his ground-breaking composition from Sheila Majid’s ‘Warna’ (EMI, 1988) album, entitled ‘Panorama’ and thus will explore the tools, the analysis and the compositional techniques utilised by Michael Veerapen in ‘Panorama’. There will be a melodic and harmonic analysis, as well as a rhythmic dissertation of the composition. Furthermore, stylistic boundaries as well as the

musical and cultural importance of ‘Panorama’ will also be discussed and projected. In conclusion, this paper on Michael Veerapen’s ‘Panorama’ intends to reinvigorate, reintroduce and refresh the various and multitudes of compositional techniques of Malay popular of Malaysia to the current and future composers of this specified genre. Thus, in accordance to this, this paper intends to create a new paradigm of compositional tools for composing Malaysian popular music by popular and jazz composers for the future.

**Keywords:** Malay Popular Music Compositions, Melodic and Harmonic Analysis, Popular music compositional techniques and tools, Paradigm shift, Michael Veerapen

### **Introduction**

“Since Independence we have been looking for that distinct ‘Malaysian’ music but till today, nothing has emerged as being uniquely Malaysian. Whereas each of the three main races of this country have their own distinct music, Chinese Music and Indian Music remains largely the same as that which you can find from the countries where they originated from. However, Malay Music does not sound like anything that you can find outside of the Malaysia/Indonesia region and therefore I would have to say that for music to be Malaysian, it has to be built on or based on Malay Music in order for it to stand as something distinct and unique in a sense.”

(Michael Veerapen, August 16, 2018)



Sheila Majid's 'Warna' (EMI Records Malaysia, 1988)

As Malay popular music evolved throughout the years, the factors which made Malay popular music adaptable to other forms of music were the ability to fuse the melodic phrasings of the Western idioms, the adaptation of the 12 tone chord series which were immediately functionable in any Malay popular music composition and the ability of the seamless expansion of a stylistic function of a western style, for example a bossa nova beat, which in the phrasings, of the bass lines and melodic junctures can easily be adapted into a Malay Popular tune.

## Prologue

In reference to a journal published in July 2016 in the Malaysian Music Journal Vol.4, Num. 2 (91-116) 92 ISSN 2232-1020, entitled *Analysis of the Melody and Lyrics of the Best Songs from Malaysia, Indonesia and Singapore in 2013* (Mohd Azam bin Sulong, 2016) which focused on the analysis of the melody and styles of the best songs from Malaysia, Indonesia and Singapore in 2013, namely 'Lelaki' -Yuna (AIM, 2013), 'Harus Terpisah' - Cakra Khan (AMI, 2013) and 'Jangan Ganggu Pacarku' - Alif Aziz (APM, 2013). The selected songs of the said paper were among those that received the 'Best Song Award' from their respective countries, (a) Malaysia—*Anugerah Industri Muzik* (AIM); (b) Indonesia—Indonesia Music Awards (AMI); and (c)

Singapore— *Planet Music Awards*. Just as this paper, Mohd Azam's paper on music analysis of the chosen compositions of Modern Contemporary music used a qualitative approach to support its data. Unlike Mohd Azam's journal, lyrics of Michael Veerapen's 'Panorama' will not be discussed nor dissected as the focus of this paper is in the compositional content of the melody, harmony, rhythmic styles and even the improvisational notes and usage of the scales, the modes and techniques. The chosen songs were analysed and discussed from the theoretical point of musicology in theory, the creation of melodies and the application of the harmony of the said composers. To further the point, and in reflection of how Michael Veerapen's 'Panorama' will be dissected in this paper, composers of this genre consistently employed elements of 'authentic' modern jazz, and blends the music cultures from both the Western or Eastern idioms with rhythmic junctures of the many styles of music which has influenced a Malay popular music composition since the 1950s.

In addition to that and in reflection with another paper which mirrors the analysis of a prominent Malaysian Popular and jazz composer since the early days of Malaysian Independence in August 1957, is Joanne Yam Pui Kuan's dissertation on '*Alfonso Soliano*' – *The Father of Jazz* (Music department, Faculty of Creative Arts, University of Malaya, 2016).

In the mentioned paper, Joanne analyses Alfonso Soliano's 'Mimpiku Semalam' and 'Rohana' from the melodic view point, in which the intricacies of the melodic movements of the compositions are dissected and framed in the ways it moves in linear with the harmony and also with the stylistic rhythmic groupings of the compositions.

Apart from that, to decipher the stylistic nuances of the various forms of harmonic patterns utilised in the said compositions and to determine the many different facets of the evolution of Modern music, Mark C. Gridley's (1988, 1994 & 2001). *Jazz styles: history and analysis*. 3<sup>rd</sup>, 4<sup>th</sup> & 5<sup>th</sup> Edition and Berklee College of Music's (Boston, MA) Steve Rochinski's



(1995). *Harmony Series* were utilised to determine a solidified desired outcome.

