| Volume 10 | Number 01 | May 2025 | E-ISSN: 2503-4405 | P-ISSN: 2580-3441 |

YouTube as a Tool for English Language Learning: A Meta-Analysis in EFL Contexts

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Abstract

The purpose of this study was to investigate the use of YouTube as a tool for English language learning in secondary and university settings within English as a Foreign Language (EFL) contexts. The study included 81 empirical research journal papers published between 2015 and February 2024. The researchers evaluated article journals that met the criteria for inclusion in the review to gain insights into the utilization of YouTube in English Language Learning (ELL) in both university and secondary school settings, with a particular focus on its use in the EFL context. This study employed a simple statistical and analytical framework to analyze the existing data. It is revealed that the most enhanced skill using YouTube was speaking. The initial number of articles obtained at the beginning of the process was 1054 articles. Then, screening was conducted according to the inclusion criteria and based on PRISMA, resulting in a final total of 81 articles. Calculations were performed by computing the effect size of each article individually and then averaging all of them using Microsoft Excel. The mean effect size from 81 articles is 1.24, indicating a very high impact on the use of YouTube as a tool for English language learning. The results also showed that the utilization of YouTube was categorized into platforms for producing content, flipped classroom, discussion platform, and media platform. Pedagogical and theoretical implications were suggested.

Keywords: *Effect Sizes; English as Foreign Language; Secondary; Skills ; University; YouTube*

INTRODUCTION

Information and communication technology (ICT) plays a critical role in education in this digital age (Abdulrahaman et al., 2020). ICT has become an important element of modern education, affecting traditional learning methods and making knowledge easier to access for students worldwide. With the rise of digital platforms, both teachers and students may now connect with interactive and multimedia-rich content, which improves understanding as well as retention. As a result, in order to keep up with this trend, teachers employed internet resources.

In the era of globalization, information and communication technology has rapidly progressed, resulting in the development of various learning media. YouTube became a popular platform for individuals of all ages and from different parts of the world. It was considered a substitute for traditional TV and had the potential to be utilized for learning purposes (Khaliq & Nasution, 2019). According to Albahlal (2019), “Teachers who uploaded educational content on YouTube were able to reach out to a wider

audience beyond their own students, including other educators and learners from various schools." YouTube provided an opportunity for teachers to create engaging and interactive learning experiences. Videos on YouTube also supplemented face-to-face classroom learning. With the increasing integration of technology in all aspects of our lives, including education, the teaching and learning process became a crucial factor in educational success (Van et al., 2021).

Notably, English teachers in the context of English language learning were able to readily access free websites to acquire legitimate materials for teaching English skills. Learning English became less complex and challenging than it had been in the past. In previous years, learners typically learned English by enrolling in traditional English courses or lessons. However, as technology advanced, learning English became more practical and convenient through the use of easily accessible online learning tools. The digital revolution has reshaped education, with ICT playing a key role in modern learning, particularly in English Language Learning (ELL). YouTube serves as a valuable tool, offering engaging multimedia content that enhances language acquisition. Understanding ICT's broader impact and YouTube's specific benefits helps clarify its influence on ELL. Among these platforms, YouTube stands out as an impressive educational tool, with an extensive collection of educational videos, tutorials, and lectures on a variety of academic fields. The ability of this tool to deliver difficult concepts visually and audibly makes learning more engaging and effective, accommodating a variety of learning styles and requirements.

Among the many online learning tools available, YouTube is a popular technology that can be utilized as a learning tool. As the most widely used online video-sharing platform in the world, YouTube was a significant contributor to the highly sophisticated information and communication technology that dominated various aspects of our lives, including education (Nofrika, 2019). Given the popularity of YouTube among young people, it became a promising medium for language learning. Mahrus and Kiptiyah (2024) state that "through short videos, learners were able to easily share and explain learning material that could be easily accessed by users" (p. 69). Moreover, learners were able to use live video sessions to engage with their followers and facilitate learning. Nonetheless, it is important to note that, unlike Zoom or Google Meet, YouTube did not provide the opportunity for face-to-face interaction with other users and followers. According to Pratama, Arifin, and Widianingsih (2020), "YouTube might have served as an efficient tool for language learning" (p. 124). Using YouTube videos as supplemental materials in language courses improved students' listening and speaking skills. YouTube provided learners with real language input, and enhanced motivation and engagement with the learning material (Almurashi, 2016, p. 33).

YouTube provides valuable educational content for learning English, particularly in improving listening and speaking skills. Utilizing YouTube as a complementary language learning tool can be an effective technique for improving English language learners' pronunciation by providing exposure to a variety of accents, intonation patterns, and conversational speech. However, its effectiveness is determined by a variety of criteria, including the quality and authenticity of the video content, learners' critical viewing skills, and the incorporation of YouTube resources within a well-structured language learning curriculum.

Qomariyah, Permana, and Hidayatullah (2021) found that students who used YouTube learning videos showed significant improvement in their listening comprehension performance compared to those who relied solely on audio recordings.

The presence of visual and auditory elements in YouTube videos provided students with a richer learning experience, allowing them to understand materials more effectively. The statistical results further confirmed a significant difference in listening comprehension scores between the experimental and control groups, emphasizing YouTube's role as a beneficial learning resource. Similarly, the study conducted by Mutiarani and Rusiana (2021) indicated that students who learned speaking skills through the *English Speeches* YouTube channel showed notable progress. The post-test scores (79) were significantly higher than the pre-test scores (65), demonstrating that exposure to authentic English speeches improved students' speaking abilities. This suggests that using YouTube channels featuring real-life speech enhances learners' pronunciation, fluency, and confidence in speaking English.

