

THE RELATIONSHIP BETWEEN MUSICAL TRAINING, FAMILIARITY, PERSONALITY AND MUSIC PREFERENCES AMONG MALAYSIAN STUDENTS

ARIFFIN, N.¹ – SHAH, S. M.^{1*}

¹ *College of Creative Arts, Universiti Teknologi MARA (UiTM), Selangor, Malaysia.*

**Corresponding author
e-mail: shahanum[at]uitm.edu.my*

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Abstract. This study examined the extent to which musical training, familiarity, and personality predict music preferences among Malaysian secondary school students. Subjects were 381 16-year-old Malaysian secondary school students from Pasir Gudang, Johor divided into two groups, i.e. those with musical training and those without musical training. The subjects listened to forty music excerpts from eight genres, including Malaysian Pop, Western Pop, Malaysian Hip-Hop, Western Hip-Hop, Malaysian R&B, Western R&B, Malaysian Rock, and Western Rock. Only vocal excerpts were utilised, with tempos ranging from 140 to 180 beats per minute. Subjects completed three questionnaire sections. Section A was demographic information; Section B consisted of the music preference inventory (MPI) and familiarity rating scale; and Section C was the Big Five Inventory (BFI). Results showed that musical training had a strong influence on music preference. Subjects with musical training obtained higher mean scores for each music genre preference. Familiarity was also strongly correlated with music preferences. Each of the Big Five personality dimensions was also positively correlated with every music genre preference. In conclusion, musical training, familiarity, and personality play a crucial role in music preference decisions.

Keywords: *familiarity, musical training, music preference, personality*

Introduction

Music preference research is an extremely diverse field (Setti, 2022). Han et al. (2022) asserted that the topic of music preference can be investigated from a variety of perspectives. Hargreaves et al. (2017) revealed that preference for music is influenced by features associated with it (Musical styles, collative variables, prototypically, performance contexts, etc.), the listening situation (sociocultural, daily events, the existence of other people, etc.), and the listener (gender, age, formal and informal influences, etc.). According to Naz et al. (2021), a person's music preference dimension depends on their social background, musical characteristics, and personality. Previously, music preference research in Malaysia used different categories of genres as the list of preferences. Shah (2000) used popular music and art music as genre selections. Yeoh et al. (2001) used ethnic-related music, pop, rock, and western art music to investigate the music preferences of teenagers.

Dobrota and Ercegovic (2017) found that music schooled participants preferred more music styles over non-music schooled participants. Williams (2018) discovered that popular music was ranked higher than classical and world music by non-majors. Ibbotson and See (2021) also stated that an individual with musical training performs better in the classroom than an individual with no musical training, as they were exposed to various kinds of music genres. In addition, Kokkidou (2021) stated that the greater the music's familiarity, the higher the music preference. Fuentes-Sánchez et al. (2022) also stated that familiarity plays an essential role in music preference. Heng et al.

(2021) determined that people will rather listen to a song that is familiar to them than one that is unfamiliar. Another point to consider is that Minnie et al. (2021) determined that personality is highly correlated to music preferences as it is an expression of their inner thoughts. Boccia (2020) also mentioned that a person's music preference reflects their personality. Hence, The Big Five personality dimensions were utilised in this study.

Problem statement

The main challenge of music preference among Malaysian students is the lack of exposure to various genres of music. Youngsters mostly develop their music preferences under the influence of the media (Petrušić, 2021). Local radio stations tend to play pop genres. Genres like R&B and classical music do not gain airplay on mainstream radio stations as much (Eksentrika Web Portal, 2019). Glover (2023) stated that music that is repeatedly broadcast by radio will influence music preference decisions. This leads to another critical issues that are an over-exposure to pop genre among teenagers, and affecting their music preferences. Therefore, students tend to only choose songs that they were familiar with. Another major issue is the students lack of appreciation for different music genres. Most Malaysian secondary school students lack knowledge about various music genres, resulting in poor music appreciation among students (Wen and Jia, 2021; Wong and Chiu, 2017). They also suggested that Malaysian music educators must help their students develop an appreciation for diverse musical genres. Jiayang and Jia (2021) stated that various genres should be exposed to the students in schools to enhance their music appreciation. In Malaysia, most of the teachers do not understand their students' personalities and behaviors (Minnie et al., 2021). It was a challenge for the teacher to choose an appropriate selection of music to be taught to students according to their personality.

Significance of the study

This study seeks to contribute to the field of music preference research by expanding the music selections to various genres such as pop, hip-hop, R&B, and rock. The music selection also expanded to include Malaysian and Western excerpts, as Jiayang and Jia (2021) suggested that not only local Malaysian music needs to be exposed, but also western music should be introduced to the students. This research demonstrated the significance of musical training to increase a person's music appreciation. Glover (2023) stated that people who were exposed to various music genres at a young age would make better music preference decisions. This study can be used as a reference for music educators, allowing them to improve the learning environment in the classroom by better understanding the student's music genre preferences. This study will help teachers choose appropriate music for their classes, considering the students' prior musical training, familiarity, and personality. Williams (2018) stated that an investigation into the students' music preferences should give educators more context for song choices in the classroom. This research benefits people of different personalities by helping them understand how their personalities correlate with their music preferences. To fill the gap in the music preference area of study, the Big Five personality dimensions were used. To better cater to a person's personality, mass media or local radio stations could employ information from this research, which helps us understand how personality effects music genre preference. This study resulted in

specific music genre classifications. In contrast to prior research that was solely represented by five dimensions of music that are genre-free, such as "mellow, "unpretentious, "sophisticated, "intense", and "contemporary" factors (Minnie et al., 2021). By providing specific music genre classifications, the students could identify their music preferences more clearly, and genre confusion could be avoided. Ceylan et al. (2021) suggested that in the process of learning and teaching music, music genre classification is crucial for facilitating perception and establishing a clearer learning process.