“A popular song doesn’t become jazz until it is improvised on, and there you have the real core of all jazz: improvisation.” (Bernstein, 1958)

## **Discussion and Background**

### ***The Malay Popular Music Scene of the Late 1980s***

From the early 1980s till the early 1990s, several contemporary Malay popular artistes carry this vision of a uniquely and exclusively intricate ‘fusion’ of Malaysian music and Western Jazz – Funk sensibilities in the guise of popular music. According to guitarist Fauzi Marzuki (2020), with artist Sheila Majid (a Malaysian popular jazz singer of the 1980s-present) with masterfully crafted popular / jazz albums such as ‘Dimensi Baru’ (EMI, 1985), ‘Sinaran’ (EMI, 1986) and ‘Warna’ (EMI, 1988), this perfect fusion of popular, jazz and funk compositions with heavily infused rhythms of their Western Counterparts , such as Chaka Khan, James Ingram and Patti LaBalle, were at the cutting edge and forefront of pioneering Malaysian popular jazz music which broke many artistic and commercial boundaries in the 1980s-90s. It was during this time when Michael Veerapen wrote ‘Panorama’ in 1987 with the latest cutting-edge technology that was being utilised in many major recording studios in and around Malaysia. As with the western counterparts and even with many Eastern Musical contemporaries during this period, the vast usage of both computers and the latest synthesisers, such as the Yamaha DX7, Fairlight CMI Series I, 2 and 3, the Roland D 50 synthesiser and Akai sampling machines were part of the daily staples of the top producers in the country such as Roslan Aziz (EMI Records), Mac Chew, and Jenny Chin, both fellow Berklee College of Music graduates as with Michael Veerapen.

With the latest technological musical tools at their disposal and armed with a global exposure of both the Western sphere of

Jazz, Funk, Rhythm and Blues and even Rock sensibilities, the mentioned producers and composers were at the forefront of composing Malay Popular Music which would be instrumental in bringing music of this kind to the very high echelons of the International Music Scene throughout the world. As with Michael Veerapen, with his technical expertise on both the sound of the synthesisers and armed with an infinite knowledge of both Jazz and pop music, he spearheaded Malaysia's popular music territory with a gem of a popular tune, written for one of the country's most beloved singer and performer, Sudirman Haji Arshad with an exquisite ballad entitled 'One Thousand Million Smiles' (EMI, 1989).

With the backdrop of the prestigious Royal Albert Hall in London, England, Michael's said composition, performed flawlessly by the late Sudirman scooped the title '1989 Asia's No. 1 Performer' title which he won during the 'Asian Popular Music Awards' competition held at the Royal Albert Hall in London on 19 March 1989 (Wikimedia Malaysia, acc. June 3<sup>rd</sup>, 2021).



The late Sudirman Haj Arshad holding aloft the '1989 Asia No.1 Performer Award' at the Royal Albert Hall, London, England after winning it with the rendition of Michael Veerapen's composition entitled, 'One Thousand Million Smiles' (EMI Records, 1989).

It was also during this time that artistes such as Mukhlis Nor, M. Nasir, Jenny Chin, Mac Chew, Michael Veerapan, Zahid Ahmad, Samuel Das and Lewis Pragasam all strive to fuse various elements from the various musical cultures in their music, either from a compositional viewpoint or from the combined use of musical instruments, themes, styles and rhythms derived from the different cultures in Malaysia. Just like their contemporaries from neighbouring Indonesia, where many of its highly acclaimed composers would be heavily influenced by both the Western idioms, especially in jazz as Erwin Gutawa (bassist, composer, arranger and producer) and Indra Lesmana ( keyboardist, arranger, composer, producer and songwriter) to name but a few, by mixing it with the many idiosyncrasies and elements of Indonesian folk music, and thus creating an entire original hybrid which would sound delicately Indonesian but with substantial global appeal. This can only be achieved with the right balance of both worlds. The rhythms of the East, with the harmonic stance of the west has always been a popular by product of achieving this. It was during this period in the late 20<sup>th</sup> century that Malay Poplar Music composers, with its boldness to embrace the latest technology despite its detractors, armed with a superior academic mindset than those who have gone before began to embrace and accept the global appeal of ‘fusing’ the perfect balance and elements of Jazz, Funk, Rhythm and Blues with the folk rhythmic stylings such as *Joget*, *Inang*, and even *Zapin* that brought Malay poplar Music to a higher global appeal, especially among the younger generation. With compositions and aesthetics which sounds very similar yet not being a carbon copy of its Jazzy western counterparts such as Mezzoforte, Spyro Gyra and even the Eastern Japanese prime fusion bands such as Casiopea and T Funk, Malay popular music held its own amongst such esteemed companies.

In the midst of it all, and from a technical and compositional viewpoint, Michael Veerapen’s ‘Panorama’ shines brightly in the middle of it all during this very progressive era where the perfect marriage of the many musical cultures sparked brightly and laid the foundation of the needs and wants of the latest available

technological wonder which would be an invaluable asset to any budding future composer of Malay popular music.

Recorded for Sheila Majid's third album, 'Warna' (EMI Records, 1988), this fusion (popular / jazz / funk/) composition was a standout track in terms of techniques, marriages of various styles of contemporary music and pioneering synthetic sounds and arranging sensibilities. The recorded version on the album also featured a synthesizer solo (improvisational lines) by Michael Veerapen himself. Recorded in a jazz combo setting, which features a drum set, various drum machines, various synthesizer 'horn stabs', keyboard accompaniments, synthesizer strings, a synthesized bass line which was recorded on the (then) state of the art sampling synthesizer, the Fairlight Series III (1989) and electric guitars, played with 'toggle' style and in 16<sup>th</sup> note funk rhythms, 'Panorama' is a tune which was a contemporary of its time regardless of the geographic landscape. Utilizing the state-of-the-art recording equipment of the late 20<sup>th</sup> century, a heavily quantized track provided the rhythmic backbone of the composition.

