

# GFL



*German as a foreign language*

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This research seeks to account for the experiences of tertiary students in German language learning by using Facebook and YouTube as aids. Several studies have already investigated the role of Facebook and YouTube in informal language learning. Yet, those studies did not explore utilizing Facebook and YouTube in language learning, especially in German, for university students in Asia. Therefore, this project endeavors to fill in this research gap. An online survey was distributed to collect data from university students. The 5E Instructional Model is employed to investigate how YouTube and Facebook aid German language learning and related limitations. Comparing two social networking sites reveals that YouTube is more effective in supporting German language learning.

### **1. Introduction**

Hongkongers live in more than just their mother tongue, Cantonese. Before the hand-over from Great Britain to Mainland China in 1997, native Cantonese speakers attended schools where the medium of instruction was English, and now Mandarin is emphasized. As Hong Kong is an international city, the importance of foreign language learning is also well-received, and Hongkongers are encouraged to learn a third or even fourth language (Leung et al. 2022b).

In Hong Kong, some schools and universities offer various European language courses. German grammar, such as word order, genders, and plurals, is more complicated than in other popular European languages, such as French and Spanish (So: 1996). As learning Cantonese and English is a matter of necessity as Hong Kong people have to use these two languages daily, learning a third language is a matter of choice. Thus, the intrinsic motivation for learning German is worth exploring, especially for people in Asia (Zhang et al. 2015).

Millions of people worldwide have been attracted by online social network sites (SNSs), such as Facebook and YouTube, which have significantly changed people's communication and collaboration habits (Dong et al. 2021). Social networks make sending,

receiving, and sharing information easier and facilitate communication, interaction, and cooperation with different people, companies, and organizations (Fong et al. 2020; Lam et al. 2019). The ease of application, simple accessibility, and individual affordance make social networks significant in education, including aids for learning foreign languages (Ma et al. 2016; Leung et al. 2022b; Zhang et al. 2015). As YouTube and Facebook are large online platforms commonly used by Hongkongers and people worldwide (Cheng et al. 2020; Fong et al. 2020; Lei et al. 2021; Leung et al. 2022b), it is worth exploring how they can motivate people in German language learning, which is a research gap that we aim to fill.

Although Facebook and YouTube were not originally created for educational purposes, increasingly people have started using them for learning collaboration (Dong et al. 2021; Leung et al. 2022b). For instance, teachers may sometimes share their teaching resources on Facebook or YouTube for pre-class activities or flipped classroom approach, and students can share their progress reports and discuss questions, forming a community of learning and practice (Lei et al. 2021). Duffy (2008) observed that a surge of videos regarding English learning was produced, which could largely facilitate global language education without geographical barriers and thus resulted in a comparatively outstanding aid to language learning (Leung et al. 2022b; Zhang et al. 2015). Further, young people have recently changed their habits of reading and media consumption to electronic means (Tse et al. 2022; Wang et al. 2016; Yu et al. 2022).

Due to the aforementioned popularity and the supportive nature of Facebook and YouTube in formal education, these two SNSs have also been applied to an informal language learning environment, such as a community of practice among a group of informal German language learners. The outcomes seem promising and are worth exploring. This study aimed to shed light on learning German via Facebook and YouTube. In response to the growing importance of YouTube and Facebook in educational settings, this study endeavored to elicit the pros and cons of these platforms as aids for German learning. Three research questions guided this research:

RQ1. How do students use Facebook and YouTube to help their German language learning?

RQ2. How do students perceive Facebook and YouTube as effective aids in German language learning?

RQ3. What are the pros and cons of using Facebook and YouTube, respectively, as aids for German language learning?

## **2. Literature Review**

### **2.1 Informal language learning**

According to the Organisation for Economic Cooperation and Development (2005), formal learning refers to learning through educational institutions, training centers, or instructional programs, usually approved by qualifications or certificates, while informal learning refers to learning from daily work-related, family, or leisure events. Formal learning occurs when students learn in a traditional classroom, whereas informal learning occurs outside the traditional classroom, enabling more independent learning. However, Colley et al. (2003) point out that attempts to define formal and informal learning are problematic and ambiguous.