Delimitation of the study

This research was limited to the district of Pasir Gudang, Johor, Malaysia. The subjects only included 16-year-old students. The selected genres were only pop, hip-hop, R&B, and rock, which were further subdivided into Malaysian excerpts and Western excerpts.

Conceptual framework

The conceptual framework of the research focuses on the music preference of Malaysian secondary school students on music genres such as pop, hip-hop, R&B, and rock. The student may prefer some of the genres over others due to factors of such as musical training, familiarity, and personality. These factors determined the music preferences of the students (*Figure 1*).

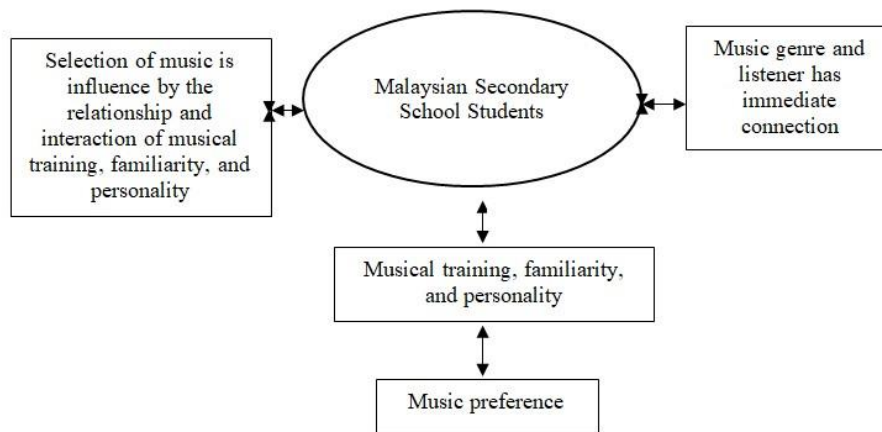


Figure 1. Conceptual framework of the research.

Research objective

The research objectives of the study were to: (1) examine whether the listener characteristics of musical training and familiarity predict music preferences for pop, hip-hop, R&B, and rock genres among Malaysian secondary school students; and (2) examine the correlation between The Big Five personality dimensions (OCEAN) and music preferences of pop, hip-hop, R&B, and rock genres among Malaysian secondary school students.

Research questions

The research questions are: (1) To what extent do the listener characteristics of musical training and familiarity predict music preferences for pop, hip-hop, R&B, and rock genres among Malaysian secondary school students? And (2) To what extent do The Big Five personality dimensions (OCEAN) correlate with music preferences of pop, hip-hop, R&B, and rock genres among Malaysian secondary school students?

Literature review

LeBlanc (1982) created eight levels in music preference model (*Figure 2*). The input level (level 8) is classified as Musical Characteristics and Developmental Characteristics. Levels 7, 6, and 5 act as filters for independent factors. Level 7 encompasses the Physiological Enabling circumstances that enable or limit a person from sensing musical stimuli. Level 6 is Basic Attention, where preference development takes place. Level 5 deals with the current affective state of the listener. Level 4 is the listener's personal characteristics. Level 3 is where the listener's brain processes all the input information. In level 2, the listener must choose between further exploration of the stimuli and making a preferred selection. At level 1, music preferences must be established.