In a perfect marriage of popular singing (which has many staccato / accented lines and sixteenth note rhythms), 'Panorama' reflected the popular style of 'fusion' funk / jazz of the late 20<sup>th</sup> century/early 21<sup>st</sup> century of Jazz / 'Popular / Funk artists from the Western sphere when it was released. Sounding, not out of place among the GRP Records, (a music label that was started and founded by Oscar-winning composer and Grammy Award-winning jazz musician Dave Grusin along with his best friend and former drummer turned engineer and co-producer/label runner Larry Rosen, GRP records was widely recognized and known for its instantly recognizable all-digital, clean widescreen sound production in the form of radio friendly 'smooth jazz / jazz pop staple of the 1980s-2000s). Adapting chords which are both diatonic and modal from the jazz idioms, staccato melodic phrasings, the funky-pop jazz rhythms and synthesizer funk sensibilities, 'Panorama' is/was as current as the epitome of a

perfect blend of the many elements of the potpourri of influences of Western and Eastern musical styles.

## **Methodology**

This paper is based on the musical and compositional analysis of the original recording from Sheila Majid's 'Warna' (EMI, 1988) album. 'Panorama' is transcribed from the said album and the transcriptions itself was used in this paper. Thus, the primary elements of music such as the form of composition, the harmonic analysis and the dissertation of Michael Veerapen's actual performance on 'Panorama' are used in this paper. The theories applied in the analysis of the said tune is based on Jack Perricone's, (2002). *Melody in Songwriting (Tools & Techniques in Writing Hit Songs)*. Berklee College of Music, Boston: Berklee Publications. (Berklee Press, 2002) on the analysis of the form, Steve Rochinski's extensive research on the Harmonic techniques (Berklee Press, 1995) on the harmony and John Mehegan's Jazz Improvisation, Volume 1 (New York Press, 1993) is utilised on the dissertation of the improvisational techniques. Thus, in this paper, 'Panorama' is dissected from the four aforementioned compositional standpoints which are the:

- a) Form
- b) Improvisational techniques
- c) Harmonic analysis
- d) Eastern and Western elements

## **The Form of 'Panorama'**

The Form of 'Panorama' is: Intro (Drums and Bass)- A Section - B Section - C Section (Drums and Bass as per the intro) - D Section – E section (Synthesizer Horn Stabs) – F Section – SOLO /Improvisational lines – G Section – Outro

The bass lines patterns (a synthesizer bass pattern), which is in 16<sup>th</sup> notes (semiquavers) kicks in on Bar 6 and sets the groove of the song. It is imperative that only the drums and bass lines are being featured here as Michael Veerapen very cleverly sets down

the tempo, feel, and the ‘mood’ of the song with the funk bass (sixteenth notes grouping) and funk drum patterns which are very tightly quantizes and hence, the rhythm being the backbone and the ‘character’ of the song.

## Panorama

Jazz Pop/Funk  
♩ = 127

SHEILA MAJID  
Composed by MICHAEL VEERAPAN

**Intro**

6 Bbm7 /A Abm7  
(Bass line)

8 Bbm7 /Ab Gbmaj7

Figure 1.0: Intro (Drums, 5 bars) and the Bass groove of ‘Panorama’ (4 bars) (Transcribed by James PS Boyle and Chin Sook Jing).

The A section, with the melody comes in Bar 10, where it continues for 8 bars. The B Section doubles the length of the A section and is as symmetrically balanced as the A section with another 16 Bars.

10 **A** B♭m7 /A A♭m7 B♭m7 /A♭ G♭maj7  
 Sepin-tas pan - da - ngan Va - ri - a ber-a-ne-kan-nya ta - ta - pa - n

14 B♭m7 /A A♭m7 B♭m7 /A♭ G♭maj7  
 Pa-da ti-ap in - san Se - mu - a ber-la-i - nan-nya tu - ju - a - n

18 **B** G♭maj7 F7 B♭m7 A♭m7 A♭m7(♭5)/D D♭7 G♭maj7  
 Da-rimu-la ki-ta mc-lang-ka-h Da-ri jcu-de - la ru-ang peng - li - ha-tan

22 G♭maj7 F7 B♭m7 A♭m7 D♭7  
 Men-ca-ri de-fi-na - si war-na ci - tra - Pa - no - ra - ma ku

26 G♭maj7 F7 B♭m7 A♭m7 A♭m7(♭5)/D D♭7 G♭maj7  
 Cu-ba-lah kaupan-dang a - rah-mu Oh re-nung-i - lahum-tuk se - de - tik wak-tu

30 G♭maj7 F7 B♭m7 A♭m7 D♭7  
 Men-ca-ri sa-sa-ran op-tuk-mu Pa - da - pa - no - ra - ma mu -

Figure 1.1: Section A (8 bars), Bars 10 - 17 and section B (16 bars) Bars 18-33 (Transcribed by James PS Boyle and Chin Sook Jing).

The C Section is the repeat of the Bass groove of Bars 6 – 13) as it establishes back its funk jazz sensibilities. Section D is a repeat of Section A in terms of the number of bars and the similarity of the melody except for a slight variation in the melody in bars 47-49 where the melody is written to fit the lyrics given.

