

## Modeling vocabulary development of learners who watch movies with English subtitles

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### ABSTRACT

This study mainly investigated the perceived level of vocabulary development of the students watching English/Filipino movies with English subtitles. Moreover, the relationship of variable accessibility to variables knowledge acquisition and attitude and the relationship of these three variables to vocabulary development were also determined. Four hundred fifty first-year students of a state university in the Philippines served as respondents in this study. Each student answered a survey questionnaire with a total of 23 items that detail their perception of using English/Filipino movies with English subtitles as a tool for developing their vocabulary. The overall perceived level of significance of the three variables showed positive results. Furthermore, the results extracted from Partial Least Squares Structural Equation Modeling (PLS-SEM) indicated that accessibility has a significant relationship to knowledge acquisition and attitude. Additionally, all three variables were found to affect vocabulary development. The study ascertained the significant relationship between English/Filipino movies with English subtitles and the underlying variables attached to the students' vocabulary development.

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### 1. Introduction

Achieving fluency in a language is believed to require substantial knowledge of thousands of word families to fully grasp everyday conversations at the level of a native speaker. Therefore, the acquisition of vocabulary is an essential element in reaching proficiency in a language. Traditional methods of vocabulary instruction frequently rely on rote memorization and isolated word drills, which can be monotonous and disconnected from real-life language use. However, in recent years, language educators and researchers have investigated novel approaches to vocabulary development that use multimedia and technology. Using movies as a learning aid for vocabulary development is one such approach that has gained attraction. With its engaging visuals, authentic language use, and contextualized vocabulary, some studies (Albiladi et al., 2018; Chuen, 2002; Katemba & Ning, 2018; Roslim et al., 2021; Xu, 2018) claim that movies provide a one-of-a-kind and dynamic learning experience that has the potential to improve learners' vocabulary skills in a meaningful and enjoyable way.

In other studies, however, Kusumaningrum (2015) and Albiladi et al. (2018) have argued that movies lack instructional and pedagogical purposes by diverting students' attention to the scene rather than the linguistic input, making it impractical for learning the language, particularly in vocabulary development. As a result, it is critical to assess students' perspectives on using

movies as a tool for improving English vocabulary skills, not only to add to the pre-existing body of research on the subject but also to identify and boost the approach's strengths while addressing and improving its weaknesses.

From a macro perspective, varied responses from various studies are made in regard to the impact of movies as a learning aid for English vocabulary development. According to a study by Ashcroft et al. (2018), watching movies can be a useful method for language learners to acquire new vocabulary, suggesting that movies have the potential to increase vocabulary acquisition rates. The advantages of using captions while viewing English TV programs were also supported by Başaran and Dilber (2013), who suggested that learners read the captions beforehand to increase motivation and comprehension. They also pointed out that memory is most efficient when both the auditory and visual registers are aroused, which can be achieved by repeatedly exposing learners to captions. However, a study conducted in China by Teng (2022) found that using movie subtitles as a method to boost vocabulary development can be effective, but it is important to consider that students' language proficiency levels vary. Lower-proficiency students may face difficulties in processing audio-visual content in real-time. Therefore, the use of movies for vocabulary enhancement may require a higher level of language proficiency to effectively engage with subtitles in audio-visual media like movies.

In essence, there is indeed a gap in utilizing movies as a learning aid for vocabulary development due to conflicting perspectives regarding the matter. In this case, the synthesis of quantitative research that clarifies a broader picture of the college student's perceptions of the use of English/Filipino movies for vocabulary development becomes theoretically important. With this, the researchers have taken an urge to delve into the topic further and situate the study in a chosen university within the locale. Employing the quantitative method of conducting a research study, this paper aims to examine the perspectives of first-year students on the use of English/Filipino movies with English subtitles as a learning aid for vocabulary development. Particularly, this research answers the following question: (1) What is the level of the proposed vocabulary development factors of the students in terms of (a) knowledge acquisition, (b) accessibility, and (c) attitude of freshmen students in using English/Filipino movies with English subtitles to improve vocabulary? (2) Are the following factors; (a) knowledge acquisition; (b) accessibility; and (c) attitude of freshmen students in using English/Filipino movies with English subtitles, a significant predictor of vocabulary development? Lastly, the researchers are fully inclined to the idea that the future results of this study will become a useful basis, source, or reference for educational practitioners, administrators, teachers, students, and other stakeholders in the proper integration of movies as a learning aid for vocabulary development in formal education.

## **2. Theoretical basic**

With special attention given to the role of audiovisual digital materials in learning English as a Second Language (ESL), this study is anchored on Paivio's (1991) Dual-Coding Theory (DCT) and Mayer's (2001) Cognitive Theory of Multimedia Learning (CTML).