There are two relatively popular ways for people to master the ins and outs of a new language: they can 1) sit in a classroom and work through exercises, and 2) watch the videos on the SNSs posted by some native speakers or teachers and interact with the native speakers through SNSs (Leung et al. 2022b). In other words, learning a new language can be categorized into two approaches: formal and informal language learning. Knowles (1950) pioneered the term “informal language learning” for learning a language outside a structured and organized context. Mahoney (2001) proposes that formal learning is associated with institutions and emphasizes products and results systematically, while informal learning focuses on the learning process which applies to language learning. Informal language learning has been much less investigated since it is hard to observe, quantify, and evaluate (Leung et al. 2022b). The distinction between formal and informal language settings has been contentious in the long-standing debate on foreign language development.

Informal language learning involves daily behaviors, skills, and values learned through interaction (Alm, 2015). As informal language learning is not a structured method of learning administered by teachers or official institutions, it requires students to be motivated, autonomous, organized, and self-disciplined (Leung et al. 2022b). An increasing number of people probably use social media for education, and especially young people may use social media daily. According to the Digital 2022 report (We are Social & Hootsuite 2022), 46.8% of internet users aged 16 to 64 weekly used online

videos as a source of learning, for instance, watching how-to videos, tutorial videos, or educational videos as of the third quarter of 2021. The report also stated that slightly more young adults aged 20 to 29 were active social media users compared with the groups aged younger or older people, and youngsters aged 16 to 24 and young adults aged 25 to 34 spent slightly more time on social media daily (We are Social & Hootsuite 2022). Therefore, the rise of mobile devices and fast mobile networks at a low cost has enabled students to learn on SNSs like Facebook and YouTube anytime and anywhere (Lau et al. 2017, 2020). There are no geographical boundaries for language learning as students can learn in different places (such as at home, a pub, or a cinema) and connect to native speakers on the other side of the globe so long as there are mobile devices (Kukulka-Hulme 2015; Zhang et al. 2015).

Due to their influence and popularity, SNSs have become part of the educational ecosystem of students because they can reinforce formal learning (Jones et al. 2010; Ma et al. 2016). De-Marcos et al. (2014) believe that SNSs can offer a practical eLearning setting. Wong et al. (2017) proposed the SMILLA (Social Media as Language Learning Artifacts) framework to operationalize seamless language learning using social media, facilitating multiple language learning pathways. Further, SNSs can facilitate interactions, communication, and collaboration among learners and teachers (Dong et al. 2021; Lei et al. 2021; Leung et al. 2022b; Yang et al. 2022). However, most of the above studies considered general and non-language learning, with only a few investigating social media as language learning aids (Leung et al. 2022b; Wong et al. 2017).

## **2.2 Facebook as a language learning aid**

As Facebook is, by far, the largest social networking site worldwide, the link between Facebook and language learning is worth investigating (Leung et al. 2022b). Facebook served around 2.91 billion monthly active users in the third quarter of 2021, with a significant increase from the third quarter of 2011 to 2021, as per the Digital 2022 report by We are Social & Hootsuite (2022). Facebook is part of the daily routine of students and is an all-in-one platform to manage their social life, especially in Hong Kong (Chan et al. 2020; Lam et al. 2019; Wong et al. 2023), to connect with friends, communicate with Facebook friends, share thoughts and pictures, plan events, and join groups.

From the perspective of language students, Facebook groups create opportunities to gather like-minded individuals, favoring language students (Leung et al. 2022b; Zhang et al. 2015). Language students can interact with people they do not know without interaction required outside Facebook, and students need not befriend the people outside the group (Schoper & Hill 2017) to protect their privacy and safety on the Internet.

Besides the Facebook groups, Facebook has various features to boost German language learning. Examples include giving the “thumbs-up” to the pages that deal with German to become the first step for students to approach German language learning communities and show their support to the communities, watching live streams in German, reading and writing comments in German, and so on. This study investigates how Facebook features affect German language learning, which few other studies have done.

### **2.3 YouTube as a language learning aid**

YouTube has dominated the online video space for a decade, and the rapid development and globalization of YouTube have opened up new informal language learning opportunities (Leung et al. 2022b). YouTube obtained 14.34 billion visits and 1.7 billion unique users in November 2021, becoming the second most-visited website worldwide as per the ranking of Semrush in the Digital 2022 report (We are Social & Hootsuite, 2022). YouTube provides unlimited educational content opportunities, especially for language learning. Duffy (2008) pointed out YouTube as a website educators use to teach the English language. Dynamic elements are included in the eLearning videos, meaning knowledge transfer improvement, complicated procedures demonstration, and explanation of sophisticated subjects or concepts. In the meantime, users can re-watch the video as often as possible and stop it whenever they need to digest it (Leung et al. 2022b; Zhang et al. 2015).