Section E is the ‘Synthesizer Horn Stabs / Instrumental break’ with many 16<sup>th</sup> notes and in a composition as this, as is for the early 21<sup>st</sup> century popular and jazz composers, the arrangements are as integral and as heavily integrated unto the importance of the composition as a whole, as much as the melody and harmony. In

this composition, the ‘synthesizer stabs’ lasts for 32 bars in this section.

34 **C** B $\flat$ m7 /A A $\flat$ m7 B $\flat$ m7 /A $\flat$  G $\flat$ maj7

38 B $\flat$ m7 /A A $\flat$ m7 B $\flat$ m7 /A $\flat$  G $\flat$ maj7

42 **D** B $\flat$ m7 /A A $\flat$ m7 B $\flat$ m7 /A $\flat$  G $\flat$ maj7  
 Tia-da ka-ta pas-ti Pi-li-han des-ti-na-si pe-man-da-ngau

46 B $\flat$ m7 /A A $\flat$ m7 B $\flat$ m7 /A $\flat$  G $\flat$ maj7  
 Ji-ka se-sat ja-lan Se-ge-ra ki-ta pu-lang

50 **E** B $\flat$ m7 B $\flat$ m7 B $\flat$ m7 B $\flat$ m7 F7( $\flat$ 9)

54 B $\flat$ m7 B $\flat$ m7 B $\flat$ m7 ( B $\flat$ m7 B $\flat$ m7 F7( $\flat$ 9) )  
 (Play x4)

Figure 1.2: D section (Bars 42 -49) and E Section (Bars 50- 57, Repeats four times) (Synthesizer stabs) (Transcribed by James PS Boyle and Chin Sook Jing).

The F Section is a repeat of Section B with augmentation s in the melody as similar with Section A and Section D.



58 **F** G $\flat$ maj7 F7 B $\flat$ m7 A $\flat$ m7 A $\flat$ m7( $\flat$ 5)/D D $\flat$ 7 G $\flat$ maj7  
 Da-ri mu - la ki - ta me - lang - kah Da - ri jen - de - la ru - ang peng - li - ha - tan

62 G $\flat$ maj7 F7 B $\flat$ m7 A $\flat$ m7 D $\flat$ 7  
 Men - ca - ri de - fi - na - si war - na ci - tra Pa - no - ra - ma ku

66 G $\flat$ maj7 F7 B $\flat$ m7 A $\flat$ m7 A $\flat$ m7( $\flat$ 5)/D D $\flat$ 7 G $\flat$ maj7  
 Cu - ba - lah kaupan - dang a - rah - mu oh re - nung - i - la hun - tuk se - de - tik wak - tu

70 G $\flat$ maj7 F7 B $\flat$ m7 A $\flat$ m7 D $\flat$ 7 N.C.  
 Men - ca - ri sa - sa - ran op - tuk - mu Pa - da - pa - no - ra - ma - mu

Figure 1.3: Section F of ‘Panorama’. Bars 58-74 (Transcribed by James PS Boyle and Chin Sook Jing).

The Synthesizer solo begins is at the tail end of Section F and lasts for 32 Bars.

**Synth Solo**

75  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   $B\flat\text{m}7$   $E\flat7$

79  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   $B\flat\text{m}7$   $E\flat7$

83  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   $B\flat\text{m}7$   $B\flat\text{m}7(\flat5)/E$   $E\flat7$   $A\flat\text{maj}7$

87  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   $B\flat\text{m}7$   $E\flat7$   
 Du-du - du - du - du Du - du - du

91  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   $B\flat\text{m}7$   $B\flat\text{m}7(\flat5)/E$   $E\flat7$   $A\flat\text{maj}7$

95  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   $B\flat\text{m}7$   $E\flat7$   
 Oh - oh - oh Oh - oh - oh - oh Oh - oh - oh

99  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   $B\flat\text{m}7$   $B\flat\text{m}7(\flat5)/E$   $E\flat7$   $A\flat\text{maj}7$

103  $A\flat\text{maj}7$   $G7$   $C\text{m}7$   
 ra - pa - ra-pa Pa - ra - pa - ra-pa - pa Pa-pa-ra-pa - pa

Figure 1.4: Section F, bars 75 –105; of ‘Panorama’ which features a Synthesizer Solo /Improvisation  
 (Transcribed by James PS Boyle and Chin Sook Jing).

The song proceeds to the G Section which is a repeat of the B section with rhythmic and melodic augmentations. Similar to the B Section, the G section also has the similar duration as the B Section with 16 bars.

107 **G** A♭maj7 G7 Cm7 B♭m7 B♭m7(b5)/E♭7 A♭maj7  
 Da-rim-u-la ki-ta me-lang-ka-h Da-ri jen-de - la ru-ang peng - li - ha-tan

111 A♭maj7 G7 Cm7 B♭m7 E♭7  
 Men-ca-ri - de-fi-na - si war-na ci - tra Pa - no - ra - ma ku

115 A♭maj7 F7 Cm7 B♭m7 B♭m7(b5)/E♭7 A♭maj7  
 Cu-ba-lah kaupan-dang a - rah-mu Re-mung-i lah um-tuk se - de - tik wak-ru

119 A♭maj7 G7 Cm7  
 Men-ca-ri sa - sa - ran op - tik - mu Pa - da - pa - no - ra - ma - mu

Figure 1.5: Section G of ‘Panorama’, bars 107 – 122 (Transcribed by James PS Boyle and Chin Sook Jing).