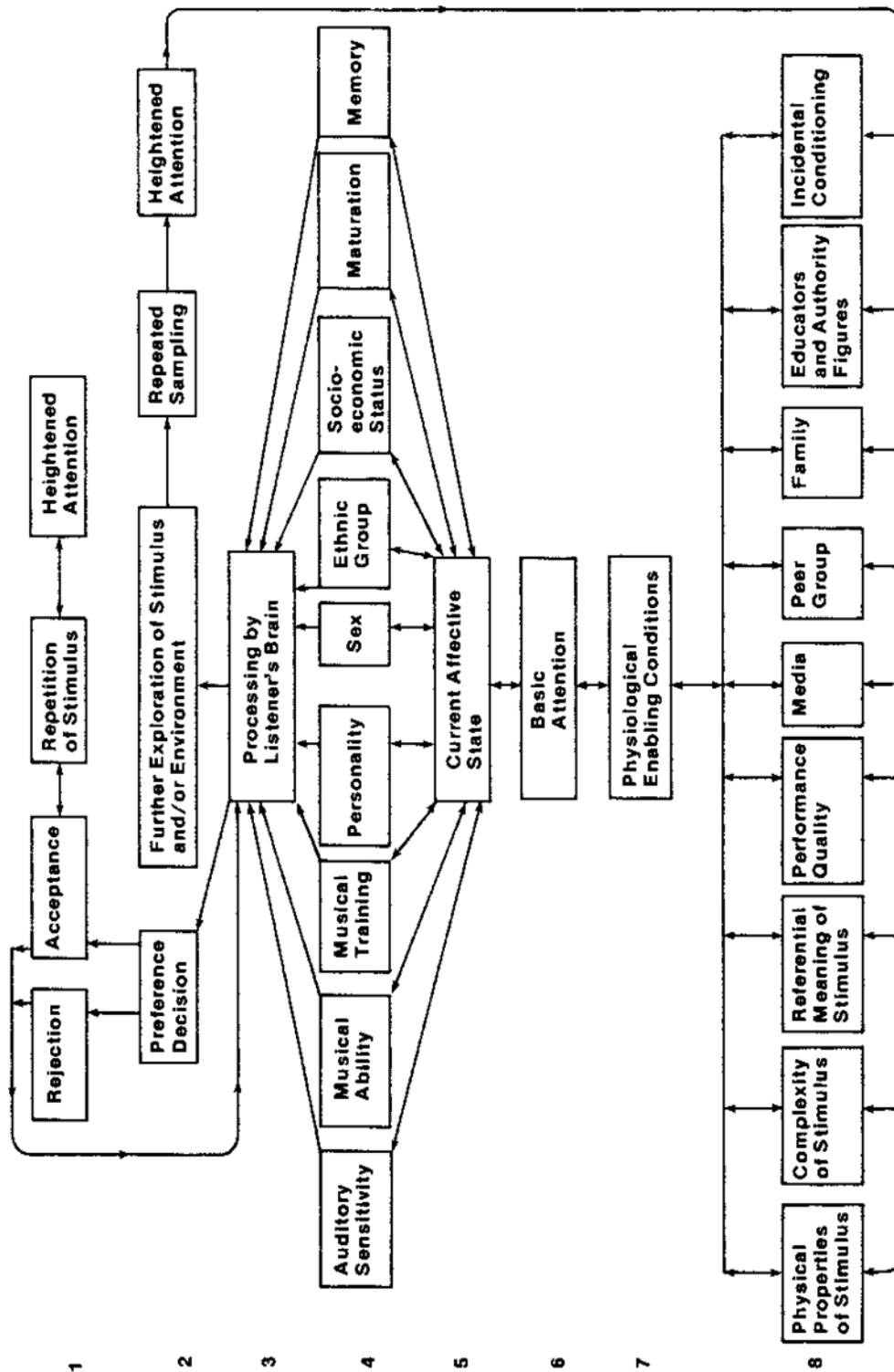


Figure 2. LeBlanc (1982) model of the sources of variations in music preferences.

LeBlanc (1982) developed the music preference interactive theory and found that an individual's music preference was influenced by the interaction of input information, listener behavior, musical stimuli, and social background. Previously, Wapnick (1976) introduced three wide categories of variables related to the preferences of music, such as musical, situational, and subject. The categories were similar to LeBlanc's, but some of

the variables were placed in different categories. For instance, Wapnick (1976) classified musical training in the situational category, while LeBlanc (1982) classified it in the listener criteria category. This was the same scenario as Stegall (2018) and Williams (2018), who classified musical training as a situational category, while Vuvan et al. (2020) classified it as listener characteristics. LeBlanc (1991) proposed that children are more accepting of various music genres, and their acceptance will decrease as they grow older. However, Brisson and Bianchi (2020) stated that an individual's music preference remained consistent from adolescence to early adulthood.

Pelchat and Gelowitz (2020) reported that music genres are a system of human-created labels for classifying and describing various kinds of music. Nacev (2018) established that music was classified based on how it differed from another in terms of the characteristics it featured. Ramakrishnan and Sharma (2018) indicated that the students preferred pop music the most. Zorkeply and Zulkifli (2022) demonstrated that the students preferred the pop genre as it brought out feelings of calmness. Jiayang and Jia (2021) stated that in Malaysia, the pop genre was fundamentally Western-influenced music with some local components. It was also stated that Malaysia has a big influence on the hip-hop music genre (Jiayang and Jia, 2021). Bakar (2021) demonstrated that Malaysia embraced a variety of foreign music genres, including Classical, Baroque, Indian, British, American, and mainstream genres from most parts of the world. Cross-cultural musical traditions from all over the world had a big influence on many of Malaysia's greatest songs. Besides, they also found that Pop, rock, and ballad genres were dominating in Malaysia in the 1970s and 1980s. Johan and Hamzah (2019) reported that people in Klang Valley preferred western music and refused to listen to local Malaysian songs as most of them were English-educated Malaysians. In contrast, Sabah and Sarawak groups expressed a greater preference for local Malaysian popular music genres.

Previously, Hash (2009) found that musical training had no effect on music preference. Other researchers would seem to suggest that this finding was very contradictory to the recent studies. Stegall (2018) indicated that an individual who received no musical training had lower confidence in their ability to decide music preferences. Any individual with musical training is confident in their musical preferences and appreciates various genres of music. This is due to the findings of Vuvan et al. (2020), who found that musical training had a strong effect on musical complexity preference. Ginocchio (2009) stated that different types of musical training also resulted in different music preference ratings. Ratliff (2017) stated that people with musical training, specifically band participants, also had different impacts on musical preferences. Band participation seemed to have the largest impact on non-popular music preferences (Ginocchio, 2009). For instance, Shah (2000) confirmed that students with musical training had a higher preference for the art music forms compared to students with no musical training. Johan and Hamzah (2019) demonstrated that the musicians in Klang Valley have music preferences that are heavily influenced by Anglo-American styles. The musicians have grown tired of listening to mainstream pop songs on the local radio station (Johan and Hamzah, 2019). Williams (2018) also stated that people with musical training rated all genres much higher than people with no musical training, except the pop music genre. Madsen et al. (2019) revealed that people with formal musical training had a better understanding of music, even when they were exposed to an unfamiliar genre of music. This finding was supported by Ginocchio (2009), who discovered that people who had taken musical training for five years or more gave much

higher preference ratings across the music genre selections compared to those who had taken fewer musical training sessions. Elvers et al. (2015) found that individuals with musical training prefer sophisticated music genres over traditional and rock music genres.