Several studies have examined the value of YouTube regarding education. Examples include the studies of neurologic (Burton, 2008), nursing (Clifton & Mann, 2011), and cardiopulmonary resuscitation (Murugiah et al. 2011). Although YouTube can be used as a fairly resourceful medium that is easy and beneficial for users to learn the target subjects, the regulation of the content creates significant uncertainties. Meanwhile, the studies mentioned focused mostly on healthcare but hardly on language learning, especially for the German language.

## **2.4 The 5E Instructional Model and research gap**

As a constructivist learning theory, the 5E Instructional Model, formally named the BSCS 5E Instructional Model, was originally developed by Bybee et al. (2006) to enhance science education and later be applied in different disciplines and settings, including informal education. Engagement, exploration, explanation, elaboration, and evaluation are the five learning phases of the 5E Instructional Model (Bybee et al. 2006), which are elaborated as follows.

Various approaches, such as asking questions, can motivate students to focus on the learning tasks and targeted concepts or skills. Then, instructors connect the learning tasks and the targeted concepts or skills with students' previous experiences and uncover possible misconceptions during the engagement phase. Acting as a coach or facilitator for learning, instructors offer guidance when students are asked to self-search and explore the learning topic to develop a concrete learning experience during the exploration phase. Students' explanations on the topics as per the findings of their self-exploration are encouraged, and a formal introduction and explanation of the concepts or skills related to the topic, for instance, terminology, are given after the students' explanation during the explanation phase. Students' applications of the learned concepts or skills in new contexts with cooperative learning are encouraged as extended learning and knowledge application during the elaboration phase. Finally, to ensure the students' understanding of the concepts or skills and learning outcomes, they should be assessed via formative and/or summative assessments. Feedback regarding students' understanding or explanation of the concepts or skills is essential for them to learn.

The 5E Instructional Model has been usually applied in the classroom context as a learning theory in different research designs in many studies, such as Hew et al. (2016) and Lai & Hew (2019). The model has recently been applied to evaluate the effectiveness of learning in the library and other informal contexts (Lam et al. 2023; Jiang et al. 2023; Tsang & Chiu 2022; Tse et al. 2022; Xie et al. 2023) to help understand and evaluate the effectiveness of supportive learning of social media throughout the student's whole learning process. Applying other learning models could not adequately achieve the research objective of this study. In addition, few studies have adapted the model as an evaluation tool for students' learning experiences, especially for German language learning. Therefore, in view of the research gaps mentioned above, this study attempts to fill the gaps by employing the 5E Instructional Model as an evaluation tool

of students' learning process in German language via Facebook and YouTube. The aim of the study is to discover how Facebook and YouTube can be a learning support tool for students of German in informal learning situations.

### **3. Methodology**

This study aimed to collect responses from students learning German at a major comprehensive university in Hong Kong which would provide mixed views on using SNSs in learning German. The survey collected responses from 36 students learning German at beginner (A1-A2), intermediate (B1-B2), and advanced (C1-C2) levels. They were in their first, second, third, or fourth undergraduate years and studied German as a major, minor, free elective, or non-degree language course. Students from all faculties can enroll in either credit-bearing or non-credit-bearing German courses.

The first part of the survey comprises seven questions in fixed nominal scales to collect basic demographic information, including gender, field of study, level of education, German as a study option, German language learning experience, German proficiency level, and the purpose of studying German. Table 1 shows the distribution of gender and education levels, Table 2 shows the study options of the German program by faculty, Figure 1 shows German proficiency levels and learning duration, and Table 3 shows the purposes of learning German as a foreign language in the next section.

The second part used fixed nominal scales and Likert scales to collect information on why the participants used Facebook to learn German, responding to RQ1 (usage of Facebook and YouTube as German learning aids), RQ2 (perceived effectiveness of Facebook and YouTube as German learning aids), and RQ3 (perceived pros and cons of using Facebook and YouTube respectively as German learning aids). Examples of nominal scales comprise the previous usage of Facebook for informal German language learning (RQ1) and types of usage of Facebook (RQ1). Examples regarding Likert scales include how Facebook helps German language learning evaluated by the 5E Instructional Model (RQ2), how Facebook helps improve their German proficiency (RQ2), why participants use Facebook for German learning (RQ3), and the limitations of using Facebook as German language learning aids (RQ3).