The Final form of the song is the Outro which is from Bars 123 – 130, which, according to the original recording on ‘Warna’ (EMI, 1988) repeats itself and ‘fades out’.

123 **Outro** Cm7 /B B♭m7  
 (Bass line)

125 Cm7 /B♭ A♭maj7

127 Cm7 /B B♭m7

129 Cm7 /B♭ A♭maj7  
 (Repeat and fade)

Figure 1.6: ‘Outro’ of ‘Panorama’ bars 123 – 130 until ‘Fade Out’ (Transcribed by James PS Boyle and Chin Sook Jing).

## The Melodic and Rhythmic Phrasings and Articulations

The melodic and rhythmic phrasings of any particular song are determined by the:

- Density of the notes in a single phrase with various rhythmic groupings
- Differing note values in a section of a song and the sectional arrangement
- Number of rests in a bar and in between the melodic phrases
- Sectional parts of various rhythmic groupings

In a composition with as many complexities in both the melody and the accompaniment as ‘Panorama’, a steady pulse of the rhythmic backbone is required to hold the entire composition together. Functioning as a popular funk drum beats with 16<sup>th</sup> notes in the *hi hat* and a steady quantized rhythmic pattern to set the tone and the beat, the entire composition kicks off on the first bar with just the drum beat for the first 5 bars.



Figure 1.7: Bass drum grooves of ‘Panorama’ bars 1-5 (Transcribed by James PS Boyle and Chin Sook Jing).

The bass pattern from bar 6 to bar 9 then establishes the rhythmic groove. The bass pattern also utilizes, as in the funk music style, 16<sup>th</sup> note rhythmic patterns to be in complete sync with the bass drum grooves.

One of the important elements of this composition lies in the detailed movements of both the melodic patterns of the vocals, which complements the underlining bass line which underlines it, and vice versa.



Figure 1.8: Funk rhythmic bass introductions of ‘Panorama’ from bar 6 to bar 9 (Transcribed by James PS Boyle and Chin Sook Jing).

Once the groove of both the drums and bass patterns interlocks, from Bar 6 onwards, it creates a relentless funk pattern to underscore and to anchor the melody and the intricacies of the melody of the vocals which follows in each subsequent section. The melody, also augmented by 16<sup>th</sup> notes in equal phrasings, functions in balanced phrases in the A section.

The melody of this song is divided into two sections, which are the A Section and the B Section. Melodically, both sections of the melodic lines are balanced, with a few melodic variations to accommodate the slightly differing lyrical content. The A Section and the B Section emerges again in slight melodic differences. The A Section is identical to the D Section as the B Section is to the F Section, hence, it is worth looking only at the A and B sections as the prime melodic movement of the composition.

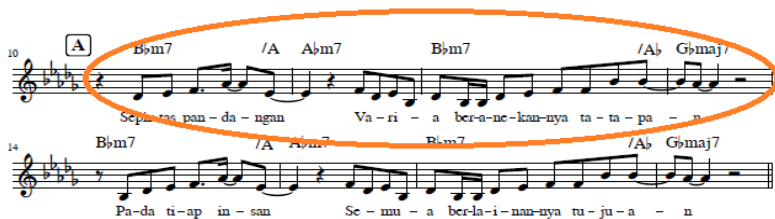


Figure 1.9: Section A of ‘Panorama’. The ‘Call’ section bars 10-13 which is symmetrical in rhythmic value to the ‘Answer’ (Figure 7.8) section, bars 14-17, hence making it a balance structural melodic phrase (Transcribed by James PS Boyle and Chin Sook Jing).

Figure 1.10: Section A of ‘Panorama’. ‘Answer’ section. Bars 14-17 (Transcribed by James PS Boyle and Chin Sook Jing).

The B section, in terms of melodic phrasings is equally balanced as the first. In utilizing a scale like melody in this section, the B section also weaves both melodic and harmonic contents in equally intricate functions as the per the bass lines interlocks with the rhythmic drum patterns. 16 Bars in length and having a balanced phrase of 8 bars for a ‘Call’ and 8 bars for an ‘Answer’ section, the B section of ‘Panorama’ melodically and rhythmically differs from the A section , yet still maintaining the similarities in utilizing a mixture of 16<sup>th</sup> notes, quavers, rests and balanced phrasings in both the melodic ‘Call’ and ‘Answer’ segment.

Figure 1.11: B Section of ‘Panorama’. ‘Call’ section Bars 18-25 (Transcribed by James PS Boyle and Chin Sook Jing).

18 **B** G7maj7 F7 Bbm7 Abm7 Abm7(b5)/D D7 G7maj7  
Da-ri-mu-la ki-ta me-lang-ka-h Da-ri jen-de - la ru-ang peng - li - ha-tan

22 G7maj7 F7 Bbm7 Abm7 D7  
Mer-ca-ri de-fi-ma - si war-na ci - tra - Pa - no - ra - ma mu

26 G7maj7 F7 Bbm7 Abm7 Abm7(b5)/D D7 G7maj7  
Ci-ba-lah kau pan-dang a - rah-mu Oh re-nung-i - lah ut-tuk se - de - tik wak-tu

30 G7maj7 F7 Bbm7 Abm7 D7  
Men-ca-ri sa - sa-ran op - tik - mu Pa - da - pa - no - ra - ma mu

Figure 1.12: Section B of ‘Panorama’ ‘Answer’ section. Bars 26-33 (Transcribed by James PS Boyle and Chin Sook Jing).