Familiarity is the assumption of having heard it somewhere before (Price, 1986). The relationships between preference and familiarity were consistently significant (Stupacher et al., 2020; Williams, 2018; Dobrota and Ercegovic, 2017; Ward et al., 2014; Pereira et al., 2011; Hamlen and Shuell, 2006; Shah, 2000). Ward et al. (2014) conducted three research studies to examine the role of familiarity in music selection. Study 1 indicated that familiarity helped influence participant's music selections. Even though they were under pressure to listen to new song tracks, Study 2 demonstrated that familiarity had a significant impact on people's musical preferences, whereas Study 3 revealed that participants were still more likely to select the radio station that played familiar songs. Further research carried out by Fuentes-Sánchez et al. (2022) confirmed that listening to music that was already familiar would lead to a higher preference rating. Sangnark et al. (2021) indicated that the relationship between music preference and familiarity led to improved comprehension of music, emotion, and the listener, causing the listener to tend to choose familiar music. Familiarity appeared to play a critical role in emotionally engaging listeners with music (Pereira et al., 2011). A person who is familiar with the music will express a preference for it (Hamlen and Shuell, 2006). Recently, Heng et al. (2021) also showed that listeners found music in a familiar musical style to be much more enjoyable than music in an unfamiliar musical style. Johan and Hamzah (2019) demonstrated that the Chinese group had the lowest preference for Malay music as they were unfamiliar with the genre, despite Malay music being the most common genre played on local radio. Previously, Teo et al. (2008) reported that Singaporean females preferred Chinese and Malay music styles. As the females were unfamiliar with Indian music, it was the least preferred genre.

Personality is a persistent pattern of thinking, feeling, or acting throughout time and across contexts (Soto, 2018). Rentfrow et al. (2009) established a correlation between music preferences and personality. Pellerone et al. (2018) found that listeners believed that their musical preferences revealed insight into themselves. For instance, Gong (2020) determined that children who prefer the rock genre tend to develop negative personality traits. In this study, the researcher utilised the Big Five personality dimensions: (i) Openness to Experience (O), (ii) Conscientiousness (C), (iii) Extraversion (E), (iv) Agreeableness (A), and (v) Neuroticism (N), also known as OCEAN, to investigate the correlation between personality and music preference. The following table shows the facet of each personality of the Big Five (*Table 1*).

Table 1. *The Big Five.*

Big Five Personality dimensions	Facet
Openness	Ideas (curious)
	Fantasy (imaginative)
	Aesthetics (artistic)
	Actions (wide interests)
	Feelings (excitable)
	Values (unconventional)
Conscientiousness	Competence (efficient)
	Order (organized)
	Dutifulness (not careless)
	Achievement striving (thorough)
	Self-discipline (not lazy)
	Deliberation (not impulsive)
Extraversion	Gregariousness (sociable)

	Assertiveness (forceful)
	Activity (energetic)
	Excitement-seeking (adventurous)
	Positive emotions (enthusiastic)
	Warmth (outgoing)
Agreeableness	Trust (forgiving)
	Straightforwardness (not demanding)
	Altruism (warm)
	Compliance (not stubborn)
	Modesty (not show-off)
	Tender-mindedness (sympathetic)
Neuroticism	Anxiety (tense)
	Angry hostility (irritable)
	Depression (not contented)
	Self-consciousness (shy)
	Impulsiveness (moody)
	Vulnerability (not self-confidence)

Source: John and Srivastava (1999).

Nacev (2018) emphasised that the Big Five personalities did not significantly contribute to the accuracy of music preference decisions. This finding was significantly different from other studies. For instance, Bapu and Curha (2020) reported that the Big Five personality dimensions were significantly correlated with music preference. They found that Openness had a strong correlation with (Reflective and Complex), (Upbeat and Conventional) and (Energetic and Rhythmic) music dimensions. Conscientiousness demonstrated a strong correlation with (Reflective and Complex) and (Energetic and Rhythmic) music dimensions. Extraversion had a positive correlation with (Intense and Rebellious), (Reflective and Complex) and (Energetic and Rhythmic) music dimensions. Agreeableness showed a significant correlation with (Reflective and Complex) and (Energetic and Rhythmic) music dimensions. Minnie et al. (2021) revealed a statistically significant correlation between Openness personality and (Energetic and Rhythmic) music preference. However, they found no significant correlations between the other personalities (Conscientiousness, Extraversion, Agreeableness, and Neuroticism) and music preferences. Upadhyay et al. (2016) stated that Openness and Agreeableness were significantly correlated to intense and electronic music dimensions. Setti (2022) demonstrated that the openness personality had significant positive correlations with all the dimensions of music preference except for the unpretentious music dimension. Neuroticism was positively correlated with Upbeat & Conventional music dimensions.

Bariş and Yeliz (2021) found that introverted personalities preferred an intense musical dimension while extrovert personalities preferred pop and electronic dance music genres. Managuran et al. (2021) stated that the pop, R&B, soul, dance, and hip-hop music genres were found to be positively associated with Agreeableness and Extraversion. These results were consistent with Boccia (2020) assertion that Openness, Extraversion, and Agreeableness appreciated a wider diversity of music genres than Neuroticism. Liu (2024) indicated that Neuroticism had a significant correlation with the rock genre, Extraversion strongly correlated with soft music, and Conscientiousness strongly preferred the hip-hop genre. Interestingly, Minnie et al. (2021) indicated that Conscientiousness, Extraversion, and Neuroticism preferred Ghazals. Chin (2017) reported that, among all personalities, the Conscientiousness had the most diverse musical preferences. Vella and Mills (2017) found that Openness predicted a positive preference for pop, R&B and rock music genre. Meanwhile, Extraversion predicted a positive preference for hip-hop music genre. Ferwerda et al. (2017) demonstrated that Openness indicated a positive correlation with country, folk, and pop music genre

preference. Langmeyer et al. (2012) found that Extraversion preferred hip-hop genre, whereas Openness preferred classical and rock music genre, but rejected the pop genre. Previously, Tekman (2009) also determined that Agreeableness and Neuroticism were found to be negatively related to preferences for classical genre.