According to Alkathiri (2019), "learners who watched and then reproduced English pronunciation videos from YouTube improved their pronunciation accuracy." (p. 26). This platform had the potential to make language learning more enjoyable and engaging by providing learners with access to content that was personally relevant and exciting to them. As a result, the desire and willingness to dedicate time and effort to improving learners' language skills grew. Danial (2022) stated that YouTube was a useful tool for learning a language, particularly for developing intercultural competence, improving listening skills, and providing visual aids that helped in language learning. YouTube could be a useful tool for developing listening skills in English language learners. YouTube helped students get better inspired and involved with their studies. YouTube's usability, adaptability, and interactive functionality made it a wonderful resource for language learners looking to develop their skills in an enjoyable and interesting manner (Qomariyah, Permana, & Hidayatullah, 2021).

YouTube provides valuable educational content for learning English, particularly in improving listening and speaking skills. However, its potential to support other language areas, such as reading, writing, and grammar, remains underexplored. Most research focuses on oral proficiency, overlooking the platform's broader educational benefits. Features like subtitles, captions, and instructional videos on writing and grammar could enhance language learning beyond speaking and listening. This study highlights the need for further research on integrating YouTube into a comprehensive language curriculum, ensuring a well-rounded approach to language acquisition.

While YouTube is a valuable tool for English Language Learning (ELL) in EFL settings, comprehensive studies on its overall effectiveness are lacking. Most research focuses on case studies rather than broad, data-driven analyses. While its impact on listening and speaking is recognized, its role in reading, writing, and grammar remains underexplored. A meta-analysis is needed to synthesize findings, identify trends, and assess YouTube's effectiveness across different educational contexts. This research would provide valuable insights for educators and institutions to enhance language learning experiences for EFL students.

Although YouTube is widely recognized as a valuable tool for English Language Learning (ELL), particularly in EFL settings at secondary schools and universities, there is still a lack of comprehensive studies evaluating its overall effectiveness across various learning environments. Most existing research focuses on individual case studies rather than offering a broad, data-driven analysis of YouTube's impact on language learning. For those learning English as a foreign language, YouTube was a useful resource to enhance speaking and listening comprehension skills (Syaripuddin& Rasyid, 2023).In the time its role in improving listening and speaking skills has been examined, its

influence on other essential language areas—such as reading, writing, and grammar—remains insufficiently explored. To bridge this gap, further research is needed, particularly through a meta-analysis approach, to compile findings from multiple studies and provide a more comprehensive understanding of YouTube's role in EFL education. A meta-analysis can help identify trends, assess the consistency of YouTube's effectiveness, and determine key factors influencing its success across different educational contexts. Addressing this gap would provide educators and institutions with valuable insights and practical recommendations to enhance language learning experiences for EFL students.

YouTube was known to be a useful tool for learning languages, but more study needed to be done to fully understand how it worked and what benefits it might offer in schools where English was taught as a foreign language. This was one area where a meta-analysis study method was very useful. A meta-analysis was a way for researchers to look at the results of many studies on YouTube's role as a language learning tool, especially in an EFL context within secondary and university levels. Meta-analysis combined different types of empirical data, which allowed the researcher to get a full picture of how well YouTube could be used as a language learning tool. Additionally, a meta-analysis helped to measure results, showing how big and consistent YouTube's effect on language learning is across various learner groups and teaching settings.

This method could make connections that might not have been clear from individual studies. By looking at these factors, the researchers could make useful suggestions for how to best use YouTube in language learning programs, which would eventually improve the learning experiences and outcomes for EFL students in high schools and colleges. A meta-analysis research method was a good way to fill in this gap because it brought together different types of existing studies, measured outcomes, and figured out the main factors that affected how well high school and college students improved their language skills with YouTube. In this study, the researchers were curious about the use of YouTube as a tool for English language learning in secondary and university settings within EFL contexts. In short, the research questions are:1) Which English language learning skill is most commonly enhanced through the use of YouTube? 2)What is the mean effect size of the selected articles? 3)How is YouTube utilized in EFL learning based on the selected articles? Therefore, the novelty of this study is that it can subsequently explain that YouTube is largely used as a media platform, particularly for speaking and listening skills, for a variety of reasons.

METHOD

This research conducted a meta-analysis of existing literature on using YouTube as a tool for English language learning. Meta-analysis, as a methodology, provides a comprehensive understanding of a research problem by summarizing previous studies under specific criteria. The primary sources were journal articles. The method combines the results of different studies to better understand fundamental connections in the community, rather than relying on individual study conclusions. A library-based approach was used for data collection. (Rahmati, Izadpanah, & Shahnavaz: 2021). The researchers utilized "Publish or Perish 8," a software tool connecting to databases like Google Scholar, Crossref, Scopus, and Semantic Scholar, to gather data for their study. This platform facilitated access to articles and research materials relevant to the study topic of using YouTube as a tool in English Language Learning. To ensure reliability and relevance, this study follows specific inclusion and exclusion criteria. It includes empirical, peer-reviewed journal articles published between 2015 and February 2024,

focusing on YouTube's impact on English language learning (reading, listening, writing, and speaking) in EFL secondary schools and universities. Only quantitative studies are considered for objective analysis. Excluded are non-empirical research, non-journal sources (e.g., theses, dissertations), studies outside the specified timeframe, and those unrelated to YouTube's role in language learning. These criteria ensure methodological consistency and meaningful insights into YouTube's educational impact.