### **2.1. Dual-Coding Theory (DCT)**

This maintains that cognition is split into two subsystems, one with a focus on language and verbal information and the other on visuals and non-verbal information. Literacy and language development have been directly impacted by DCT - a general theory of cognition. This theory posits that learning is enhanced when individuals are simultaneously engaged with complementary sources of information such as images and text (Paivio, 1991). Additionally,

recent study updates by Paivio (2007, 2014), contend that memory is composed of two distinct channels for processing verbal and pictorial data, each functioning independently yet synergistically within working memory to enhance the retention and recall of information. On that note, through the combination of text and images (including moving images), audiovisual media in movies with subtitles fit into this theoretical paradigm.

### ***2.2. Cognitive Theory of Multimedia Learning (CTML)***

CTML delves into how individuals acquire knowledge through multimedia presentations, as articulated by Mayer (2005). This theory draws its theoretical roots from Wittrock's generative theory (1992) and Paivio's dual-coding theory. However, CTML extends beyond these foundations by casting the learner (movie watcher) in the role of a "knowledge constructor," who consciously selects and connects visual and verbal information components. In addition, CTML centers on two concepts that are fundamental in this study. The first principle to consider is the multimedia principle, which posits that learners can acquire knowledge more effectively when presented with a combination of visual elements (i.e., illustrations, drawings, graphs, charts, photographs, and particularly videos and animations, as noted by Butcher, 2006) and verbal elements (text, spoken words or sounds, and narrations), as opposed to words alone. The second principle, known as the temporal contiguity principle, addresses the potential issue of overwhelming learners with excessive multimedia content. It contends that the simultaneous presentation of the two elements, instead of consecutive or sequential, allows learners to understand learning aids better (Mayer & Fiorella, 2014; Rusanganwa, 2015). In light of these two CTML principles, using English-subtitled movies as a genuine source of multimedia content and instructional aid (both simultaneously presented) in casual and informal ESL learning aligns seamlessly with this framework.

### ***2.3. Movies with subtitles as audiovisual language learning resources comprising both verbal and visual elements cocooned in a simultaneous presentation***

By incorporating subtitles or captions, movies stand out as prominent multimedia assets for teaching and learning ESL. It's worth noting that written and spoken words are stored in our brains through a single encoding process. In contrast, visual representations of words are encoded twice: first visually and then verbally. This dual encoding results in more robust and enduring memory traces, as elucidated by Kirschner and Kirschner (2012). A learner can access more excellent working memory space when captions or subtitles are used (Baddeley, 2001). Consequently, captions or subtitles are more likely to enhance word retention and unintentional vocabulary acquisition, a point Mayer (2005) emphasized. As audiovisual resources, movies offer an engaging context by featuring dynamic actions rather than static images. However, recent findings from different research (Albiladi et al., 2018; Kusumaningrum, 2015) suggest that movies may not effectively serve educational and pedagogical goals. These studies contend that films can hinder language learning, especially in terms of vocabulary development, as they tend to shift students' focus toward the visual aspects rather than the linguistic input, making the learning process impractical.

In summary, both theories share common principles, namely, (1) the idea that individuals learn more effectively when exposed to a combination of words and visuals, as opposed to words alone, as suggested by Marée et al. (2013), Mayer (2001), and (2) the notion that the simultaneous presentation of words and images enables the brain to process a greater amount of information while mitigating the risk of information overload. Although, compared to a few opposing research findings, numerous studies favor these theories, the majority narrows its scope to English movies only. Hence, more study is still required to fully understand the challenge of

vocabulary learning particularly in ESL contexts. Therefore, the present study seeks to justify the aforementioned assumptions by investigating the perspectives of students (as “movie watchers” and “knowledge constructors”) on the use of English/Filipino movies with English subtitles, as a learning aid for vocabulary development in learning English as a second language. Specifically, this study proposes the following hypotheses:

*H1: Accessibility directly impacts attitude*

*H2: Accessibility directly impacts knowledge acquisition*

*H3: Accessibility directly impacts vocabulary development*

*H4: Attitude directly impacts vocabulary development*

*H5: Knowledge acquisition directly impacts vocabulary development*

### **3. Methodology**

#### **3.1. Research method**

This study utilized the quantitative research design following the correlational method in testing the relationship between the independent and dependent variables.

#### **3.2. Setting and respondents**

The respondents of this study were 450 first-year students from various college programs (i.e., Teacher Education, Engineering, Technology, and Management and Business) of a state university in Central Visayas, Philippines. These respondents consume at least 05 hours of watching movies every week. Using the Purposive Sampling method, the research captured a wide array of perspectives and experiences related to using English subtitles in English/Filipino movies for vocabulary development.