In a composition of this mould, in the funk / jazz / popular style of composition, Michael Veerapen was as contemporary as his Western counterparts in terms of the tools and techniques used.

With a Beats per minute of 127, and in rhythmic patterns of 16<sup>th</sup> notes melodic phrasings, and featuring staccato 16th notes bass lines, compositions of this era (smooth jazz, GRP, music of the late 1980s early 1990s) functions as a blueprint of compositional techniques in which the arrangements of the songs as well as the identity of any improvisations played on the record is part of the song.

Hence, if a song such as ‘Panorama’ is covered by another artists, it will not be complete if the artist(s) covering compositions of this styles would not only have to consider the melodic and harmonic accuracies, but also the importance of both the arrangement of the bass lines and the details of each improvisational note in the said composition.

The arrangement techniques of a funk jazz composition also play an integral part in establishing both the groove and identity of

the song. Therefore, the syncopations of the chordal placements are also an important part of a jazz /funk composition, where the tightness of the band is of primary importance of how the song is delivered and executed. Below are the rhythmic syncopations of the chordal ‘attacks’ from Section A to Section D.

The musical score is written in Bb minor (three flats) and consists of five systems of music, each representing a different section (A, B, C, D) with its own set of chords and rhythmic patterns. Section A (measures 14-17) features chords Bbm7, /A, Abm7, Bbm7, /Ab, and Gbmaj7. Section B (measures 18-22) features Gbmaj7, F7, Bbm7, and a first ending with Abm7, Abm7(b5)/D, D7, Gbmaj7, and a second ending with Abm7, D7. Section C (measures 23-27) features Gbmaj7, F7, Bbm7, Abm7, Abm7(b5)/D, D7, Gbmaj7, Abm7, and D7. Section D (measures 28-31) features Bbm7, Abm7, Bbm7, and Gbmaj7. Section E (measures 32-35) features Bbm7, /A, Abm7, Bbm7, /Ab, and Gbmaj7. The score includes various rhythmic notations such as eighth notes, quarter notes, and rests, with some notes marked with 'x' to indicate syncopation.

Figure 1.13: Syncopated rhythmic chordal ‘attacks’, from Section A to Section D (Transcribed by James PS Boyle and Chin Sook Jing).

### Harmonic Analysis of ‘Panorama’

Written in the key of Bb Minor, ‘Panorama’ showcases the harmonic prowess of Michael Veerapen in writing a composition which utilizes the modal harmony. Essentially a composition in the Phrygian mode, ‘Panorama’ is a rare Malaysian Popular and Jazz composition which has the following exclusiveness. Its usage of the modal harmony (Phrygian in this case), and the modulation that takes place in the tail end of the F Section makes this song completely unique, as the arrangement techniques applied here in



this composition is of equal importance to the melody and harmony.

Below is the harmonic analysis of ‘Panorama’:

**Panorama**

SHEILA MAJID  
Composed by MICHAEL VEERAPAN

Jazz Pop/Funk  
♩ = 127

**Intro**

6 I minor 7 Bbm7 /A bVII minor 7 Abm7

8 (Bass line) I minor 7 Bbm7 /Ab bVI MAJ 7 Gbmaj7

10 **A** I minor 7 Bbm7 /A bVII minor 7 Abm7 I minor 7 Bbm7 /Ab bVI Maj 7 Abmaj7

14 I minor 7 Bbm7 /A bVII minor 7 Abm7 I minor 7 Bbm7 /Ab bVI Maj 7 Abmaj7

Sepintas pan - da - ngan Va - ri - a ber-a-ne-kan-nya ta - ta - pa

Pa - da ti - ap in - san Se - mu - a ber-la-i - nan-nya tu - ju - a - - n

Figure 1.14: Harmonic Analysis of ‘Panorama’ A Section (Transcribed by James PS Boyle and Chin Sook Jing).

Figure 1.15: Harmonic Analysis of the B Section of ‘Panorama’ (Transcribed by James PS Boyle and Chin Sook Jing).

In terms of harmony, the bulk of the Harmonic analysis lies in Section A (as with section D) and Section B (as with Section F) which utilizes chords from the Phrygian mode, ‘Panorama’ uses a harmonic rhythm which is highly structural and repetitive. This is a strong form of having a sense of an ‘anchorage’ in the composition as the melody and rhythmic patterns are busy and employs many polyrhythmic arrangement qualities in the relationship between the melody and the chords.

Figure 1.16: Section E of ‘Panorama. It is just one chord, the I minor 7 with a V7 / I. Harmonically it is immobile as the melody above it (Synthesizer Horn Stabs / Instrumental break) are both very rhythmic and with many melodic movements as shown in Figure 1.17 below (Transcribed by James PS Boyle and Chin Sook Jing).