Table 1. Initial Search String

Topic	Search Items
Youtubeutilization as a tool for English language learning	"YouTube utilizations" or "YouTube in English language learning" or "YouTube for developing English skills" or "YouTube for EFL" "YouTube in English education" "YouTube in English language classroom"
AND	
Multimedia tools in teaching and learning	"The use of multimedia tools" or "media in English learning" or "the effect of multimedia for EFL" or "tools in English learning" "media for English students to learn"
AND	
English language learning	"English skills" or "speaking skills" or "reading skills" or "writing skills" or listening skills" or "vocabulary" or " grammar"

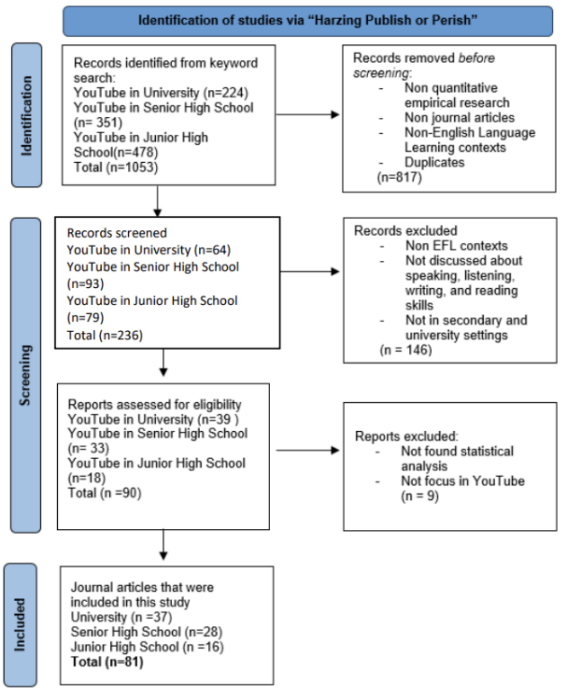
After obtaining the initial results, the inclusion criteria were applied to filter out articles that did not meet the study's research objectives. Specifically, the articles were limited to those focused on discussing the usefulness of YouTube in English Language Learning and its ability to improve specific English language learning skills or components using YouTube as a tool. Prior to the start of the review, an inclusion and exclusion criteria selection process was conducted to ensure the focus of the research (Page et al., 2021).

Table 2. Inclusion and Exclusion Criteria

Inclusion	Exclusion
1) Publication year is between 2015-February 2024.	1) Published before 2015 and after February 2024
2) It is empirical-based research (type of research that relies on observed and measured phenomena)	2) Non empirical research
3) The data used is quantitative research only	3) The data is not quantitative research
4) Journal articles	4) Non-journal article sources (e.g., theses)
5) The data used must have results on the influence on English language learning skills such as reading, listening, writing, and speaking.	5) The data that do not present results regarding the impact of YouTube on English language learning skills, specifically reading, listening, writing, and speaking,
6) The data used is discussed about the use of YouTube in English language learning process	6) The data that does not discussed on the use of YouTube in English language learning.
7) Settings in secondary schools and universities within EFL contexts.	7) Settings unrelated to secondary schools and universities within EFL contexts

By focusing only on peer-reviewed journal articles, this study aims to maintain reliable and consistent data. Although theses and dissertations can be useful, excluding them ensures the quality and rigor of the research. Although theses and dissertations can provide valuable information, they were excluded from this study for methodological reasons. Journal articles go through a strict peer-review process, which ensures the accuracy and quality of the data. While many theses are high quality, they do not always receive the same level of review. addition, journal articles follow consistent formats for presenting research, making it easier to analyze data in a meta-analysis. Theses and dissertations, however, often vary in structure and accessibility, which can make it harder to include them consistently.

The picture below shows the article screening process conducted by the researcher using the Publish or Perish application. The screening process involved filtering articles that met the established criteria. Data analysis involves systematically searching for and organizing data into categories, breaking it down into manageable units, selecting key elements for study, and drawing conclusions that are clear and comprehensible, as outlined by Creswell (2017).



Source: Page et al. (2021)

Picture 1. Screening Article Process Illustrated in PRISMA Diagram

A well-conducted meta-analysis should clearly explain the statistical methods used to combine data and examine differences between studies. Sharing details—like how effect sizes are calculated—helps make the research more transparent and trustworthy. It also makes it easier for other researchers to repeat the study or build on its results in the future. The researcher coded each language learning skill and educational stage to study their popularity among English language learners using YouTube. Skills were coded as Speaking (A), Listening (B), Writing (C), and Reading (D), while educational stages were coded as University (U), Junior High School (J), and Senior High School (S). This systematic classification ensured accurate analysis of preferences

and trends in YouTube-based language learning. The articles were then listed and coded accordingly.