##### *3.2.1. Age*

As shown in Table 1, among the 450 respondents ranging from age 17 - 24, students aged 19 had the highest participation of 222 individuals, and ages 23 and 24 had the lowest frequency of only one each. This distribution, as shown in Table 1, suggests that the survey captured a diverse age range within the target respondents of the study, which are first-year college students from a state university in the Philippines.

**Table 1**

*Age Distribution of the Respondents*

Age (in years)	f	%	Age Group	f	%
17	2	0.44	17 - 20	428	95.11
18	88	19.56	21 - 24	22	4.88
19	222	49.33			
20	116	25.78			
21	13	2.89			
22	7	1.56			
23	1	0.22			
24	1	0.22			
<b>Total</b>	<b>450</b>	<b>100</b>	<b>Total</b>	<b>450</b>	<b>100</b>

Source. The researcher's data analysis

### 3.2.2. Sex

The data presented in the table reflects that there are 299 female students, comprising 66% of the total, surpassing the male students, who account for only 151 students, constituting 34% of the population. This observation aligns with the broader trend seen in related studies focusing on the impact of movies on vocabulary development, as indicated by prior research (Chuen, 2002; Damanik & Katemba, 2021; Kusumaningrum, 2015; Santianes, 2018; Teng, 2022), where a higher frequency of female participants has been a consistent pattern.

**Table 2**

*Sex Distribution of the Respondents*

Sex	f	%
Male	151	34
Female	299	66
<b>Total</b>	<b>450</b>	<b>100</b>

Source. The researcher's data analysis

### 3.2.3. Program

The survey population is comprised of respondents under teacher education (34.89%), technology-related (24%), engineering (20%), and management and business-related (21.11%) programs. Respondents from teacher education are shown to cover the highest of the overall survey population.

Various studies posit that students in English-related courses exhibit more inclination to improve their vocabulary through subtitled movies (Angelina & Andriani, 2020; Albiladi et al., 2018; Alharthi, 2020; Teng 2022). However, other programs that are not English-related could still offer significant findings with the acquisition of domain-specific terminology from movies directly related to their program (Bostanci, 2022; Sathyanarayanan & Shekar, 2011).

**Table 3**

*Program Distribution of the Respondents*

Category (Program)	n	%
Teacher Education	157	34.89
Technology related	108	24
Engineering	90	20
Management and Business related	95	21.11
Total	450	100

Source. The researcher's data analysis

### 3.3. Research instruments

The instrument used in this study was adapted from Damanik and Katemba's (2021) self-designed questionnaire, which was then altered and adjusted significantly to fit the study's content and purpose. The questionnaire was divided into two parts: a) the respondent's background characteristics and b) the respondent's perception of Filipino/English movies with English subtitles as a learning aid for vocabulary development. For the second part, a 5-point Likert scale with the following options: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree, was used to evaluate the responses.

### 3.4. Data collection and analysis

After the researchers obtained the necessary approval for the survey, the collection was conducted through two different methods: an online and an in-person survey. In both methods, respondents were briefly informed of everything they needed to know about the study and were asked for permission before participating in the survey. Confidentiality of data was also assured upon their approval.

In the first phase, the survey was administered online through Google Forms at the vacant time of the target respondents. To achieve the remaining half of the quota, the researchers initiated an in-person survey conducted at the school premises. The researchers then transferred the responses from the questionnaire (from the in-person survey) to Google Forms for easier data organization. Afterward, the data was coded numerically in Excel to calculate each indicator's mean and standard deviation. In addition, the collected data encoded in Excel was then entered into the Smart PLS software, which provided the necessary input to evaluate the relationship between the study's variables.

## 4. Results

The results of this study are divided into two sections: (1) the level of the proposed vocabulary development factors of the respondents; and (2) the relationship between the respondents' vocabulary development and their level of the proposed vocabulary development factors.

### 4.1. Level of the proposed vocabulary development factors of the respondents

This section presents the level of the proposed vocabulary development factors of the respondents in terms of knowledge acquisition, usability, and attitude. These are evaluated and described through the calculated mean and standard deviation.

#### 4.1.1. Vocabulary development factors in terms of knowledge acquisition

The variable 'Knowledge Acquisition' aims to uncover the learning strategies or exercises employed by the respondents to enhance their vocabulary using English-subtitled movies.

Among the items under this variable, recalling terms regularly achieved the highest mean, which is 4.31, with a verbal description of SA (Strongly Agree). Following it, with a mean of 4.03 and a verbal description of A (Agree), is using a new word in a phrase. These two learning exercises coincide with various existing related studies (Katemba & Ning, 2018; Roslim et al., 2021).

