



# Bibliometric analysis using VOSviewer with Publish or Perish of Identifying Local Legends through Project-Based Learning for Critical Thinking Skills in English Lessons

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## ABSTRACT

This research discusses publication trends regarding Identifying Local Legends through Project-based Learning for Critical Thinking Skills in English Lessons. This research aims to analyze research trends regarding Identifying Local Legends through Project-based Learning for Critical Thinking Skills in English Lessons using bibliometric analysis methods assisted by mapping analysis. Bibliometric analysis methods and mapping analysis with VOSviewer were used in this research. The data source was taken from the Google Scholar database in the period 2019 - 2024. The total number of documents found during the last 5 years was 53 documents. Based on the research results, it was found that the number of publications regarding multiliteracy in EFL teaching decreased from 2020 to 2024. From a total of 13 documents in 2020 to 3 documents in 2024. The results of article data mapping produce three forms of visualization, namely network, overlay, and density visualization. The mapping results show that Identifying Local Legends through Project-based Learning for Critical Thinking Skills in English Lessons still needs to be carried out.

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## 1. INTRODUCTION

The implementation of local legends and folktales into project-based learning has become a popular strategy in English language education for developing students' critical thinking abilities (Lestariyana & Widodo, 2018). This article explores the advantages of using local legends in English classes via project-based learning (PBL) and how it affects students' ability to think critically. Students can deepen their engagement with cultural heritage and develop their analytical and interpretive skills within a linguistic context by using local legends as educational resources (Yang & Yeh, 2021).

To delve into this subject, it is essential to understand the educational and cognitive dynamics involved in using local legends as a foundation for PBL. This approach not only enriches language acquisition but also cultivates cross-disciplinary skills such as cultural appreciation, narrative analysis, and problem-solving, all of which are integral to critical thinking development (Holdworth & Sandri, 2021).

Previous studies have shed light on related areas. Hikmawati *et al.* (2021) explored the impact of local culture-based learning on critical thinking in science education, emphasizing the role of indigenous contexts in skill development. Ikromovna (2022) highlighted the effective use of folktales in English lessons, underscoring the value of storytelling for language learning. Nugraheni *et al.* (2022) investigated how character-based learning through traditional media like Wayang Beber influences critical thinking among students.

Additionally, Syarifah and Emiliasari (2019) discussed project-based learning strategies to enhance students' creative writing abilities, aligning with the holistic goals of this research. This research focuses on identifying publication trends in the domain of utilizing local legends within project-based learning for enhancing critical thinking in English lessons. The study employs bibliometric analysis methods, assisted by mapping analysis, to comprehensively analyze and visualize the evolving research landscape in this area.

The rationale for conducting bibliometric analysis lies in its ability to provide a systematic overview of research trends, highlighting the growth, decline, or shifts in scholarly interest over time (Hicks *et al.*, 2015). By examining a dataset spanning from 2019 to 2024 sourced from Google Scholar, comprising 53 relevant documents, this study aims to discern patterns and gaps within the academic discourse. Notably, the analysis reveals a decline in publications related to multiliteracy in EFL teaching, prompting an exploration into emergent themes and areas that require further investigation.

Through bibliometric methods and mapping analysis using tools like VOSviewer, the research contributes to identifying the current state and future directions of integrating local legends into project-based English learning contexts. The visualizations generated offer insights into knowledge domains, research clusters, and collaborative networks, thereby guiding educators, researchers, and policymakers in advancing pedagogical strategies that promote critical thinking through culturally enriched English instruction. In essence, this study underscores the importance of leveraging indigenous local legends within project-based learning frameworks to nurture critical thinking skills among language learners, informed by a comprehensive analysis of scholarly outputs and trends in the field.