Example:

AU1= Article Speaking University number 1, BU2= Article Listening University number 2

The researchers analyzed 81 articles to identify how frequently each language learning skill (listening, speaking, reading, writing) was discussed in the context of using YouTube for English study. They interpreted and synthesized the findings to assess YouTube's benefits and limitations as a learning tool. Additionally, the researcher calculated the effect sizes for 81 articles and categorized them as low, moderate, or high. The overall mean effect size was then obtained by averaging these individual effect sizes using Microsoft Excel.

RESULTS AND DISCUSSION

Results

The researchers conducted a meta-analysis using 81 articles as data sources. In this chapter, the findings were described in accordance with the research questions. The findings presented below are based on three research questions. The first research question focuses on identifying which language learning skills are most commonly enhanced through the use of YouTube. The researchers collected and analyzed data related to this question, which is described in the table below:

Table 3. The Most Commonly Enhanced Skill Using YouTube

Education Level	**Number of articles**	**Skill**	**Number of articles**	**Rank**
University	37	Speaking	37	**1**
Senior High School	28	Listening	24	**2**
Junior High School	16	Writing	12	**3**
		Reading	8	**4**
Total articles	**81**	**Total articles**	**81**	

The researchers identified four key skills: Speaking, Listening, Writing, and Reading enhanced by using YouTube as a language learning tool.

The Most Commonly Enhanced Skill Using YouTube

The researcher identified four key skills, speaking, listening, writing, and reading enhanced by using YouTube as a language learning tool. Speaking was the most commonly enhanced skill, followed by listening, writing, and reading. Most articles focused on secondary school level (54 articles), followed by university level (37 articles). Specifically, 37 articles emphasized improving speaking skills using YouTube, 24 articles focused on listening skills, 12 on writing, and 8 on reading. These findings underscore YouTube's diverse and dynamic role in promoting language learning, particularly in enhancing speaking skills in an EFL environment.

This table presents the effect size (E.S.) values from 81 studies along with their corresponding effect size categories: Very Low, Low, Moderate, High, and Very High. The effect size indicates the magnitude of the impact YouTube had on English language learning in EFL area. The effect size was calculated using the following statistical parameters and the formula below:

Table 4. The Result of Effect Sizes from Each Article

No	Code	E.S	Category	No	Code	E.S.	Category	No	Code	E.S	Category
1	AU1	2.16	Very High	28	CU2	2.98	Very High	55	AS12	6.41	Very High
2	AU2	0.83	High	29	CU3	0.14	Low	56	AS13	0.62	Moderate
3	AU3	0.55	Moderate	30	CU4	0.64	Moderate	57	AS14	2.91	Very High
4	AU4	0.1	Very Low	31	CU5	0.2	Low	58	AS15	0.03	Very Low
5	AU5	1.94	Very High	32	CU6	1.84	Very High	59	AS16	0.25	Low
6	AU6	3.07	Very High	33	CU7	0.22	Low	60	AS17	0.3	Low
7	AU7	1.18	Very High	34	DU1	0.29	Low	61	BJ1	1.71	Very High
8	AU8	1.03	High	35	DU2	0.65	Moderate	62	BJ2	1	High
9	AU9	1.38	Very High	36	DU3	0.1	Very Low	63	BJ3	0.18	Low
10	AU10	1.29	Very High	37	DU4	1.05	High	64	BJ4	0.78	Low
11	AU11	3.67	Very High	38	AJ1	8.36	Very High	65	BJ5	1.55	Very High
12	AU12	0.65	Moderate	39	AJ2	2.27	Very High	66	BJ6	3.2	Very High
13	AU13	4.04	Very High	40	AJ3	3.79	Very High	67	BS1	1.67	Very High
14	AU14	0.7	Moderate	41	AJ4	1.67	Very High	68	BS2	0.49	Moderate
15	BU1	0.41	Moderate	42	AJ5	0.11	Very Low	69	BS3	2.02	Very High
16	BU2	0.75	High	43	AJ6	3.37	Very High	70	BS4	0.37	Low
17	BU3	2.1	Very High	44	AS1	0.03	Very Low	71	BS5	1.27	Very High
18	BU4	1.08	High	45	AS2	0.29	Low	72	BS6	0.02	Very Low
19	BU5	1.06	High	46	AS3	0.06	Very Low	73	CJ1	0.22	Low
20	BU6	2.6	Very High	47	AS4	5.56	Very High	74	CS1	0.49	Moderate
21	BU7	2.14	Very High	48	AS5	1.79	Very High	75	CS2	1.07	High
22	BU8	5.8	Very High	49	AS6	0.24	Low	76	CS3	0.06	Very Low
23	BU9	0.45	Moderate	50	AS7	4.86	Very High	77	CS4	0.85	High
24	BU10	0.11	Very Low	51	AS8	0.08	Very Low	78	DJ1	3.91	Very High
25	BU11	1.08	High	52	AS9	0.2	Low	79	DJ2	0.21	Low
26	BU12	4.92	Very High	53	AS10	0.08	Very Low	80	DJ3	0.02	Very Low
27	CU1	0.23	Low	54	AS11	1.35	Very High	81	DS1	0.05	Very Low