In addition, the respondents also showed favorable responses on the remaining items. This means that the respondents agree to use these learning exercises to improve their vocabulary while watching either Filipino or English movies with English subtitles.

**Table 4**

#### *Knowledge Acquisition*

	<b>Indicators</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Verbal Description</b>
KL1	Watching either Filipino or English movies with English subtitles helps me acquire vocabulary	4.11	1.01	A
KL2	I take notes on vocabulary from either Filipino or English movies with English subtitles that I watched	3.59	0.97	A

	<b>Indicators</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Verbal Description</b>
KL3	Watching either Filipino or English movies with English subtitles and trying to recall terms regularly helped me improve my vocabulary	4.31	0.75	SA
KL4	I use the new words I have encountered from watching either Filipino or English movies with English subtitles to help me remember them better	4.03	0.86	A
KL5	When studying, I read aloud the words I gained from watching either Filipino or English movies with English subtitles	3.77	1.06	A
<b>AGGREGATE MEAN</b>		<b>3.93</b>		<b>Agree</b>

Legend: 4.21 - 5.00 = Strongly Agree (SA); 3.41 - 4.20 = Agree(A); 2.61 - 3.40 = Neutral (N); 1.81 - 2.60 = Disagree (D); 1.00 - 1.80 = Strongly Disagree (SD)

Source. Data analysis result of the research

#### 4.1.2. Vocabulary development factors in terms of accessibility

The third indicator garnered the most favorable measurement value ( $M = 4.28$ ,  $SD = 0.81$ ) among the indicators under the second variable, indicating a strong agreement among respondents that watching movies with English subtitles on online platforms can help improve their English in everyday situations. This finding corroborates earlier studies emphasizing the benefits of subtitled movies in enhancing language learning and comprehension (Baddeley, 2001; Kusumawardhani & Nurhayati, 2019; Mayer & Fiorella, 2014; Yazici, 2020) as it exposed language learners to real-world (authentic) language (Kanellopoulou, et al. 2019).

The first and second indicators also gained a favorable response from the respondents. These findings are further supported by other related research (Desfitranita, 2017; Jenner, 2018).

In summary, the overall data for the second variable indicates a positive perception among the respondents regarding the accessibility and benefits of watching movies with English subtitles on online audio-visual platforms.

**Table 5**

#### Accessibility

	<b>Indicators</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Verbal Description</b>
AC1	Movies with English subtitles on any online audio-visual platforms are easy to access	4.12	0.84	A
C2	Watching either Filipino or English movies with English subtitles on any online audio-visual platforms is more enjoyable than watching them on other offline services (e.g., DVD)	3.98	0.91	A
AC3	Watching either Filipino or English movies with English subtitles on any online audio-visual platforms can help me improve my English in everyday situations	4.28	0.81	SA
<b>AGGREGATE MEAN</b>		<b>4.12</b>		<b>Agree</b>

Legend: 4.21 - 5.00 = Strongly Agree (SA); 3.41 - 4.20 = Agree (A); 2.61 - 3.40 = Neutral (N); 1.81 - 2.60 = Disagree (D); 1.00 - 1.80 = Strongly Disagree (SD)

Source. Data analysis result of the research

#### 4.1.3. Vocabulary development factors in terms of attitude

Table 6 introduces the third variable in the study, focusing on the concept of “attitude.” This variable explores the personal feelings and outlooks of students concerning the influence of English/Filipino movies featuring English subtitles on vocabulary development.

The second indicator ( $M = 4.33$ ,  $SD = 0.73$ ) and seventh indicator ( $M = 4.32$ ,  $SD = 0.73$ ) got the most favorable responses from the respondents among the indicators listed under the third variable, indicated with a verbal description of “SA” (Strongly Agree). The second indicator is further supported by various studies (Apulisa et al., 2021; King, 2002) Cognitive Theory of Multimedia Learning (CTML). Meanwhile, the seventh indicator is supported by Paivio’s (1991) Dual Coding Theory and Mayer’s (2001) Multimedia Learning. Aside from the first indicator that got a neutral response, which can be explained by several studies (Hakim, 2019), all remaining indicators got a favorable response from the respondents.

Thus, the data reveals that learners generally have a positive attitude toward using movies with subtitles as a valuable tool for learning English vocabulary. These findings emphasize the significance of engaging multimedia-based approaches in language education.