## 2. METHODS

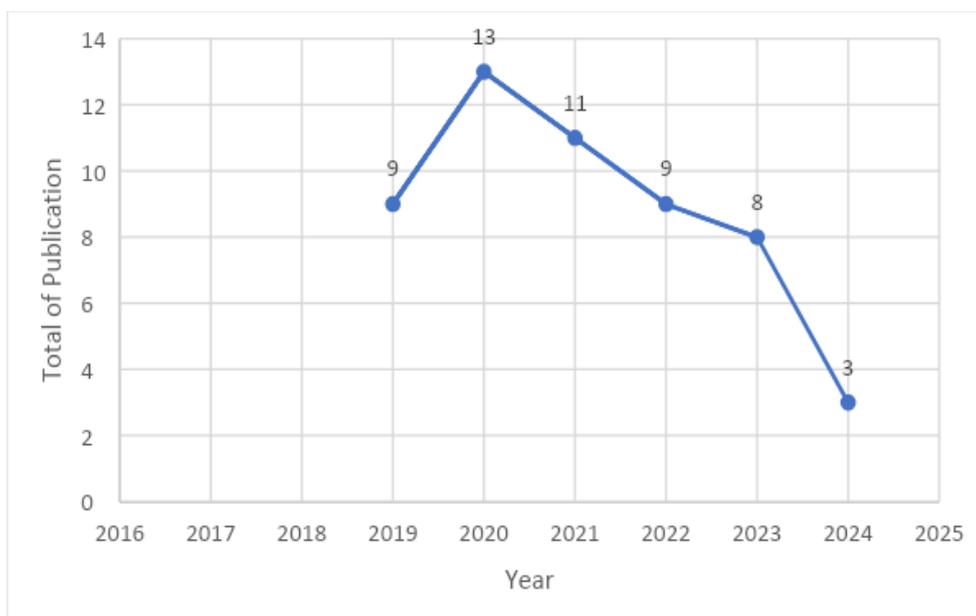
Bibliometric analysis was used as a research method. The process of bibliometric analysis involves multiple stages, such as: The first stage in performing bibliometric analysis-based literature research is gathering article data. Publicly available research papers on the subject

of "Statistical significance" are gathered at this point. Google Scholar article data indexed between 2013 and 2023 is used. Article data is gathered using the application Publish or Perish. There were 1000 articles available for analysis as a consequence of the Publish or Perish article data collection process. The data from the research articles is saved in two formats: (\*.ris) for visualization and analysis using the VOSviewer application, and (\*.csv) for analysis using Microsoft Excel software. Following data collection, article data was filtered to determine whether certain components (like year) were complete. After that, Ms. Excel was used to analyze the article data, and VOSviewer was used to visualize it. Our earlier study provides more thorough explanations of the analysis steps (Al Husaeni & Nandiyanto, 2022).

### 3. RESULTS AND DISCUSSION

#### 3.1. Development of Multiliteracy in EFL Teaching 2019 - 2024

The annual report on "Identifying Local Legends through Project Based Learning for Critical Thinking Skills" research that has been published in national and international journals is displayed in **Figure 1**. The data indicates that a total of 200 documents have been found over the previous five years. Information about how many research papers there were on "Identifying Local Legends through Project Based Learning for Critical Thinking Skills" has decreased. 2020 was the year with the highest number of publications, namely 13 articles. This number continued to decrease until 2024 with the respective numbers being 11 (2021), 9 (2022), and 8 (2023). In 2024, the number of publications decreased to 3 documents.



**Figure 1.** Annual report of publications.

#### 3.2. Trend of Multiliteracy in EFL Teaching Citation 2019 - 2024

Difference Identifying Local Legends through Project Based Learning for Critical Thinking Skills in English Lessons articles with the most citations. In this research, we present 30 articles regarding different test statistics that have the highest number of citations. **Table 1** presents some metadata from articles with the highest number of citations.

**Table 1.** Article of multiliteracy in EFL teaching the most citation.

No	Cites	Title	Year	Cites Per Year	Cites Per Author	Ref.
1	135	The stuff of legend: History, memory, and the temporality of organizational identity construction	2019	27	45	Ravasi <i>et al.</i> (2019)
2	80	Improving the critical thinking skills of secondary school students using problem-based learning	2020	20	40	Lapuz & Fulgencio (2020)
3	60	Echoing the golden legends: Storytelling archetypes and their impact on brand perceived value	2021	20	30	Ganassali & Matysiewicz (2021)
4	53	Project-based learning to develop students' ability and creativity in writing narrative story	2019	10.6	27	Syarifah & Emiliasari (2019)
5	52	Exploring the educational value of Indo-Harry Potter to design foreign language learning methods and techniques	2022	26	13	Sya <i>et al.</i> (2022)
6	52	Critical historical inquiry: The intersection of ideological clarity and pedagogical content knowledge	2020	13	17	Blevins <i>et al.</i> (2020)
7	50	The learning trajectory of number pattern learning using "Barathayudha" war stories and uno stacko.	2020	12.5	25	Risdiyanti & Prahmana (2020)
8	39	Use of folktales in English lessons	2022	19.5	39	Ikromovna (2022)
9	31	Dramatizing a Northeastern Thai folklore to lessen high school students' communication anxiety.	2019	6.2	16	Inphoo & Nomnian (2019)
10	29	The effect of argumentation-based social studies teaching on academic achievement, attitude and critical thinking tendencies of students.	2019	5.8	15	Yilmaz-Özcan & Tabak (2019)
11	26	The myths and legends of King Satoshi and the knights of blockchain	2022	13	9	Faustino (2022)
12	24	Development of emotional intelligence of future teachers of professional training	2022	12	5	Kovalchuk <i>et al.</i> (2022)
13	23	21st century skills in higher education: Teaching and learning at Ifugao State University, Philippines	2020	5.75	23	Gonzales (2020)
14	21	The revitalization of batu Parsidangan Batak Toba folklore into teaching materials in English subject for junior high school	2021	7	5	Sinamo <i>et al.</i> (2021)
15	19	A reader response approach in collaborative reading projects to foster critical thinking skills	2019	3.8	10	Pasaribu & Iswandari (2019)