The third part was designed in the same way as the second part but changed the subject to YouTube, responding to RQ1, RQ2, and RQ3 in the ways mentioned in the Facebook section. The fourth part adopted the fixed nominal scales and bipolar Likert scales to



compare the efficiency of both Facebook and YouTube. Responses on the usefulness of Facebook and YouTube as learning aids for the German language (Table 9) were relevant to RQ2. Data were analyzed using Microsoft Excel.

## 4. Findings and Analysis

### 4.1 Demographics

A total of thirty-six questionnaires were collected in this research. Table 1 illustrates the distribution of gender and education levels of the respondents. Thirty-six respondents were learning German, with more than half female learners (69%). They were mostly undergraduates in Year 2 (42%), followed by undergraduates in Year 4 or above (22%).

Table 1. Distribution of gender and education levels

Education level	Gender					
	Female		Male		Total	
Taught postgraduate	2	6%	0	0%	2	6%
Undergraduate - Year 1	6	17%	0	0%	6	17%
Undergraduate - Year 2	11	31%	4	11%	15	42%
Undergraduate - Year 3	2	6%	3	8%	5	14%
Undergraduate - Year 4 or above	4	11%	4	11%	8	22%
<b>Total</b>	<b>25</b>	<b>69%</b>	<b>11</b>	<b>31%</b>	<b>36</b>	<b>100%</b>

Since the university's School of Modern Languages and Arts offers the German program, most respondents came from the Faculty of Arts (39%) (See Table 2). In addition, all nine respondents who majored in German were Arts students. Surprisingly, five respondents (14%) were from the Faculty of Engineering, constituting the second-largest group of respondents, even though four only took German as an elective and one as a minor.

Table 2. Study options of the German program by faculty

Faculty	Study Options of the German program				Total
	Free elective	Major	Minor	Non-degree language course	
Architecture				1	1 (3%)
Art	1	9	4		14 (39%)
Business & economics	2		1	1	4 (11%)
Education	1			2	3 (8%)
Engineering			1	4	5 (14%)
Law				1	1 (3%)
Medicine	1				1 (3%)
Science	1		2		3 (8%)
Social sciences	2		2		4 (11%)
<b>Total</b>	<b>8 (22%)</b>	<b>9 (25%)</b>	<b>10 (28%)</b>	<b>9 (25%)</b>	<b>36 (100%)</b>

Figure 1 shows the respondents' learning history of the German language, which was rather short. Most respondents (23) had only learned German for zero to one year, while only two respondents had learned German for more than four years. German learning has six levels: A1 for beginners, A2 for elementary, B1 for intermediate, B2 for upper intermediate, C1 for advanced, and C2 for mastery. Most of them (30) were beginners in German language learning at the 'A1 to A2 level.' Unfortunately, this study only recruited six respondents at the 'B1 to B2 level' and none at the 'C1 to C2 level.'