The image shows a musical score for Section E, consisting of five staves of music. The key signature is B-flat major (two flats) and the time signature is 4/4. The score is transcribed for a synthesizer horn. The first staff (bar 36) is marked with a box containing the letter 'E' and the chord B♭m7. The second staff (bar 49) includes chords B♭m7, B♭m7, B♭m7, and F7(♭9). The third staff (bar 52) includes three B♭m7 chords. The fourth staff (bar 55) includes B♭m7, F7(♭9), B♭m7, and B♭m7 chords. The fifth staff (bar 58) includes B♭m7 and B♭m7 6 chords. The music features a repetitive rhythmic pattern of eighth notes, often with staccato articulation, and includes octave leaps and arpeggios. The notation includes various accidentals and dynamic markings.

Figure 1.17: Section E; Synthesizer Horn Stabs / Instrumental break. (Bar36 to Bar 59) 32 Bars in total (Transcribed by James PS Boyle and Chin Sook Jing).

The Synthesizer Horn stabs in Section E are 32 bars long. As shown in Figure 4.9.6 the notes of the Horn stabs are very ‘staccato-ish’ in rhythmic stature and are in 16<sup>th</sup> notes (semiquaver) rhythmic patterns. The notes of the Synthesizer Horn stabs are diatonic in nature and are repetitive in phrases. Using both octave leaps and arpeggios, the melodic lines of the Synthesizer Horn stabs are both jazzy and as the recording suggests, it is entirely played by a programmed sequence. The production of this Synthesizer Horn stabs is played ‘Live’ at a slower pace and are fastened / quickened by the sequencer to the required tempo of the composition which is 127 beats per minute (BPM).

In Section F, from bars 74, the composition modulates to the key of C Natural minor. The indication of which, is the cue of the

beginning of the synthesizer improvisation. The entirety of the Synthesizer improvisation is played over a group of chords, with four bar phrasings each.

The chords are: (Ab Major 7<sup>th</sup>) bVI major 7<sup>th</sup> – (G7) V7/I – (C minor 7<sup>th</sup>) I minor 7<sup>th</sup> – (Bb minor 7<sup>th</sup>) bVII minor 7<sup>th</sup> – (Eb7) bIII7

Modulation to C minor from bar 74

70 Gbmaj7 F7 Bbm7 Abm7 Db7 N.C.  
Men-ca-ri sa-sa-ran op-tik-mu Pa-da - pa-no-ra-ma - mu

75 Synth Solo Abmaj7 G7 Cm7 Bbm7 Eb7

79 Abmaj7 G7 Cm7 Bbm7 Eb7

83 Abmaj7 G7 Cm7 Bbm7 Bbm7(b5)/E Eb7 Abmaj7

87 Abmaj7 G7 Cm7 Bbm7 Eb7

91 Abmaj7 G7 Cm7 Bbm7 Bbm7(b5)/E Eb7 Abmaj7

95 Abmaj7 G7 Cm7 Bbm7 Eb7

99 Abmaj7 G7 Cm7 Bbm7 Bbm7(b5)/E Eb7 Abmaj7

Oh - oh - oh Oh - oh - oh

Figure 1.18: Harmonic analysis of the Synthesizer Improvisation section, in the key of C minor from bars 75-102 (Transcribed by James PS Boyle and Chin Sook Jing).

Below is the transcribed improvisational of Michael Veerapen's solo from Sheila Majid's 'Warna' (EMI, 1988) album.

**Synth Solo**

71  $A\flat\text{maj}7$   $G7$   $Cm7$

74  $B\flat m7$   $E\flat 7$   $A\flat\text{maj}7$   $G7$

77  $Cm7$   $B\flat m7$   $E\flat 7$   $A\flat\text{maj}7$

80  $G7$   $Cm7$

82  $B\flat m7$   $B\flat m7(b5)/E$   $E\flat 7$   $A\flat\text{maj}7$   $A\flat\text{maj}7$   $G7$

85  $Cm7$

86  $B\flat m7$   $E\flat 7$   $A\flat\text{maj}7$   $G7$

89  $Cm7$   $B\flat m7$   $B\flat m7(b5)/E$   $E\flat 7$   $A\flat\text{maj}7$   $A\flat\text{maj}7$

92  $G7$   $Cm7$   $B\flat m7$   $E\flat 7$

The image shows a musical score for a synthesizer solo, consisting of four staves of music. The key signature is B-flat major (two flats). The first staff (bar 95) features a melodic line with a 5-measure rest, followed by a 6-measure rest, and then a 3-measure rest. The second staff (bar 97) includes a 5-measure rest, followed by a 5-measure rest, and then a 5-measure rest. The third staff (bar 99) includes an 8-measure rest, followed by a 3-measure rest. The fourth staff (bar 101) includes a 5-measure rest, followed by a 3-measure rest, and then an 8-measure rest. The score is annotated with various chords: Abmaj7, G7, Cm7, Bbm7, Bbm7(b5)/E, Eb7, and Abmaj7. The notation includes eighth and sixteenth notes, rests, and slurs.

Figure 1.19: Synthesizer Solo, as played by Michael Veerapen in ‘Panorama’ bars 71-102 (Transcribed by James PS Boyle and Chin Sook Jing).

### Eastern and Western Elements

This composition broke new barriers in the composing of Malay popular music style of music for the early 21<sup>st</sup> century popular and jazz composers in Malaysia. ‘Panorama’ was a perfect example of the smooth jazz, funk, pop music which ruled both the jazz circuits and the rock arenas and to a certain extent, the charts of the top selling hits of the day.