**Table 6**

#### *Attitude*

	<b>Indicators</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Verbal Description</b>
AT1	I am not afraid to apply what I have learned from either Filipino or English movies with English subtitles by having a conversation with an English speaker using new words	3.24	1.08	N
AT2	Improving vocabulary from either Filipino or English movies with English subtitles is an interesting way	4.33	0.73	SA
AT3	I prefer books over Filipino or English movies with English subtitles for learning vocabulary	3.55	1.05	A
AT4	It is easier to learn a new vocabulary via Filipino or English movies with English subtitles	4.11	0.8	A
AT5	Filipino or English movies with English subtitles should be included in EFL classes	3.82	0.8	A
AT6	Filipino or English movies with English subtitles are an excellent resource for teaching English vocabulary	4.13	0.8	A
AT7	Watching Filipino or English movies with English subtitles is useful for my English learning	4.32	0.73	SA
<b>AGGREGATE MEAN</b>		<b>3.93</b>		<b>Agree</b>

Legend: 4.21 - 5.00 = Strongly Agree (SA); 3.41 - 4.20 = Agree (A); 2.61 - 3.40 = Neutral (N); 1.81 - 2.60 = Disagree (D); 1.00 - 1.80 = Strongly Disagree (SD)

Source. Data analysis result of the research

#### 4.1.4. Vocabulary through movies with English subtitles

Table 7 shows data on learners' perceptions of the efficacy of watching Filipino or English movies with English subtitles for language learning. Overall, respondents strongly agree with statements about this method, as demonstrated by mean scores that consistently surpass 4.20 and fall into the "Strongly Agree" category for the majority of indicators. The low standard deviations across variables indicate a high level of agreement among respondents on this strategy's favorable influence on language acquisition. It can be inferred from the findings that watching English-subtitled movies is widely is generally acknowledged as an effective method for improving language skills.

These findings imply that watching movies with English subtitles is widely perceived as an effective method for improving language skills, especially regarding vocabulary development and comprehension. This is also agreed and affirmed by various researchers (Albiladi et al., 2018; Kabooaha, 2016; Kalra, 2017; Liando et al., 2018). Specifically, one noteworthy finding is the close association between vocabulary development and comprehension, which are the two skills that learners enhance while watching English/Filipino movies with English subtitles, as indicated by the three questions addressing students' comprehension. This aligns with the study conducted by Napikul et al. (2018), which suggests that simultaneously listening to and reading English can facilitate the acquisition of new vocabulary and improve both listening and reading comprehension. This is because students are able to differentiate between familiar and unfamiliar words (as exemplified by "big" and "huge" in the questionnaire) and recall challenging vocabulary.

**Table 7**

#### *Vocabulary Development*

	<b>Indicators</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Verbal Description</b>
EV1	Watching either Filipino or English movies with English subtitles can help me learn many words	4.47	0.72	SA
EV2	I can comprehend when I watch either Filipino or English movies with English subtitles	4.25	0.74	SA
EV3	I can distinguish between words due to watching movies with English subtitles. For example, the words 'big' and 'huge'	4.20	0.80	A
EV4	When I watch either Filipino or English movies with English subtitles, I want to understand the meaning of the words	4.32	0.80	SA
EV5	After watching either Filipino or English movies with English subtitles, I improved my vocabulary in my English tests	3.96	0.85	A
EV6	I comprehend every word when the teacher talks in English after watching either Filipino or English movies with English subtitles	3.96	0.82	A
EV7	Watching either Filipino or English movies helps me enhance my vocabulary	4.35	0.71	SA
EV8	I learned a lot of vocabulary from the English subtitles I read while watching Filipino or English movies/series	4.27	0.74	SA
<b>AGGREGATE MEAN</b>		<b>4.22</b>		<b>Strongly Agree</b>

Legend: 4.21 - 5.00 = Strongly Agree (SA); 3.41 - 4.20 = Agree (A); 2.61 - 3.40 = Neutral (N); 1.81 - 2.60 = Disagree (D); 1.00 - 1.80 = Strongly Disagree (SD)

Source. Data analysis result of the research

## ***4.2. Relationship between the respondents' vocabulary development and their level of the proposed vocabulary development factors***

### *4.2.1. Reliability and validity test*

In order to evaluate the research's quality, reliability, and validity tests are conducted. In SEM analysis, reliability and validity are principles evaluated by statistical indicators.

Reliability is measured through the assessment of internal consistency and individual item reliability of a dataset or construct (Huang, 2021), wherein if it passes the acceptable value for each measurement indicator, it is considered reliable. Internal consistency is often measured through the value of Cronbach's Alpha and composite reliability. Both measurement indicators recommend a value greater than or equal to 0.70 to be considered reliable (Huang, 2021; Jain & Chetty, 2021; Tentama & Anindita, 2020).