Figure 1. German proficiency levels and learning duration

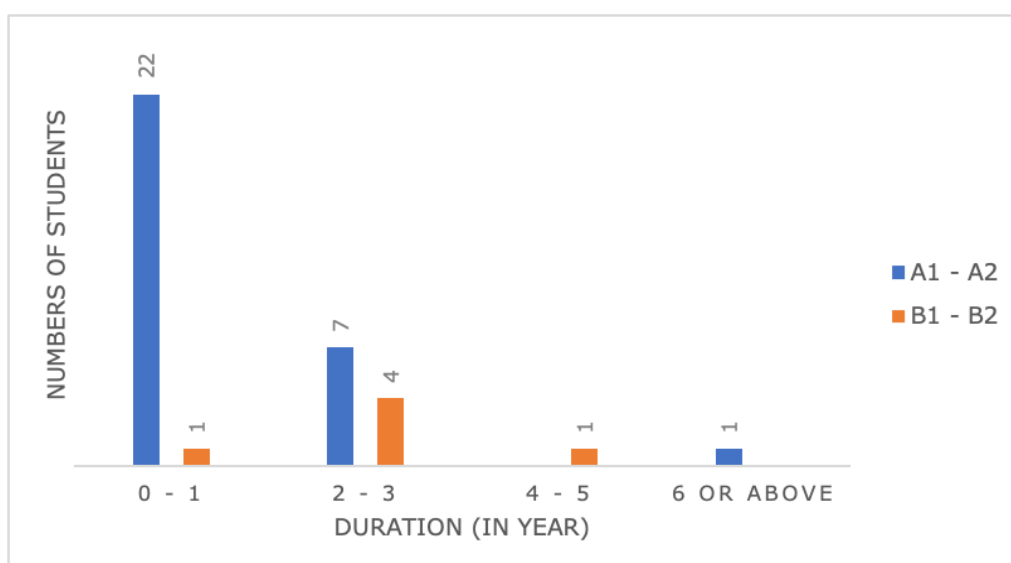


Table 3 demonstrates the purposes of students learning German as a foreign language. Respondents were allowed to choose more than one answer. Among them, 81 percent of the respondents learned German for interest and 58 percent for study.

Table 3. Purposes of learning German as a foreign language

<b>Purpose</b>	<b>Number of respondents (Percentage)*</b>
For interest	29 (81%)
For study	21 (58%)
For work	11 (31%)
For leisure	7 (19%)

\*Note: n = 36, and multiple choices allowed.

#### **4.2 Usage of Facebook and YouTube as German learning aids (RQ1)**

Table 4 illustrates the respondents' usage of Facebook and YouTube, respectively, as aids in their German language learning outside classrooms. More respondents used YouTube (56%) more than Facebook (31%) for informal German language learning. More than half of them (69%) did not adopt Facebook as a supplementary tool in German language learning.

Table 4. Facebook and YouTube usage for informal German language learning

<b>Usage</b>	<b>Use Facebook</b>	<b>Use YouTube</b>
<b>Yes</b>	11 (31%)	20 (56%)
<b>No</b>	25 (69%)	16(44%)
<b>Total</b>	<b>36 (100%)</b>	

Respondents who used Facebook for informal German language learning (n =11) were asked about their usage of Facebook for this purpose (see Table 5). They were allowed to choose more than one option. All respondents used Facebook to 'like pages dealing with German' (100%), followed by 'check out pages for German language learners' (64%) and 'join German language learning groups' (45%). Very few respondents made use of Facebook to practice reading or writing German, for instance, 'reading (and writing) comments' (9%) and 'studying status updates and posts by their new friends, and writing their own' (9%).

Table 5. Facebook utilization in German language learning

<b>Types of Facebook usage for German language learning</b>	<b>Responses in percentages*</b>
“Like” pages that deal with German	100%
Check out pages for German language learners	64%
Join German language learning groups	45%
Watch viral videos from people who speak German	27%
Watch live streams in German	18%
Read (and write) comments	9%
Study status updates and posts by your newfound friends, and write your own	9%

\*Note: n = 11, and multiple choice allowed.

Table 6 shows respondents’ usage of YouTube for informal German language learning. They were allowed to make all possible choices on their usage approaches. Most respondents ‘watched online German language courses’ (75%) and ‘subscribed to the channels dealing with German’ (70%). Like Facebook, most of them did not use YouTube in writing or developing their own content in the German language, indicated by low activities of ‘commenting on videos in German’ (10%) and ‘uploading their practice videos’ (5%).

Table 6. YouTube utilization for German language learning

<b>Types of YouTube usage for German language learning</b>	<b>Responses in percentage*</b>
Watch online German language courses	75%
Subscribe to the channels that deal with German	70%
Watch TV shows and movies in German	55%
Listen for songs in German	45%
Find videos with transcripts to read as you listen	30%
Follow language Vloggers	25%
Comment on videos in German	10%
Upload your own practice videos	5%

\*Note: n = 20, and multiple choice allowed.

### 4.3 Perceived effectiveness of Facebook and YouTube as German learning aids (RQ2)

This study used the 5E Instructional Model (Bybee et al. 2006) to analyze how Facebook and YouTube can help students with German language learning during the five learning phases: engagement, exploration, explanation, elaboration, and evaluation. Table 7 shows the students' perceived effectiveness of Facebook and YouTube as learning support tools for informal German language learning, respectively, per the five phases of the 5E Instructional Model. Respondents who used Facebook (n = 11) and YouTube (N = 20) were required to respond to the statements in Table 7.