Table 5. How to Determine Effect Size

Statistic data	**Formula**
Average within one group	$ES = \frac{\bar{x}\ post - \bar{x}\ pre}{SD_{pre}}$
Average within each group (two-group post-test only)	$ES = \frac{\bar{x}\ eksperimental - \bar{x}\ control}{SD_{control}}$
Average within each group (two group pre post-tests)	$ES = \frac{(\bar{x}\ post - \bar{x}\ pre)eksperimental - (\bar{x}\ post - \bar{x}\ pre)control}{\frac{SD_{pre\_control} + SD_{pre\_eksperimen} + SD_{post\_control}}{3}}$
Average within two group (without pre-test & post-test)	$ES = \frac{\bar{x}\ group\ 1 - \bar{x}\ group\ 2}{pooled^{SD}}$

1. Average within one group
Explanation:
This formula calculates the effect size (ES) within a single group by comparing the mean difference between post-test and pre-test scores (x̄_post - x̄_pre) divided by the standard deviation of the pre-test scores (SD_pre).
2. Average within each group (two-group post-test only)
Explanation:

This formula calculates the effect size by comparing the mean score difference between the experimental group ($\bar{x}$_experimental) and the control group ($\bar{x}$_control), divided by the standard deviation of the control group (SD_control).
3. Average within each group (two-group pre-post tests)
Explanation:
This formula calculates the effect size by comparing the difference in the pre-test and post-test scores for the experimental group and the control group. The numerator is the difference in mean change between the two groups, and the denominator is the average of the standard deviations from the pre-test and post-test scores for both the control and experimental groups.
4. Average within two groups (without pre-test & post-test)
Explanation:
This formula calculates the effect size between two groups (without considering pre-test or post-test) by comparing the mean difference between group 1 and group 2, divided by the pooled standard deviation of the two groups. The pooled standard deviation combines the variances from both groups.

After the effect size is calculated based on the appropriate formula, the next step is to categorize the effect size according to Cohen's criteria in Table 6.

Table 6. Effect Size (ES) Criteria

No.	Effect Size	Category
1	ES ≤ 0.15	Very Low
2	0.15 ≤ ES ≤ 0.40	Low
3	0.40 ≤ ES ≤ 0.75	Moderate
4	0.75 ≤ ES ≤ 1.10	High
5	ES ≥ 1.10	Very High

Source: Cohen, J (1988). Statistical Power Analysis for the Behavioral Science. US: Lawrence,Erlbaum

After the effect size is calculated based on the appropriate formula, the next step is to categorize the effect size according to Cohen's criteria in Table 6. This categorization is essential because it helps interpret how strong or meaningful the effect is in practical terms. Cohen provides commonly accepted thresholds—such as small, moderate, and large—that make it easier to understand whether an intervention had a minor, noticeable, or substantial impact. By applying these benchmarks, researchers and readers can more effectively compare results across different studies and better understand the practical significance of the findings.

The second research question focused on determining the mean effect size of the selected articles. The researchers categorized the effect size based on two categories: (1) school level, and (2) skills. The data are displayed in the table below:

Table 7. Mean and Qualification of Effect Size in University and Secondary School

University	Mean	Qualification	Secondary School	Mean	Qualification
Speaking	1.61	Very High	Speaking	2.37	Very High
Listening	1.87	Very High	Listening	1.44	Very High
Writing	0.89	High	Writing	0.42	Moderate
Reading	0.52	Moderate	Reading	0.72	Moderate
Mean University	1.23	Very High	**Mean Secondary School**	1.24	Very High

Mean and Qualification of Effect Size in University and Secondary School

The study analyzed the effect sizes of using YouTube as a language learning tool in university and secondary school settings. Table 7 shows that the mean effect size is 1.23 for university and 1.24 for secondary school, both indicating a very high impact. These findings demonstrate YouTube's effectiveness in improving language skills across educational levels. The researchers offered insights into the variation of effect sizes, providing guidance for planning educational interventions and policies in the EFL context, aiming to enhance educational strategies and practices at both secondary and university levels.

The difference in effect sizes between the university level (1.23) and the secondary school level (1.24) is indeed very small and not statistically significant. It is important to emphasize that this minimal difference does not suggest a substantial variation in the impact of YouTube as a language learning tool across these two educational levels. However, despite the small difference, the findings still indicate that YouTube has a very high impact on enhancing language skills in both university and secondary school contexts. The "Very High" effect sizes observed for both groups demonstrate that YouTube is an effective tool for English as a Foreign Language (EFL) learning, regardless of the educational level. This indicates that YouTube consistently demonstrates strong potential as a language learning tool across different educational settings. It highlights that YouTube can be successfully implemented in both university and secondary school environments, providing similar benefits in improving language skills. Therefore, although the difference is small, it ultimately reinforces the effectiveness of YouTube as a valuable tool for language learning at various educational levels.

Table 8. Mean and Qualification of Effect Size Based on English Language Skills

Skill	Mean effect size by each skill	Qualification
Speaking	1.99	Very High
Listening	1.66	Very High
Writing	0.66	Moderate
Reading	0.62	Moderate
Mean effect size from the whole articles	**1.24**	**Very High**

The data in Table 8 shows that using YouTube as a language learning tool in EFL contexts has a substantial impact. Speaking skills had a very high impact with an effect size of 1.99, and listening skills also had a very high impact with an effect size of 1.66. Writing and reading skills had moderate impacts with effect sizes of 0.66 and 0.62, respectively. The overall mean effect size across all skills was 1.24, indicating a very high collective impact. These findings underscore the effectiveness of YouTube in enhancing language proficiency in EFL contexts and highlight its importance in designing educational interventions, as noted by Smith and Johnson (2018).