As shown in Table 8, all established constructs except KL (Knowledge Acquisition) passed the value criterion for Cronbach's Alpha, wherein the calculated values range from 0.710 to 0.878 (see Table 7 below) and which denotes high reliability (Sideridis et al., 2018). For the construct that fell short of the recommended value, Hajjar (2018) states that a construct with a value greater than 0.60 is still reliable. Thus, the construct Knowledge Acquisition (KL) with a Cronbach's Alpha of 0.618 is accepted. As for the composite reliability, all constructs show values greater than 0.70, which ranges from 0.796 to 0.905. These values represent good reliability (Cheung et al., 2023; Hair et al., 2009).

Aside from internal consistency, reliability is also measured by individual item reliability which can be identified by factor loadings analysis. Similar to the earlier measurement indicators, Comrey and Lee (2013) suggested an acceptable range of factor loadings which is a value greater than 0.63, indicating very good loadings. For the relatively lower factor loadings to be accepted, some items should be removed to increase the value of the composite reliability or AVE (Forsberg, 2017; Hair et al., 2014). With full consideration of this, five items (i.e., EV6, KL2, KL5, AT1, and AT3) were removed after the values of composite reliability were maintained to 0.7 and the AVE was raised to 0.5.

Moving on to validity, this principle is measured through the evaluation of convergent validity and discriminant validity. Average Variance Extracted (AVE) is considered as a basis to assess the convergent validity. To establish validity with AVE, a value greater than or equal to 0.5 should be reached (Cheung et al., 2023; Fornell & Larcker, 1981). As shown in Table 7, all constructs possess values greater than 0.5, which range from 0.566 to 0.629. Thus, all constructs passed the recommended value of validity for AVE, and convergent validity was established.

**Table 8**

### *Measurement Model Assessment Results*

<b>Items</b>	<b>Loadings</b>	<b>AVE</b>	<b>Cronbach <math>\alpha</math></b>	<b>CR</b>
EV1	0.766	0.578	0.878	0.905
EV2	0.733			
EV3	0.723			
EV4	0.739			
EV5	0.742			
EV7	0.814			
EV8	0.800			

Items	Loadings	AVE	Cronbach $\alpha$	CR
KL1	0.699	0.566	0.618	0.796
KL3	0.777			
KL4	0.778			
AT2	0.746	0.582	0.819	0.874
AT4	0.756			
AT5	0.685			
AT6	0.827			
AT7	0.791			
AC1	0.808	0.629	0.710	0.835
AC2	0.716			
AC3	0.849			

Note. AVE = Average Variance Extracted;  $\alpha$  = Cronbach's Alpha; CR = Composite Reliability; VD = Vocabulary Development; KA = Knowledge Acquisition, AT = Attitude; AC = usability

Source. Data analysis result of the research

According to the Fornell-Larcker criterion, a method used to assess the discriminant validity, the discriminant validity is established when the value shared between the correlation of a construct and the other constructs is lower than the square root of the AVE (Forsberg, 2017).

**Table 9**

*Discriminant Validity According to Fornell-Larcker Criterion*

	AC	AT	KL	VD
AC	<b>0.793</b>			
AT	0.580	<b>0.763</b>		
KL	0.513	0.432	<b>0.752</b>	
VD	0.679	0.699	0.590	<b>0.760</b>

Note. The values set in bold are the square root of each construct's AVE. The remaining values are the correlation value of each construct to the other constructs

Source. Data analysis result of the research

As presented in Table 8, all values extracted from the square root of their AVE (VD = 0.760, KL = 0.752, AT = 0.763, AC = 0.793) are greater than the correlation value between the constructs. Hence, good discriminant validity can be inferred from the given results.

Overall, all statistical indicators for the assessment of the measurement model's validity and reliability, have been met and satisfied. Thus, all items presented in this study are statistically verified to be used on the evaluation and estimation of the structural model's parameters.

#### 4.2.2. Structural model analysis

The Standardized Root Mean Square Residual (SRMR) of the model indicates an approximate fit with a value of 0.072. The acceptable range for SRMR is 0 - 0.08 (Asparouhov & Muth'en, 2018; Hu & Bentler, 1999). Any values in between this range, therefore, accepted and translated as an approximate well-fitting model. Meanwhile, the Normed Fit Index (NFI)

with the calculated value of 0.821, fell short of the NFI's acceptable value of > 0.90. Nevertheless, the nearer the NFI values are to 1, the better it is as a model (SmartPLS, n.d.).

Next, the path analysis draws interpretation on the relationships between constructs. This considers three indicators: the path coefficient, t-values and p-values. The structural model's path coefficients denote that the five hypotheses of this study are supported (See Table 10 below).

To know whether the hypothesis is true, t-values are analyzed and interpreted. As shown in Table 10, all t-values are greater than 3.29. This means that for the hypotheses to be valid, p-values should be less than 0.001. Therefore, the set of established hypotheses (H1, H2, H3, H4 and H5) reached a significant level with a p-value of 0.000 each and are all supported.