Both Facebook and YouTube generally had a slightly similar inclination of agreement on their effectiveness as learning support tools for informal German language learning, except in the exploration and explanation phases. Respondents agreed that YouTube could offer learning assistance in the exploration phase, with all means of the statements above 4, while Facebook only received an inclination to the agreement in the exploration phase (overall mean = 3.67), with a mean of 'exploring my questions on the German language' as 3.36. Similarly, respondents tended to agree on YouTube (overall mean = 3.83) as an effective learning aid in the explanation phase than on Facebook. It was evidenced by 'connecting them to people who answer their questions in the German language' (mean = 3.18) and 'facilitating German language learning by using search functions' (mean = 3.18) for Facebook. Notably, respondents were more likely to disagree on Facebook (mean = 2.91) 'helping them revise the German language for exam purposes' than YouTube (mean = 3.55).

Table 7. Perceived effectiveness of Facebook and YouTube as German language learning aids

Statement	Facebook (n=11)	YouTube (n=20)
<b>Engagement Phase</b>		
Sets German learning within a meaningful context	3.82	3.95
Arouses my attention to German language learning	3.91	4.00
Provides me with an interesting environment to learn German, such as offering some learning videos	4.09	4.20
Motivates me to improve my German language proficiency	3.91	4.15
<b>Overall:</b>	<b>3.93</b>	<b>4.08</b>

<b>Exploration Phase</b>		
Aid me in knowing what I should learn about the German language (e.g., searching related channels on YouTube)	3.64	4.15
Beneficial to connect new German knowledge to my German knowledge	3.91	4.15
Explore my questions on the German language	3.36	4.00
Helps me know more about the German language in general	3.91	4.30
A good platform to improve my German proficiency	3.55	4.15
<b>Overall:</b>	<b>3.67</b>	<b>4.15</b>
<b>Explanation Phase</b>		
Provides learning guidance on the German language	3.45	3.85
Provides content that answers my questions on the German language	3.73	3.75
Connects me to people who answer my questions in the German language	3.18	3.80
Facilitates German language learning by using search functions	3.18	3.90
<b>Overall:</b>	<b>3.39</b>	<b>3.83</b>
<b>Elaboration Phase</b>		
Presents new German language knowledge to me in an effective manner	3.91	4.15
Reconstructs and extends explanations and understanding using integrating different ways, such as videos, games etc.	3.73	3.90
Provides a pleasant environment to interact with other German learners and teachers	3.55	3.70
<b>Overall:</b>	<b>3.73</b>	<b>3.92</b>
<b>Evaluation Phase</b>		
Helps me to practice and intensify my understanding of the German language	3.64	3.85
Provides an opportunity to review and reflect on my own learning and gain new understanding	3.36	3.85
Helps me do the assignments and projects for my German studies	3.27	3.45
Helps me revise the German language for exam purposes	2.91	3.55
<b>Overall:</b>	<b>3.30</b>	<b>3.68</b>

Notes:

(1) 5-point Likert scale: 1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; and 5 – strongly agree.

(2) All numeric data shown are means of the responses.

Table 8 illustrates the improvement in German proficiency after using Facebook and YouTube, respectively. Respondents who used Facebook (n=11) and YouTube (n=20) perceived that Facebook and YouTube could improve their German language proficiency, with a tendency towards somewhat better in all four aspects. Notably, respondents thought YouTube was very useful in helping them improve their listening ability in German (mean = 4.15).

Table 8. Perceived German language improvement by using Facebook and YouTube as learning aids

Areas of improvement	Facebook (n= 11)	YouTube (n=20)
Reading comprehension	3.91	3.80
Writing	3.73	3.45
Listening	3.82	4.15
Speaking	3.45	3.70

Notes:

- (1) 5-point Likert scale: 1 – Much worse; 2 – somewhat worse; 3 – stay the same; 4 – somewhat better; and 5 – much better.
- (2) All numeric data shown are means of the responses.

Table 9 illustrates the usefulness of Facebook and YouTube from the respondents' perspectives. On the whole, respondents thought that YouTube is more likely to help learn the German language (56%), while Facebook is less likely to be perceived as helpful in learning the German language (3%).

Table 9. The usefulness of Facebook and YouTube as learning aids for the German language

SNS	Number of respondents (Percentage)*
YouTube	20 (56%)
Both are useful	10 (28%)
Neither is useful	5 (14%)
Facebook	1 (3%)

\*Note: n = 36.