Definition of terms

Music preference

Music preferences are a type of listening response that expresses an individual's degree of enjoying or disliking certain musical stimuli at a particular point in time (Finnäs, 1989).

Music training

Musical training refers to a formal music lessons that follows a consistent schedule (D'Souza et al., 2018).

Familiarity

Familiarity is the assumption of having heard it somewhere before (Price, 1986).

Personality

Personality is a persistent pattern of thinking, feeling, or acting throughout time and across contexts (Soto, 2018).

Pop

Pop genre is characterised by extreme use of major keys. The musical arrangement is frequently repetitious, particularly in the chorus section. The verse part is usually between 8 or 16 bars that have a similar melody to make it catchy. The chord progression is usually I-IV-V and ends with perfect cadence (V-I). The song typically ranged from 2 1/2 to 5 1/2 minutes. The vocalist often sings in a soft and cheerful voice. Pop song can be happy, sad, flirty, upbeat, or mid-tempo.

Hip-hop

A distinctive feature of Hip-hop is heavy bass lines, constant beat, syncopated drumbeats, and deep, meaningful lyrics (MasterClass Web Portal, 2021). Ramakrishnan and Sharma (2018) stated that Hip-hop genre consists of rapping, a rhythmic and rhyming speech that is chanted. The lyrics may occasionally refer to partying, arrogance, insults, racial issue, promoting ideologies, and expressing their lived experience (Vito, 2019). Additionally, this genre features long percussion sections known as "breaks," which are meant for dancing, or "breakdance" (MasterClass Web Portal, 2021).

Rhythm and Blues (R&B)

R&B incorporated pentatonic scales and bass guitar. The drum sounds like drum machine-backed rhythms. R&B genre is also based around keyboards and synthesizers. Main singers and the saxophonist would take turns performing the song's melodies. R&B compositions frequently follow the pattern of verse, then chorus, repeating verse

and chorus, bridge, and then chorus. The lyrics are frequently centred on love and sex. This genre emphasizes vocals over lyrics. Ramakrishnan and Sharma (2018) stated that R&B has a soulful, smooth and lush vocal style, featuring much improvisation.

Rock

The rock genre is usually performed by bands. Most rock bands utilized keyboards, electric guitars, bass, and drums. The band plays aggressive "shredding" as a solo line to provide variation or anticipation. Some rock songs have been composed in triple metres such as 3/4 and 12/8, however, 4/4 is the most common time signature. The tempos ranged from 100 to 140 beats per minute (MasterClass Web Portal, 2021). It is also often played in major keys and using chordal fifths. Verse-chorus-verse-chorus-bridge is the most typical form of song structure. The vocalist often uses a slightly distorted voice (Ginocchio, 2009). The typical lyrics of rock songs revolve around sex, drugs, suffering, rebellion, coping with life's difficulties, and love-related circumstances (MasterClass Web Portal, 2021).

Materials and Methods

Research design

This study used the quantitative method. A questionnaire consisting of three sections was developed. Section A collected demographic information. Section B used a 5-point Likert scale for familiarity rating and a 7-point Likert scale for the Music Preference Inventory (MPI). Section C utilised the Big Five Inventory (BFI) to measure personality dimensions. The questionnaire was double-translated, and the subjects could choose to answer it in either Malay or English. Two experienced composers and singer-songwriters were selected to validate the list of 40 music excerpts. *Table 2* displays the song list for this study. The duration of the excerpts ranged from 25 to 30 seconds and only vocal excerpts were listed. Western excerpts were included in the song selection as they were widely played by the mass media in Malaysia.

Table 2. Genre, item number, selections, composer/performer, tempo (beats/min).

Genre	Item no.	Selection	Composer/performer	Tempo*
Malaysian Pop	1	Dirgahayu	Faizal Tahir ft. Siti Nurhaliza	145
	2	Empat Dara 2020	Faizal Tahir, Elly Mazlein, Zizii Kirana	160
	3	Teman	Iman Troye	144
	4	Pencuri Hati	Ayda Jebat	168
	5	Belunggu Rindu	Wany Hasrita ft. Dato' Jamall Abdillah	142
Western-pop	6	Positions	Ariana Grande	144
	7	Love Me	Katy Perry	143
	8	Shake It Off	Taylor Swift	160
	9	Holiday	Lil Nas X	152
	10	Driver License	Olivia Rodrigo	144
Malaysian Hip-hop	11	Gila	Kaka Azraff	141
	12	Budak Flat	Aman RA	150
	13	Pun Boleh	ALYPH & SonaOne	156
	14	Sampai jadi	Joe Flizzow ft. Alif	163
	15	Lotta Stress	Meerfly	145
Western Hip-hop	16	Astronaut In The Ocean	Masked Wolf	150
	17	Butterfly Effect	Travis Scott	141
	18	Stupid	Ashnikko ft. Yung Baby Tate	150
	19	LLC	Nicki Minaj	154
	20	Captain Hook	Megan Thee Stallion	164
Malaysian R&B	21	Matinya Sebahagian Jiwa	Ruffedge	178
	22	Bodysong	Innuendo ft. M.O.B	150
	23	Kerna Sayang	V. E	152