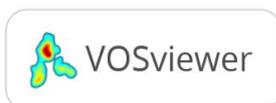
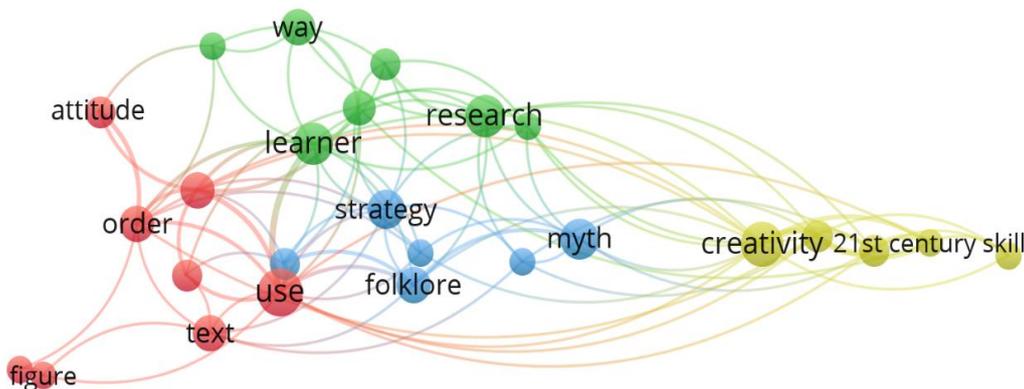
**Table 1 (Continue).** Article of multiliteracy in EFL teaching the most citation.

No	Cites	Title	Year	Cites Per Year	Cites Per Author	Ref.
16	18	Using science fiction films to advance critical literacies for EFL students in China.	2019	3.6	18	<a href="#">Liu (2019)</a>
17	15	"It broadens our horizon": English learners learn through global literature and cultural discussion	2020	3.75	15	<a href="#">Wang (2020)</a>
18	14	Effect of local culture-based learning in science on critical thinking and student communication skills	2021	4.67	5	<a href="#">Hikmawati et al. (2021)</a>
19	12	Problem solving attitude and critical thinking ability of students	2020	3	4	<a href="#">Moneva (2020)</a>
20	11	The cultural treasures of Baima Tibetan Folk songs in Gansu province, China, as a resource for literacy education in Chinese music history	2023	11	6	<a href="#">Tang (2023)</a>
21	11	The influence of Wayang Beber (the legend of Wasis Joyokusumo) as a character-based learning media on students' critical thinking ability.	2022	5.5	4	<a href="#">Nugraheni (2022)</a>
22	11	Critical perspectivism: educating for a moral response to media	2021	3.67	11	<a href="#">D'Olimpio (2021)</a>
23	10	Proposing a model of critical literacy program for fostering Indonesian EFL students' critical thinking skills	2020	2.5	3	<a href="#">Kurniawati et al. (2020)</a>
24	9	Unravelling Vietnamese students' critical thinking and its relationship with argumentative writing	2020	2.25	5	<a href="#">Nguyen &amp; Nguyen (2020)</a>
25	9	English teaching in social and cultural contexts: Language teachers as cultural managers	2020	2.25	2	<a href="#">Suryani et al. (2020)</a>
26	9	Effectiveness of successful intelligence-based education on critical thinking disposition and academic engagement students	2019	1.8	5	<a href="#">Masumzadeh &amp; Hajhosseini (2019)</a>
27	8	Profiling figure legends in scientific research articles: A corpus-driven approach	2021	2.67	3	<a href="#">Du et al. (2021)</a>
28	8	Tracing fan uptakes: Tagging, language, and ideological practices in the legend of Korra fanfictions	2019	1.6	8	<a href="#">Mesina (2019)</a>
29	5	Development of media pop up card folklore to improve the critical reading skills of grade-iv students' elementary school	2020	1.25	5	<a href="#">Dewani (2020)</a>
30	5	The analysis of higher order thinking skill implementation in English reading textbook for the fifth graders of Malaysian primary school	2019	1	5	<a href="#">Hidayat (2019)</a>