To answer the third research question regarding how the utilization of YouTube in university and secondary school settings, the researchers have summarized its usage into four points, detailed as follows:

Table 9 provides an overview of the use of YouTube in English as a Foreign Language (EFL) instruction within university and secondary school contexts. It discusses YouTube's multiple uses, such as platforms for producing content, discussion platforms, the flipped classroom method, and its role as a media platform. Each category is accompanied by the number of articles and their codes.

Table 9. The Utilization of YouTube in University and Secondary School

Utilization	Number of articles	Code of the Articles
Platforms for producing content	5	AU4, AU12, AJ6, AS1, AS16
Discussion platform	10	AU4, AU9, BU4, BU11, CU3, AS2, AS14, BJ5, CJ1, DJ1
Flipped classroom	4	AU7, CU5, CU7, AS5
Media platform	76	AU1, AU2, AU3, AU5, AU6, AU8, AU9, AU10, AU11, AU13, AU14, BU1, BU2, BU3, BU4, BU5, BU6, BU7, BU8, BU9, BU10, BU11, BU12, CU1, CU2, CU3, CU4, CU5, CU6, CU7, DU1, DU2, DU3, DU4, AJ1, AJ2, AJ3, AJ4, AJ5, AS2, AS3, AS4, AS5, AS6, AS7, AS8, AS9, AS10, AS11, AS12, AS13, AS14, AS15, AS16, AS17, BJ1, BJ2, BJ3, BJ4, BJ5, BJ6, BS1, BS2, BS3, BS4, BS5, BS6, CJ1, CS1, CS2, CS3, CS4, DJ1, DJ2, DJ3, DS1

The Use of YouTube in University and Secondary School

The researchers categorized the use of YouTube into four categories, which were:

1) Platforms for producing content

First, YouTube serves as a platform for producing content in EFL instruction, with five articles (AU4, AU12, AJ6, AS1, AS16) highlighting its significance in creating educational materials. This emphasizes the role of YouTube as a versatile tool for educators to provide interesting and useful content that fulfills language learners' requirements (O'Bannon & Thomas, 2015). YouTube allows students or content creators to create instructional videos targeting specific English language skills, such as Speaking, Listening, Writing, and Reading. These videos could include language lessons, conversations, language usage examples, and more. The content could be used by students to upload and receive comments from peers to gain feedback for improving their skills. Educational content uploaded on YouTube could enhance students' creativity in creating engaging and enjoyable learning materials.

2) Discussion platform

Moreover, YouTube is utilized as a discussion platform in EFL instruction, as evidenced by ten articles (AU4, AU9, BU4, BU11, CU3, AS2, AS14, BJ5, CJ1, DJ1) It serves as a space for interactive communication and collaborative learning, facilitating discussions on various language topics and fostering learner engagement (Kessler, 2009). YouTube was used as a discussion platform for English as a Foreign Language (EFL) learners at the secondary school and university levels in several ways. YouTube features comments that allowed users to interact directly with uploaded videos. EFL learners used this feature to discuss topics covered in the videos, exchange opinions, and share experiences with other learners. Additionally, YouTube supports live

streaming. Language learners watched live broadcasts related to specific language topics and participated in direct question-and-answer sessions with instructors or speakers. The use of YouTube as a discussion platform for EFL learners at the secondary school and university levels enhanced social interaction, expanded the scope of learning, and provided a more interactive and immersive learning experience.

3) Flipped classroom

Furthermore, YouTube supports the implementation of the flipped classroom model in EFL education, as indicated by four articles (AU7, CU5, CU7, AS5). The flipped classroom approach involves students engaging with instructional content online outside of class, allowing for more active and personalized learning experiences during class time (Bergmann & Sams, 2012). YouTube was used as a flipped classroom model for English as a Foreign Language (EFL) learners at the secondary school and university levels in various ways. Teachers could create instructional videos that covered English language topics, such as topic introductions, concept explanations, language usage examples, and exercises. These videos were uploaded to YouTube and could be accessed by learners outside the classroom. Additionally, EFL learners could watch instructional videos before class to prepare themselves. This allowed them to study independently and understand basic material before attending the classroom. Then, during class sessions, time was allocated for discussions, exercises, or collaborative projects based on the material previously learned through YouTube. This enabled teachers to focus on more interactive and practical activities.

4) Media platform

Additionally, YouTube functions as a media platform significantly utilized in EFL instruction, with a significant number of articles (76) presenting its various role. This highlights its broad presence and adaptability in delivering educational content, providing access to varied authentic language materials and resources (Jones, 2015). YouTube is most commonly used as a media platform because it provides access to various audiovisual content relevant to English language learning, such as instructional videos, presentations, interviews, and dialogues. EFL learners can use these videos to enhance their understanding of pronunciation, vocabulary, grammar, and language usage contexts. YouTube also serves as a platform for EFL learners to upload their own videos, speak in English, and receive feedback from a broader community. This encourages creativity and the practical development of English-speaking skills.

Discussion

This study provides a comprehensive overview of how YouTube is used in English Language Learning (ELL) for English as a Foreign Language (EFL) in both university and secondary school settings. It begins by explaining the selection process, which only 81 out of many articles from Google Scholar met the inclusion criteria. The analysis highlights that more studies focus on secondary schools than universities, with 37 articles on university-level education, 28 on senior high schools, and 16 on junior high schools. The study examines four key language skills: Speaking, Listening, Writing, and Reading, with Speaking being the most extensively studied skill (37 articles).