	24	Ina	Afdlin Shauki	140
	25	Detik Bersama	V. E	149
Western R&B	26	Leave The Door Open	Bruno Mars ft. Anderson .Paak – Silk Sonic	148
	27	We Belong Together	Mariah Carey	140
	28	Why Does She Stay	Ne-Yo	148
	29	'Till It's Over	Anderson .Paak	144
	30	The town	The Weeknd	140
Malaysian Rock	31	Kotak Hati	Hujan	150
	32	Hang Pi Mana	Khalifah	145
	33	Bunk Anthem	Bunkface	153
	34	Cinta Pantai Merdeka	Jinbara	142
	35	Luka Seribu Rindu	Fotograf	161
Western Rock	36	Not Listening	Papa Roach	164
	37	Come Together	The Beatles	165
	38	Poor Little Fool	Ricky Nelson	155
	39	Bleed It Out	Linkin park	140
	40	All The Small Things	Blink-182	149

Note: *Tempo is designated in M. M. markings (beats/min).

Pilot study

A pilot study was conducted to test the reliability of the excerpts listed, including to improve the questions, format, and scales of each section. Stratified sampling method (probability sample) technique was used to select 30 students (16 years old) as the subjects. A minimum sample size of 30 representative subjects of the target population is required for a pilot study whose purpose is a preliminary survey or scale development (Rahman, 2023). The subjects were divided into two categories, musical training (n=15) and non-musical training (n=15). The alpha reliability coefficient value of MPI was .78 and for familiarity rating was .77. For the BFI, the reliability values of each personality dimensions were; Openness to experience (.92), Conscientiousness (.92), Extraversion (.93), agreeableness (.86), and Neuroticism (.90). The alpha values were greater than 0.7 indicating that the instruments were consistent. The inter-item was calculated using Pearson Product Moment. For MPI, the inter-item correlation ranges from .31 to .50; while the familiarity ratings range from .41 to .50. This indicated that these questionnaires were reliable and no songs replacement was needed.

Subjects

Subjects (N=381) were Malaysian upper secondary school students aged 16 years old selected using the stratified sampling (probability sample) method. Subjects were categorized according to their musical training; (i) musical training (n=190), and (ii) non-musical training (n=191). They were selected from secondary schools in the state of Johor, particularly the Pasir Gudang District, which consists of approximately 50000 students. Krejcie and Morgan (1970) stated that a population of 50,000 requires a sample size of at least 381. The following shows Krejcie and Morgan's table (Table 3).

Table 3. Table for determining sample size for a finite population.

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320

50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note: N is the population size; S is the sample size.

Procedure

Approval was obtained from the research ethics committee of the university, the Ministry of Education Malaysia, the state education department, and the principals of the selected secondary schools to conduct the study. The questionnaire was administered to the subjects in person. They filled out Section A, rated their preference and familiarity in Section B while listening to the music excerpts, and completed the BFI in Section C. The final scores for each personality dimension were calculated based on scoring instructions.

Results and Discussion

Descriptive statistics for music genre preference composites

A composite score for each music genre's preference was calculated, and descriptive statistics were generated to investigate the prevalence of each preference genre in the *Table 4*. The results revealed that the Western pop genre was the most preferred music genre with the highest mean score ($M=22.00$, $SD=6.45$), followed very closely by the Malaysian rock genre ($M=21.91$, $SD=6.6$). The Malaysian R&B genre was the least preferred music genre with the lowest mean score ($M=12.22$, $SD=5.60$). Generally, R&B genre had a low mean score for both Malaysian and Western categories ($M<16.00$). These results indicated that there was a relatively high degree of variability across subjects' responses to each genre ($SD>5.00$).

Table 4. *Descriptive statistics for music genre preference composites.*

Genre	Mean	SD
Malaysia Pop	21.80	5.61

Western Pop	22.00	6.45
Malaysian Hip Hop	20.45	7.18
Western Hip Hop	17.48	6.87
Malaysian R&B	12.22	5.60
Western R&B	15.51	6.43
Malaysian Rock	21.91	6.16
Western Rock	15.35	7.54

One-way MANOVA for music genre preference by musical training

To test whether there were differences between the means of identified groups of subjects (musical training and non-musical training) on a combination of dependent variables, the One-way MANOVA (Multivariate analysis of variance) was conducted in the data analysis. The researcher referred to the Wilks Lambda criterion, as Wilks' lambda is the simplest and most straightforward in terms of its analogous relation to F in a univariate ANOVA. The findings of the data analysis for music preferences based on musical training are displayed in the *Table 5*. As shown in *Table 5*, the value for Wilks Lambda (Λ) is .62, which ranged between 0.30 and 0.99, indicating a strong relationship between musical training and all eight music genre preferences. In *Table 6*, the results revealed that the students with musical training (n=190) obtained higher mean score than the students with no musical training (n=191) for every eight music genre preferences. For students with musical training, they scored the highest mean on Western Pop (M=23.88, SD=4.65), followed by Malaysian Pop (M=23.83, SD=5.18), Malaysian Rock (M=23.03, SD=6.27), Malaysian Hip-hop (M=22.16, SD=6.88), Western Rock (M=19.32, SD=7.28), Western Hip-hop (M=18.01, SD=6.93), Western R&B (M=17.16, SD=5.25), and lastly Malaysian R&B (M=14.09, SD=5.36). For students with no musical training, they scored the highest mean on Malaysia Rock (M=20.80, SD=5.87), followed by Western Pop (M=20.14, SD=7.40), Malaysian Pop (M=19.81, SD=5.32), Malaysian Hip-hop (M=18.75, SD=7.09), Western Hip-hop (M=16.95, SD=6.79), Western R&B (M=13.87, SD=7.06), Western Rock (M=11.41, SD=5.45), and Malaysian R&B (M=10.35, SD=5.21).