#### 4.4 Perceived pros and cons of using Facebook and YouTube respectively as German learning aids (RQ3)

Table 10 shows why students use Facebook and YouTube as supplemental tools for informal German language learning, respectively. Respondents who used Facebook (N = 11) and YouTube (N = 20) as German language learning aids were asked to state their

levels of agreement on the reasons for usage. Both Facebook and YouTube received similar agreements on most of the reasons listed in Table 5, except ‘sufficient German-language materials.’ Respondents slightly agreed on the possible higher adequacy of German-language materials on YouTube (mean = 4.20) than on Facebook (mean = 3.45).

Table 10. Reasons for using Facebook versus YouTube as a learning aid for learning German

<b>Reason for using as aids for German language learning</b>	<b>Facebook (n = 11)</b>	<b>YouTube (n = 20)</b>
Convenient	4.36	4.60
Free of charge	4.64	4.65
Ease to use	4.27	4.65
Flexible in time and place	4.36	4.65
Sufficient German language materials	3.45	4.20
More chances to interact with other German learners	3.27	3.25
More chances to interact with native German speakers	3.09	3.20
Improving the German proficiency level	3.82	4.00

Notes:

(1) 5-point Likert scale: 1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; and 5 – strongly agree.

(2) All numeric data shown are means of the responses.

Table 11 expresses the limitations of Facebook and YouTube as learning supplement tools for informal German language learning from the respondents’ perspectives. Respondents agreed that YouTube ‘lacks face-to-face interaction’ (mean = 4.00). As for Facebook, respondents had a higher tendency to agree toward ‘lack of face-to-face interaction’ (mean = 3.73), ‘lack of guidance for German learning’ (mean = 3.73), ‘distraction from other Facebook activities’ (mean = 3.82), and ‘lack of structural learning plan’ (mean = 3.73).



Table 11. Limitations of Facebook and YouTube as German language learning aids

	<b>Facebook (n = 11)</b>	<b>YouTube (n = 20)</b>
Lack of credibility of the posted educational materials	3.27	3.20
Lack of face-to-face interaction	3.73	4.00
Lack of guidance for German learning (no instructor)	3.73	3.45
Distraction from other Facebook/YouTube activities	3.82	3.60
Lack of structural learning plan	3.73	3.55

Notes:

(1) 5-point Likert scale: 1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; and 5 – strongly agree.

(2) All numeric data shown are means of the responses.

## 5. Discussion

### 5.1 Usage of Facebook and YouTube as German learning aids (RQ1)

Exposure to diverse linguistic environments improves the ability to imagine oneself in the situation or circumstances of another person and to understand or empathize with their perspectives, opinions, or points of view (Lo et al. 2016). Exposure to multiple languages also provides experience in seeing the world from another perspective. In addition to broadening the horizons, people can trace who speaks which language, who understands which content, and who can communicate with whom (Fan et al. 2015). As SNSs have prevailed, students can easily converse with other German learners, German teachers, or native German speakers (Leung et al. 2022b). However, the findings show that only 11 respondents used Facebook and 20 used YouTube as learning aids for German, and five students responded that neither Facebook nor YouTube is helping them in German language learning. This indicates that students might not proactively use Facebook and YouTube to learn German, meaning they might lack the motivation to learn German through Facebook and YouTube. This result is remarkably different from the findings by Leung et al. (2022b) and Zhang et al. (2015) that Hong Kong people and mainland Chinese might enthusiastically use SNSs to support their language learning of Japanese.

Results indicated that respondents used Facebook and YouTube as German learning aids due to convenience, the fact that it is free, ease of use, and flexibility of use at any time and place. Particularly, they could use YouTube because of their perceived im-

provement in German proficiency levels and the adequacy of German-language learning materials. The findings also indicated that respondents probably used Facebook for ‘liking’ the German pages, searching for German language learners, and joining German language learning groups, but seldom for watching videos (listening), reading, or writing. Similarly, respondents mainly used YouTube to listen to German, yet rarely for reading, writing, or speaking.