Mart (2020) and Nofrika (2019) both highlighted YouTube's effectiveness in developing various language skills through diverse video content. Mart (2020) found that videos featuring native speakers significantly enhance Listening and Speaking skills by providing authentic language exposure and pronunciation models, while subtitled

videos improve Reading and Writing by reinforcing vocabulary, sentence structure, and comprehension. Similarly, Nofrika (2019) emphasizes YouTube's role in supporting speaking, listening, and pronunciation development in both classroom and independent learning settings. These findings suggest that YouTube serves as a comprehensive language-learning tool, offering learners exposure to authentic speech, diverse accents, and real-world communication contexts, ultimately fostering a well-rounded approach to language acquisition.

From a Multimedia Learning Theory (MLT) perspective, the findings of this study underscore the significant role of multimodal input, specifically audio and visual elements in enhancing language acquisition. According to Mayer (2024), MLT posits that individuals learn more effectively when information is presented through both verbal (spoken or written words) and visual (images or animations) channels simultaneously. This dual-channel processing allows learners to engage with content more deeply by distributing cognitive load and enabling the brain to integrate information from multiple sources.

In the context of this study, YouTube emerges as a powerful educational tool that aligns closely with these principles. The platform provides rich audio input in the form of spoken language, native pronunciation, and real-time dialogues, while also delivering visual cues through imagery, gestures, facial expressions, and contextual video scenes. These combined modalities support the encoding of language input into long-term memory by offering redundant and reinforcing cues, which not only aids comprehension but also improves retention and recall of new vocabulary, pronunciation patterns, and grammatical structures.

Moreover, the interactive affordances of YouTube such as the ability to pause, rewind, and replay content, further enhance the learner's ability to process challenging segments at their own pace, making it possible to focus selectively on specific language forms or communication contexts. This self-regulated and personalized interaction with multimedia materials facilitates active learning, which is another key component of MLT. By repeatedly engaging with multimodal content, learners are better equipped to integrate new language input with prior knowledge, thus fostering a more robust and meaningful learning experience.

From this research, it was found that the skill most commonly enhanced through the use of YouTube as a tool for English language learning is Speaking, followed by Listening, then Writing and Reading. This aligns with the finding that YouTube is an audio-video-based platform, making it most suitable for skills that require practice through repetition and imitation of the videos. Speaking is the skill that most enhanced by using YouTube because speaking required imitation and practice to become more proficient in this skill. By using YouTube, learners could find many videos in the target language, which was English. There were many videos with native speakers that could help students improve their speaking skills by practicing through learning and following the content of videos from native speakers on YouTube. Learners could replay parts that were difficult to understand and pause the video to repeat parts that they had not mastered well.

The second skill was Listening because with YouTube, students could find many video-audios that contained English, allowing them to sharpen their listening skills through the various videos. YouTube videos were often more realistic and authentic compared to audio recordings alone. This was because videos on YouTube often

featured real-life situations with natural dialogues, giving students exposure to the language used in everyday contexts. For speaking skills, learners need input in the form of authentic material so they can observe and practice the material they have received. The authentic materials provided by YouTube can have a better impact on the learning process. Learners learning a language greatly benefited from actual language input since it improved their auditory and interpretative skills and familiarized them with language usage in real-life situations. This is in line with what was stated by Bahrani and Sim (2012), "The incorporation of multimedia and internet resources in technology enabled learners to conveniently access a wide array of visual and auditory materials, a significant portion of which was available at no cost."

YouTube, a multimedia-based platform, significantly enhances language learning through sensory aids and visuals, improving effectiveness and authenticity. Technology, particularly digital videos, has influenced language learning by facilitating access to actual language input. Learners can watch a variety of videos in the target language on YouTube, exposing them to different accents and dialects, which aids comprehension and cultural acceptance. The platform's ability to pause and rewind films enables learners to focus on difficult sections. Authentic materials on YouTube help both teaching and learning, making language education more efficient. Overall, advancements in technology, particularly those provided by YouTube, have significantly increased chances for language learners to experience and engage with real-world language use, consequently improving their skills.

This is also consistent with Listening skills, which can be strengthened more effectively when accompanied by elements such as Speaking. Listening is inherent in the Speaking process, since learners naturally pay attention to both their own and their discussion partner's speech. This dual focus on creating and perceiving language enables learners to improve their pronunciation, intonation, and overall comprehension in a more integrated way. Not only conversation allows students to practice articulating their thoughts, but it also improves their ability to interpret and process spoken language, making the interaction between speaking and listening critical for optimal language acquisition.

This is in line with the study conducted by Danial (2022), which found that the use of YouTube as a teaching medium significantly improved students' listening skills. The improvement in students' performance at SMKN 2 Majenecan be seen in their classification from "Very Poor" in the pre-test to "Poor" in the post-test. This suggests that YouTube provides an effective platform for enhancing listening comprehension by exposing students to authentic spoken language and diverse listening materials. Additionally, students responded positively to this instructional approach, demonstrating increased engagement and participation in the learning process.