Table 5. MANOVA analyses across music preferences for eight music genres by musical training (N=381).

Source	Wilk Lambda (Λ)	F	Hypothesis df	Error df	P
Musical training	.62	28.83	8	372.00	.000

Table 6. Mean and standard deviations for music preference by musical training.

Genre	Music training	Mean	SD
Malaysian Pop	No (n=191)	19.81	5.32
	Yes (n=190)	23.81	5.18
Western Pop	No (n=191)	20.14	7.40
	Yes (n=190)	23.88	4.65
Malaysian Hip-hop	No (n=191)	18.75	7.09
	Yes (n=190)	22.16	6.88
Western Hip-hop	No (n=191)	16.95	6.79
	Yes (n=190)	18.01	6.93
Malaysian R&B	No (n=191)	10.35	5.21
	Yes (n=190)	14.09	5.36
Western R&B	No (n=191)	13.87	7.06
	Yes (n=190)	17.16	5.25

Malaysia Rock	No (n=191)	20.80	5.87
	Yes (n=190)	23.03	6.27
Western Rock	No (n=191)	11.41	5.45
	Yes (n=190)	19.32	7.28

Pearson correlation between music genre preferences and familiarity

Table 7 showed that all r values were greater than 0.01. This indicated that there was a positive correlation between all music genre preferences and familiarity. The correlation values ranged from .50 to .80.

Table 7. *Pearson correlations between music genre preference and familiarity.*

Music genre	r
Malaysia Pop	.50
Western Pop	.79
Malaysian Hip Hop	.80
Western Hip Hop	.75
Malaysian R&B	.59
Western R&B	.72
Malaysian Rock	.78
Western Rock	.69

Note: Correlation is significant at the 0.01 level.

Analysis of data for the big five personality dimension (OCEAN) in relation to music preferences

Table 8 displayed the correlation between each of the Big Five personality dimensions and music preference genres. Openness showed a strong positive correlation towards Western Pop, Malaysian Pop, and Malaysian Rock ($r > .80$). Other genres such as Malaysian Hip-hop, Western Hip-hop, Western Rock, Western R&B, and Malaysian R&B indicated a moderately positive correlation towards openness ($r > .50$). Conscientiousness showed a strong positive correlation towards three music genre that were Malaysian Pop, Malaysian Rock, and Malaysian Hip-hop ($r > .80$). A moderate positive correlation was shown between conscientiousness and Western Pop, Western Hip-hop, Western R&B, and Western Rock genres ($r > .50$). A weak positive correlation was shown between conscientiousness and Malaysian R&B genre ($r < .50$). A strong positive correlation for extraversion was found towards Malaysian Pop, Malaysian Hip-hop, and Malaysian Rock genres ($r > .80$). Meanwhile, Western Pop, Western Hip-Hop, Western R&B, and Western Rock genres showed a moderate positive correlation towards extraversion ($r > .50$). However, a weak positive correlation was also found between extraversion and Malaysian R&B genres ($r < .50$). For agreeableness, a strong positive correlation was found towards Malaysian Rock, Western Pop, and Malaysian Pop ($r > .80$). A moderately positive correlation of agreeableness was found towards Malaysian Hip-hop, Western Hip-hop, Western Rock, and Western R&B genres ($r < .50$). A weak positive correlation was also shown between agreeableness and Malaysian R&B genre ($r < .50$). Lastly, the neuroticism personality dimension obtained a strong positive correlation towards Malaysian Rock, Western Pop, and Malaysian Hip-hop genres ($r > .80$). Neuroticism also found a moderate positive correlation towards Malaysian Pop, Western Hip-hop, Western R&B, and Western Rock genres ($r > .50$).

However, a weak positive correlation was found between neuroticism and Malaysian R&B genre ($r < .50$).

Music genre preference

The results showed that the Western Pop genre had the highest score out of all the other music genres, indicating that it was the genre that Malaysian secondary school students preferred the most. This result was determined without considering the student's musical training, familiarity, or personality. Interestingly, this demonstrated that although Malaysia is not a western country, Malaysian students did strongly enjoy western pop music. These findings were related to previous findings by Jiayang and Jia (2021), who stated that most Malaysian music was influenced by the West. The results of this study were consistent with Bakar (2021), who discovered that Malaysians frequently included English international mainstream music genres into their favourite playlist. Similarly, Zorkeply and Zulkifli (2022) also discovered that students tend to listen to English Pop music on their Spotify application, as they believed that listening to English Pop songs helped them improve their English communication skills. All English-educated Malaysians tend to prefer Western songs, no matter what the genre is (Johan and Hamzah, 2019). These provided a lot of insight into the reasons behind the increasing popularity of Western Pop music as the most preferred music genre in current research. This study also portrayed that Malaysian R&B genre was the least preferred compared to others. Previously, Jiayang and Jia (2021) stated that the pop and hip-hop music genres were widely embraced in Malaysia. Besides, Bakar (2021), who claimed that since the 1970s, pop, rock, and ballads have been among the top genres of music that Malaysians listen to on a daily basis. This provided further evidence that the R&B genre did not receive widespread exposure in Malaysia until today. As a consequence of this, the students have the lowest level of appreciation for R&B genre.