The very many Western elements of ‘Panorama’ in Michael Veerapen’s exquisite use of theory, technology and technique, cements the many unique compositional strength and the bridging of a new era of Malaysian popular jazz compositional techniques, which is in lieu and on par with the Western musical world, and in the phrasings of the lyrical diction, Eastern elements. With lyrics written in the Malay language and phrasings of the melody which caters for it, ‘Panorama’ remains a Malaysian composition in identity yet global in sound and structure.

With a rhythmic pattern which is an up-tempo 127 Beats per minute) and updated fusion akin with the traditional Malay folk style known as *Inang*, and also *dangdut*, a genre of Indonesian dance and folk music which originated from the Indonesian Java island, and is partly derived and fused from Hindustani, Arabic music, and to lesser extent local folk music. Instrumentally, *Dangdut* music normally features a *tabla* and a *gendang* in its execution and performance. ‘Panorama’ functions solidly as both a Malay Popular composition infused with a consistently 16<sup>th</sup> funk groove version of the *Inang* and *dangdut* with the sensibilities of a pop tune strengthened by the sophistications of Jazz harmony infused throughout.

The image displays a musical score for three instruments: Drums Panorama, Inang, and Dangdut. The score is organized into three horizontal staves, each with a 4/4 time signature. The top staff, labeled 'Drums Panorama', uses a drum set notation with various symbols for different drum parts. The middle staff, labeled 'Inang', and the bottom staff, labeled 'Dangdut', use standard musical notation with stems and flags to represent rhythmic patterns. The notation is consistent across all three staves, showing a complex, syncopated rhythm. The score is divided into four measures by vertical bar lines, and each measure contains a dense sequence of rhythmic notes and rests.

Figure 1.20: The Rhythm of the Malay folk style of both the *Inang* and *Dangdut* style of Indonesia in comparison with the Drum groove and pattern of ‘Panorama’ (Transcribed by Dr Nasir bin Mohd Hashim).

## **In Conclusion: The Musical and Historical Importance of ‘Panorama’**

Fast, furious, intense, hectic, focused and masterfully constructed and produced, ‘Panorama’ by Michael Veerapen on Sheila Majid’s ‘Warna’ (EMI, 1988) album is artistically a stand out track which showcases the entire spectrum of a Malaysian popular and jazz composition which is both a musical wonder and an intricate piece of pop jazz composition that delivers on all angles.

The key points of ‘Panorama’:

- a) ‘Panorama’s arrangement techniques are uniquely tied to the composition of both the melody and harmony of the song. Unlike the Malaysian Popular and Jazz songs of the mid-20<sup>th</sup> Century, which was entirely built on the exquisiteness of both the melody and the relationship of it with the harmony, where we have explored that the composers of the mid-20<sup>th</sup> century in Malaysia were heavily influenced by the Jazz Harmonic series of the West. ‘Panorama’ expands on what had been laid before, and adds another layer of originality and the emphasis on the importance of an arrangement of a composition.
- b) With an upbeat and ‘funk’ up version of the Malay traditional rhythmic stylings of the *Inang* and *dangdut* as its backbone, ‘Panorama’ doubly functions as an instrumental piece, which favours a rhythm section (Drums, Bass, Guitar, Keyboards) that requires the musician an advanced level of technique to perform. With the tempo at 127 beats per minute (BPM) and running 16<sup>th</sup> notes (semiquavers) for almost the entire duration of the composition, ‘Panorama’ appeals to the jazz instrumental purist who revels on the intricacies and challenges required for an advanced instrumental jazz composition.
- c) The identity of the composition is in the original execution of the ‘sound’ and the technology used during this period is an integral musical fabric of the



composition in itself, 'Panorama', is exclusively anonymous with the original on the said Sheila Majid's album.

- d) The composer showcases his technical prowess as well as his compositional abilities. 'Panorama' features the composer Michael Veerapen's improvisational capabilities as well. Jazz aficionados have long look up to Michael as the torch bearer of the Malaysian jazz piano scene as well as being an outstanding composer and arranger. By looking at the compositional, arranging techniques and the transcribed improvisational lines, 'Panorama' showcases Michael in the many facets that makes one a complete musician as a performer, arranger and composer.
- e) The modulation. Compositions from the mid-20<sup>th</sup> Century, chords were used as Modal Interchanges and slight harmonic contents which faithfully resolve back to the original key. 'Panorama' encompasses this by having the last part of the composition (Ending of the F Section) modulate to another key entirely, which features, another unique element, and an improvisational passage which ends the song (albeit a fade out in the original recording).

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## **APPENDIX: MICHAEL VEERAPEN**



A pioneer of the new generation of ‘new fusion’ of Malay Popular music, especially in the genre of jazz, Michael Veerapen, is at the same time a pioneer of ethics of authenticity in the style of his performance which was bebop derived and executed in many of his ‘running’ lines and jazz licks and chops, as he was as a front lining composer of Malay popular music of the early 21<sup>st</sup> century in Malaysia. Michael Veerapen has been a symbolic figure of the advent of the up rise of a generation of specialized jazz composers. The signatures of the career development of this generation include first of all, having been trained professionally in an institution. Since appearing in the music scene in the 1970’s, Michael has been widely attributed to be the major force behind the forging and appreciation of jazz music in Malaysia. Graduating from Berklee College of Music in 1982 with Summa Cum Laude, his love and passion for jazz would blossom and cause him to not just become a huge name but a huge mentor and influence for many local jazz musicians to this very day.