In the third place was Writing. YouTube was not commonly used to improve Writing skills because it was primarily a platform designed for sharing videos, so that its main focus was on visual and audio content. This meant that text-based interaction was not a priority, and the features that supported writing practice were limited. For effective writing practice, specialized tools such as automatic correction, comments, and improvement suggestions were needed. YouTube did not provide these tools. Instead, platforms specifically designed for Writing, such as Google Docs or Microsoft Word, had these features. Although YouTube had a comment section below the videos, this area did not support formal writing or essays. YouTube could help students in writing, for example, by providing brainstorming material or giving more ideas to pour into their

writing, but it was not very significant in helping the writing process itself. Similar to Writing, Reading was also not commonly enhanced with YouTube because videos on YouTube might include text in the form of descriptions, subtitles, or comments, but these were usually short and not continuous. For effective reading practice, long and coherent texts were needed, such as articles, stories, or essays, which were not commonly found on YouTube.

In addition to investigating the most commonly enhanced skills using YouTube, this study also explored the effect sizes of implementing YouTube as a language learning tool at the secondary and university levels in EFL instruction. Table 7 presented effect sizes categorized by qualification levels, ranging from Very Low to Very High. The results showed significant variability in effect sizes, with some factors demonstrating notably high impacts on language learning outcomes. For example, articles coded as AU6 and AS7 exhibited very high effect sizes, highlighting the substantial influence of YouTube as a language learning tool. This emphasized the importance of considering the effectiveness of YouTube as an instructional approach in enhancing language proficiency among students.

Furthermore, Table 9 outlines the diverse utilization of YouTube in EFL instruction across secondary and university settings, including platforms for content production, discussion forums, the flipped classroom approach, and media dissemination. This multifaceted approach highlights YouTube's versatility as an educational tool, offering opportunities for collaborative learning, interactive engagement, and authentic language exposure, (Bergmann & Sams, 2012). The use of YouTube as a discussion platform for EFL learners at the secondary school and university levels enhanced social interaction, expanded the scope of learning, and provided a more interactive and immersive learning experience. By utilizing YouTube as a flipped classroom, EFL learners could access material more flexibly, develop independent skills, and engage in a more dynamic and interactive learning experience outside of the traditional classroom environment. Moreover, the findings from this study contribute valuable insights into the varied ways in which YouTube is employed to enhance language learning experiences and outcomes in both university and secondary school settings especially in EFL context. By elucidating the popularity of language skills, effect sizes of interventions, and diverse utilization of YouTube, the study provides a nuanced understanding of its role in EFL instruction, informing future research and pedagogical practices in the field.

The findings revealed that YouTube is widely used as a media platform, primarily to its ability to provide a diverse range of educational videos, particularly those focusing on the English language. This tool is popular because it's easily accessible and cost-free to learners as well as teachers. Furthermore, YouTube's platform is rich in different resources supported by visual aids, ranging from instructive courses to immersive language learning experiences. This ease of use and abundance of content contribute significantly to its general acceptance as a useful tool for language learning and educational supplements. Visual aids, such as pictures, videos, and subtitles, are useful for language learning, and YouTube provides a wealth of resources to help learners understand language subject matter and expand their vocabulary. These visual resources, such as subtitled videos and examples of English idioms, improve listening and reading abilities. They play an important part in the educational system by keeping students engaged and making the learning process easier. This is in line with what was stated by Halwani (2017) that “using visual aids and multimedia helps learners overcome learning barriers.”

As a result, it can be predicted that in the future, there will be more YouTube videos aimed at improving speaking and listening skills. This highlights a potential trend in future research on the popularity and efficacy of YouTube videos for improving speaking and listening abilities. Researchers may delve deeper into numerous aspects of these videos, including their design, content, accessibility, and impact on language acquisition. Furthermore, studies might look into innovative instructional techniques and tools integrated into YouTube platforms to improve language learning outcomes. Overall, what is expected is a growing interest in studying the impact of digital resources, notably YouTube, in supporting language development, which reflects an overall trend toward digitalized and accessible language learning techniques.

CONCLUSION

Based on the research findings, the most popular English language learning skill enhanced through YouTube is Speaking. This conclusion is supported by the analysis indicating that the majority of studies (37 articles) focused on improving Speaking skills using YouTube as a learning platform. The average effect size for Speaking skill, which is 1.99, is the highest among the other skills. This suggests that YouTube has a strong positive impact on Speaking skills compared to Listening, Writing, and Reading. The large effect size means YouTube is especially effective for improving speaking because it combines both visual and audio elements, making learning more engaging. This allows learners to practice speaking repeatedly, improving their fluency and confidence.

This suggested that Speaking is the most frequently discussed and emphasized aspect of EFL language learning in the context of using YouTube as an educational tool. In terms of effect size, the mean effect of various interventions or factors associated with YouTube use in English language learning showed significant impact. Although there was variation in effect sizes, the overall average effect from all analyzed language skills was very high (1.24), indicating that interventions or factors related to YouTube use had a substantial impact on improving EFL learners' language abilities. The use of YouTube in English as a Foreign Language (EFL) learning involved various approaches and strategies. YouTube served as a platform for producing educational content, interactive discussion forums, flipped classroom approaches, and media broadcasting. This demonstrated YouTube's flexibility in supporting diverse learning styles and language learners' needs. Therefore, not only YouTube served as an effective learning tool, but it also played a role as a diverse and dynamic resource in the context of English language learning.

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