### 3.3. Visualization of Research Data Mapping of Multiliteracy in EFL Teaching

Data mapped using VOSviewer produces 3 forms of visualization, namely network visualization (**Figure 2**), overlay visualization (**Figure 3**), and density visualization (**Figure 4**). Network visualization shows that the terms generated from the abstract and keywords that are considered to correspond to the keywords used when collecting data are divided into 4 clusters with a total of 36 items. Each item has a different link, total link strength, and occurrences. Overall, based on network visualization, the total link strength is 816 while the total number of links is 373. The following is a more detailed explanation of each cluster:

- i) Cluster 1 marked in red consists of 12 items, namely challenge, digital storytelling, EFL learning, EFL teaching, English, experience, impact, perception, researcher, skill, task, and tool.
- ii) Cluster 2 marked in green consists of 11 items, namely case, language teaching, literature, multilingualism, multiliteracies approach, multiliteracies pedagogy, pedagogy, process, strategy, theory, and way.
- iii) Cluster 3 marked in blue consists of 7 items, namely critical literacy, digital literacy, effect, EFL classroom, EFL student, EFL teacher, and literacy
- iv) Cluster 4 marked in yellow consists of 6 items, namely approach, implementation, multiliteracies framework, multimodality, pre-service teacher, and teaching English.



**Figure 2.** Network visualization.

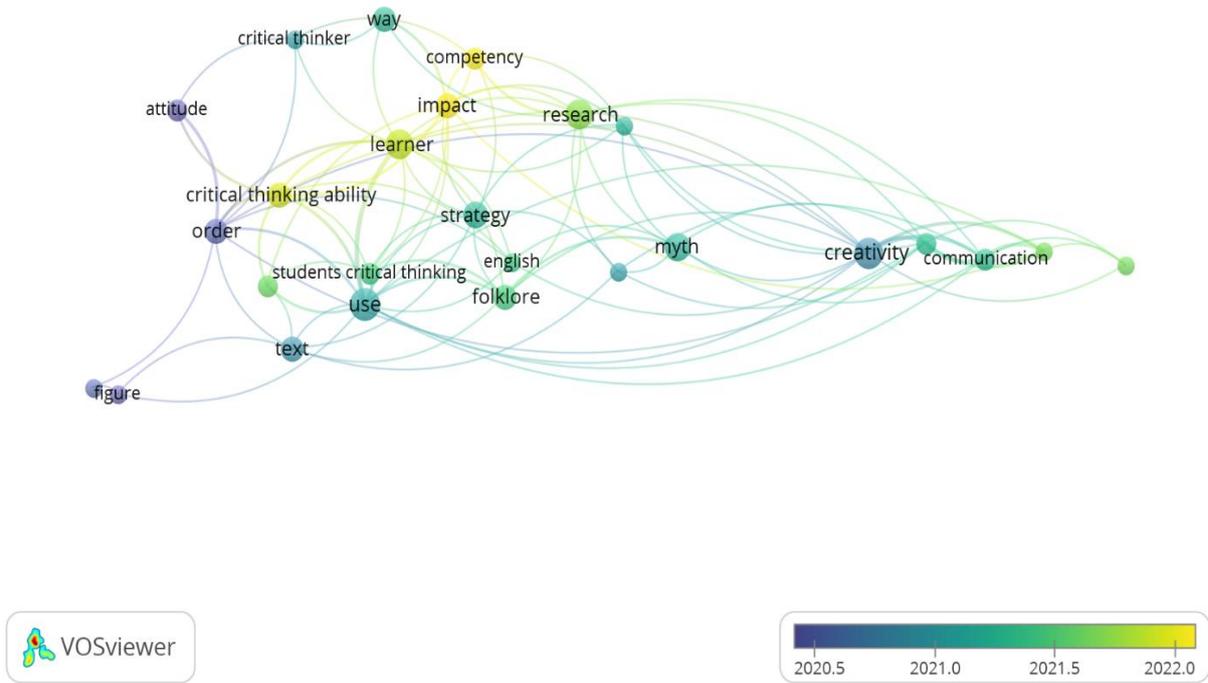


Figure 3. Overlay visualization.