Musical training

In this study, subjects with musical training had higher preferences for all eight genres, whether Malaysian or Western music, compared to subjects with no musical training. This result indicated that students with musical training had a broader musical exposure than students who did not receive musical training. Subjects who had musical training demonstrated a greater appreciation for music, regardless of the culture from where the music originated. The findings of this study corroborated an earlier research study by Johan and Hamzah (2019), which found that those who are professionally music-educated are likely to have wider musical genre preferences. However, the result of this study demonstrated that students with musical training still gave higher preference ratings to mainstream genres such as pop, hip-hop, and rock compared to non-mainstream genres like R&B. Contradictory, Johan and Hamzah (2019), stated that musicians and professional composers tend to get bored of mainstream genres. However, this study was conducted on teenagers, but the prior study (Johan and Hamzah, 2019) was on early adults, which may explain the inconsistency.

Familiarity

In this study, the correlation value between music genre preference and familiarity with music genres ranged from .50 to .80. This demonstrated that familiarity was highly correlated with an individual's music preference. These findings were consistent with

theories from prior research, stating that familiarity is the relationship between preference and familiarity that is consistently significant (Williams, 2018). Heng et al. (2021) have also claimed that familiarity is a highly significant factor in selecting music to listen to. The result of this study was also consistent with Fuentes-Sánchez et al. (2022), demonstrating that listening to familiar music enhanced the preference for the music genre and indicated a positive correlation between musical preference and familiarity. It showed that Malaysian secondary school students were most familiar with the Malaysian Pop genre, followed by the Western Pop genre. This result was consistent with Zorkeply and Zulkifli (2022), who discovered that most of the students preferred listening to the pop music genre because the tracks were frequently catchy and simple to comprehend. Overexposure to mainstream pop music on local radio led to this.

Personality

This study demonstrated that all personality dimensions (OCEAN) were significantly correlated with music preference. Openness preferred a broader selection of musical genres than other personality dimensions. This result is consistent with previous studies by Kleć et al. (2023), Aroyewun and Karatu (2022) as well as Boccia (2020), who also found that Openness personality appreciated a broader variety of musical genres than other personality dimensions. Conscientiousness tends to highly prefer Malaysian Pop, Malaysian Rock, and Malaysian Hip-hop over other listed genres. This result corroborated Aroyewun and Karatu (2022), who stated that conscientiousness was found to have a significant positive correlation with most music genres. Contrary to the findings of Minnie et al. (2021), it was discovered that there was no significant correlation between conscientiousness and a preference for rock and hip-hop music. The results showed that Extraversion personality was found to strongly prefer Malaysian Pop, Malaysian Hip-hop, and Malaysian Rock genres. Similarly, Managuran et al. (2021) demonstrated that pop and hip-hop genres were most preferred by extraversion. Contradictory, Aroyewun and Karatu (2022) found that extraversion had no significant positive correlation with the pop, Hip-hop, and rock genres. This study disagreed with Minnie et al. (2021), who found that extraversion did not demonstrate a significant preference for any music genres. However, Kleć et al. (2023) found that extraversion gave a low preference rating towards the rock genre but a high preference rating towards the hip-hop genre. In this study, extraversion indicated the lowest preferred genre for Malaysian R&B. In contrast to Managuran et al. (2021), the R&B genre was highly positively correlated with extraversion.

It was also found agreeableness have a strong preference for the Malaysian Rock, Western Pop, and Malaysian Pop genres in this study. The result was in line with Managuran et al. (2021), who demonstrated that the Pop genre was strongly preferred by agreeableness. The result established that Malaysian R&B genre was the least preferred among the agreeableness. Contradictory, there was no correlation between agreeableness and any music preference genres (Minnie et al., 2021). Greenberg et al. (2022) claimed that the neuroticism personality dimension would probably have gone one of two ways: either selecting depressing music to express their loneliness or favouring upbeat music to change their moods. This study discovered that neuroticism tends to highly preferred Malaysian Rock, Western Pop, and Malaysian Hip-hop genres. The results were consistent with Bapu and Curha (2020), who discovered that there was a significant relationship between neuroticism and preference for the pop genre. Similarly, Aroyewun and Karatu (2022) demonstrated that neuroticism had a significant

positive correlation with the hip-hop genre only. Lastly, this study determined that neuroticism tends to have the lowest preference for Malaysian R&B genre.

Conclusion

In summary, this study successfully demonstrated that a person's musical preferences can be influenced by factors such as musical training, familiarity, and personality. Additionally, this study presented the Ministry of Education Malaysia with a strong justification for expanding the repertoire included in the school's syllabus. By expanding the selection of repertoire, students will be exposed to a wider range of music genres and develop a greater appreciation for different types of music. For instance, non-mainstream genres like R&B should be incorporated into the school's curriculum, as it is underappreciated in our local media. The current pedagogy of music education should be improved by incorporating music that corresponds to the personality of the student. A list of genres that correspond to each type of personality should be compiled with the collaboration of music experts, psychologists, and psychotherapists. Given the limitations of the study, future research needs to expand of the sample size with data collected nationwide. Future researchers could also expand the range of musical genres, such as jazz, classical, country, reggae, electro, traditional, or folk. Any trending or latest mainstream music genres could be incorporated to be relevant in the present. Future studies could also take into consideration other variables known to influence music preference decisions and different types of personality tests in their research other than The Big Five, such as the HEXACO personality test, the Myers-Briggs Type Indicator (MBTI), or the DISC personality test.

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Conflict of interest

The authors confirmed that there was no conflict of interest involved with any parties in this research study.

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