**Table 10**

*Path Coefficient Results*

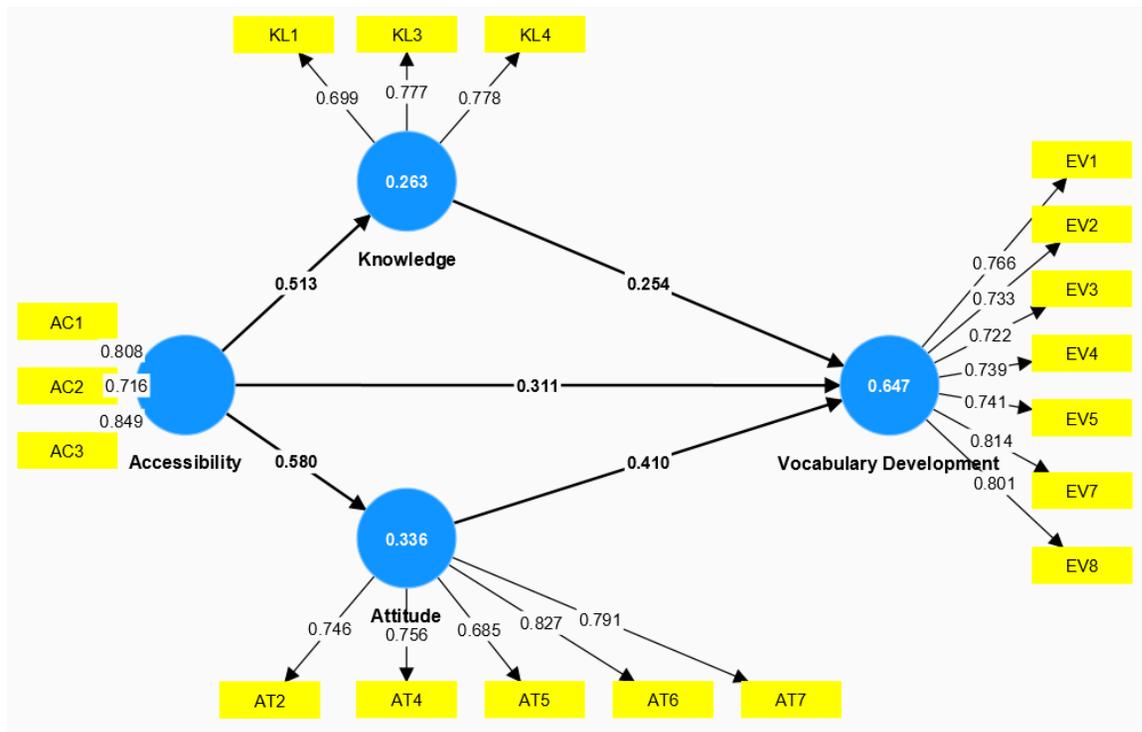
	$\beta$	t values	p values	Decision
AC -> AT	0.58	12.035***	0.000	Supported
AC -> KL	0.513	9.466***	0.000	Supported
AC -> VD	0.311	17.94***	0.000	Supported
AT -> VD	0.41	5.144***	0.000	Supported
KL -> VD	0.254	4.046***	0.000	Supported

(\*\*\* significant at  $p < 0.001$ .)

Source. Data analysis result of the research

**Figure 1**

*The Final Result*



Source. Data analysis result of the research

## 5. Discussion and implications

This study investigated the perspectives of students (as “movie watchers” and “knowledge constructors”) on the use of English/Filipino movies with English subtitles as a learning aid for vocabulary development in learning English as a second language. Specifically, the researchers obtained significant results about the (a) knowledge acquisition, (b) accessibility, and (c) attitude of freshmen students in using English/Filipino movies with English subtitles to improve vocabulary.

On the relationship between the constructs, it can be seen in Table 10 that Knowledge acquired through English/Filipino movies with English subtitles directly impacts Accessibility ( $\beta = 0.315$ ,  $p < 0.001$ ) and Vocabulary Development ( $\beta = 0.283$ ,  $p < 0.001$ ). The results of the hypothesis testing are congruent with the findings of Damanik and Katemba’s (2021), and Alm’s (2021), including Roslim et al. (2021). This means that language learners who acquire knowledge from movies can be a determining factor to continue using audiovisual materials (such as movies) and, in turn, constantly enhance their vocabulary.