## **5.2 Perceived effectiveness of Facebook and YouTube as German learning aids (RQ2)**

For many years, German has been taught to students in a traditional classroom setting. Even though students were willing to learn, they might lose interest and be discouraged once they learned above or below the average learning speed. Thanks to the rise of social media, learning German is no longer limited to sitting in the classroom. The findings indicate that people could learn at their own pace through Facebook and YouTube, and the outcomes could have unlimited possibilities. This finding aligns with many other positive results of using SNSs as learning aids (Chung et al. 2020; Lei et al. 2021; Leung et al. 2022b; Zhang et al. 2015).

This study has evaluated the effectiveness of Facebook and YouTube as learning aids during the learning process from students’ perspectives by employing the 5E Instructional Model. The findings showed that respondents perceived YouTube as a slightly more effective learning support aid than Facebook in all five learning phases of the model.

Besides the 5E Instructional Model, respondents were asked to rate their German proficiency in four dimensions, reading comprehension, writing, listening, and speaking after using Facebook and YouTube. The findings indicate that respondents tend to perceive Facebook and YouTube as learning aids more likely to improve their language proficiency, except for speaking proficiency for Facebook and writing proficiency for YouTube. Particularly, respondents may perceive YouTube and Facebook assist them somewhat in improving their listening and reading comprehension proficiency, respectively. To sum up, YouTube could be more useful and helpful as a learning aid for students to learn German than Facebook from the respondents’ perspectives.

### **5.3 Perceived pros and cons of using Facebook and YouTube respectively as German learning aids (RQ3)**

Facebook and YouTube are the most popular social networking sites in the world. As these two SNSs are not particularly designed for language learning, they have strengths and limitations as German language learning aids.

Table 10 illustrates that participants choose Facebook and YouTube for learning the German language for variable reasons. Respondents strongly agreed on the benefits of using both Facebook and YouTube as convenience, the fact that it is free, ease of use, and time and place flexibility. Meanwhile, they agreed only YouTube had adequate German-language materials for learning.

Nonetheless, limitations occurred when respondents used both SNSs as German language learning aids (see Table 11). Respondents tended to agree that distraction from other Facebook activities was the primary concern, followed by lack of guidance for German learning, lack of structural learning plan, and lack of face-to-face interaction. Respondents agreed that the primary concern was a lack of face-to-face interaction with YouTube. Meanwhile, respondents also tended to agree with distraction from other YouTube content. However, the least perceived problem was content creditability, which differed from other studies (Au et al. 2021; Ho et al. 2022; Leung et al. 2022b).

In short, respondents perceived that both Facebook and YouTube could not provide adequate aids for face-to-face interaction and distraction from other SNS activities. Distraction has been found as a major problem in using SNSs as learning aids (Lei et al. 2021; Leung et al. 2022b), and addiction to SNS use has also been found to be a problem among youngsters (Wong et al. 2023). The limitations above could raise learners' concerns when learning through SNSs. This might suggest that face-to-face interaction less often occurs in informal language learning through SNSs but perhaps more often occurs in traditional classroom settings.

## **6. Conclusion**

The recent popularity of SNSs has motivated students to use them as German language learning aids and for adults' self-learning, and SNSs have enormous potential to help informal language learning. However, few studies have assessed how Facebook and YouTube can help students with German language learning. This research focuses on understanding students' experiences using Facebook and YouTube as German learning

aids and exploring the pros and cons of using the two SNSs. Respondents found SNSs convenient, easy to use, free of charge, and flexible as German language learning aids. Yet, the lack of face-to-face interaction imposes restrictions when using SNSs.

The 5E Instructional Model was employed to evaluate the effectiveness of Facebook and YouTube as learning aids for informal German language learning. Results indicated that YouTube could be a more effective learning support tool for learning German than Facebook from students' perspectives. Students also found their German proficiency improved, especially reading comprehension and listening, after using Facebook and YouTube. Findings show promise for Facebook and YouTube as German language learning aids.

However, owing to the small sample size, it is suggested that future studies should increase the sample size and cover learners in different countries. Researchers can also explore the motivations and limitations of amateur German language learners, who may be learning German independently or at language schools. Researchers can also explore using SNSs as aids for learning other languages, resulting in a bigger picture of using SNSs in learning a foreign language. Further, with recent lockdowns due to the COVID-19 pandemic, the role of online learning with the aid of virtual learning environments and SNSs should be further explored (Huang et al. 2021, 2022, 2023; Leung et al. 2022a; Yu et al. 2023).

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### **Keywords**

Facebook; YouTube; German Learning; Quantitative Study; Third Language; Foreign Language