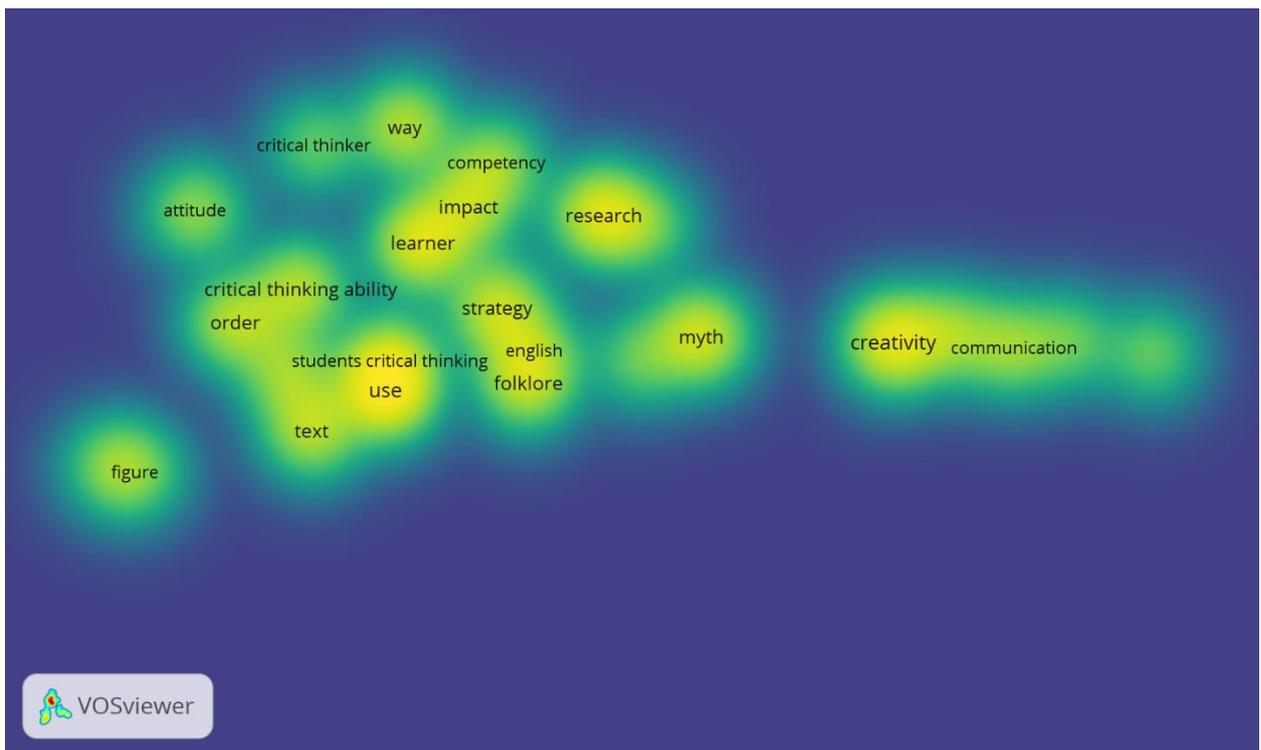


Figure 4. Density visualization.

#### 4. CONCLUSION

The number of publications regarding Local Legends through Project Based Learning for Critical Thinking Skills during the last 5 years (2019-2023) was 200 documents. The development of research regarding "Local Legends through Project Based Learning for Critical

Thinking Skills " has decreased. 2020 was the year with the highest number of publications, namely 13 articles. This number continued to decrease until 2024 with the respective numbers being 11 (2021), 9 (2022), and 8 (2023). In 2024, the number of publications decreased to 3 documents.

Apart from that, the terms used as keywords when used in the mapping stage using the VOSviewer application produce 26 items which are divided into 4 clusters marked with different colors. Each cluster has a different number of items and each item has a different number of occurrences, links, and total link strength (although it does not rule out the possibility that there are the same number of items). Terms that are often used both as keywords and as abstracts in research articles related to keywords.

## 5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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