Furthermore, the Attitude of students toward watching English/Filipino movies with English subtitles exerts a significant relationship towards Accessibility ( $\beta = 0.442$ ,  $p < 0.001$ ) and Vocabulary Development ( $\beta = 0.404$ ,  $p < 0.001$ ). The outcomes of the hypothesis testing align with the discoveries of the study of Bellalem et al. (2018), Wang and Zhang (2012), Ebrahimi and Bazaee (2016). This implies that students generally have a favorable attitude towards watching English/Filipino movies with English subtitles, and this practice of seeking increased access to them appears to positively impact their vocabulary development and language learning.

Moreover, Accessibility directly influences Vocabulary Development ( $\beta = 0.304$ ,  $p < 0.001$ ). The results of the hypothesis testing coincide with the discoveries of Albiladi et al. (2018), Desfitranita (2017), Khoshniyat and Dowlatabadi (2014). For example, the significance of accessibility is highlighted by the fact that without access to movies, language learners might encounter challenges in their language acquisition journey.

Overall, the PLS-SEM analysis, as visibly shown in Table 10, discloses that there is a significant relationship among the variables. This implies that first-year students generally agree that English/Filipino movies with English subtitles contribute positively to their vocabulary development. This further collaborates with the study of Roslim et al. (2021); Albiladi et al. (2018); Xu (2018); Chuen (2002); Katemba and Ning (2018) and lends credence to the notion that movies offer a unique and dynamic educational experience with the capacity to enhance learners’ vocabulary skills in a meaningful and enjoyable manner.

Finally, the pedagogical significance determined from the study’s findings emphasizes the potential of movies with English subtitles to become a valuable learning aid for vocabulary development among students learning English as a second language. Hence, this study suggests that the academe recognizes the utilization of movies with English subtitles as a primary learning tool rather than a supplementary one in developing vocabulary for ESL learners. The significant relationship between knowledge acquisition, movie accessibility, and the learner’s attitude to watching movies to vocabulary development highlights the necessary considerations in utilizing audiovisual resources in language learning contexts. Using these insights as a foundation, the academe can design more effective language learning routines and interventions, encourage learners to foster positive attitudes towards movie-based learning experiences, and ensure

improved accessibility to these audiovisual materials. With recognition, movies with English subtitles could significantly improve language learning experiences by creating more immersive and engaging learning environments and promoting sustained language acquisition among students with diverse learning preferences.

## **6. Conclusions & recommendations**

The present study revealed that freshmen students generally agree that English/Filipino Movies with English subtitles enhance vocabulary.

Firstly, in terms of knowledge acquisition, the collective response of the respondents reveals their ability to acquire vocabulary by watching English/Filipino movies with English subtitles. This aptness can be attributed to the several strategies, methodologies, and techniques employed by the respondents in learning vocabulary through watching movies, such as taking down notes of vocabulary words, recalling vocabulary terms from the subtitles regularly, paying attention to the English subtitles, testing their vocabulary repertoire using online exercises, applying vocabulary terms in phrases, and saying the words aloud when studying vocabulary terms. Hence, it is important to consider the learning agency and active participation of students in enhancing their vocabulary through watching English-subtitled movies because, without these, students are less likely to attain vocabulary development by watching movies, especially if they only watch solely for entertainment. Therefore, it is imperative to benchmark on the aforementioned strategies or explore other techniques for better results and improved vocabulary development through English/Filipino movies with English subtitles.

Secondly, in terms of accessibility, the conjoined response of the respondents indicates that they find it easier and more convenient to access English/Filipino movies with English subtitles on online audio-visual platforms than on offline media like DVDs. This lends credence to the notion that in today's classroom setting or even at home, long gone are the days of using DVD/Blu-ray because of the rise of internet video-on-demand or what is called online audio-visual platforms (SMART TVs) and applications (i.e., Netflix, YouTube, etc.). In today's technologically advanced world, students experience unprecedented convenience in accessing movies, fostering heightened exposure. Additionally, the findings of this study propounded that this accessibility positively influences their attitude toward language learning, offering numerous opportunities to expand their linguistic knowledge and contribute significantly to vocabulary development. Hence, language learners should be given more access to movies of diverse linguistic contexts (not just English and or Filipino), provided that they are accompanied by English subtitles.

Thirdly, the present study revealed that learners generally have a positive attitude toward using movies with subtitles as a valuable tool for learning English vocabulary. These findings emphasize the significance of engaging multimedia-based approaches in language education. It is essential for educators to recognize and leverage these preferences to create more effective language learning environments, catering to the diverse attitudes and preferences of their students.

Finally, based on the conclusions drawn from this study, it is strongly advised that educators, curriculum developers, and teachers recognize the pivotal role of English/Filipino movies with English subtitles in fostering vocabulary development. Consequently, the researchers recommend the seamless integration of English-subtitled movies into vocabulary teaching methodologies.

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