Research Trends and Gaps in the Use of Animated Video Media in Arabic Learning: A Bibliometric Analysis (2014-2024)

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Abstract

Arabic language learning can be meaningful in various ways, one of which is applying animation media in the learning process. With the advancement of technology, animation can be an effective tool to increase students' understanding and interest in learning. Therefore, the purpose of this study is to analyze research trends in the use of animated video media in Arabic language learning as well as future research opportunities through the number of developments in research publications, the level of productivity of researchers, and research development maps. The research design used is quantitative descriptive analysis with bibliometric method assisted by VOSviewer application. The data collection technique uses the help of the Publish or Perish (PoP) application which is sourced from the Google Scholar database using the keywords "Arabic Language Learning, Media, Animated Video, Arabic Learning, Video" in the last 10 years (2014-2024). The results show that the development of research on the topic of animated media in Arabic language learning in 2014-2024 has relatively increased with the highest publication occurring in 2024 which amounted to 165 publications (33%) and the lowest in 2015 with 1 publication (0.2%). The most productive researchers on the topic are Mudinillah, A. with a total of 6 publications and Hamid, MFA. with a total of 5 publications. The publication development map based on keywords produces 6 clusters, while the development map based on the author produces 18 clusters. Some topics that can be developed based on the topic of

animated media in Arabic language learning include *english, interest, effect, grade, article, arabic language teacher, lack,* and *type.*

Keywords: Animated Teaching Media; Arabic Language; Bibliometric Analysis; Research Trend

INTRODUCTION

In the context of Society 5.0, digital transformation has introduced a new paradigm in human and technology interaction, which has a significant impact on various sectors, including education (Akman & Erdirençelebi, 2024). Society 5.0 focuses on the integration of advanced technologies to create a sustainable and inclusive ecosystem, where education is expected to adapt innovative teaching methods. Haleem et al. (2022) stated that the application of technology in education not only facilitates access to information, but also improves the quality of learning through a more interactive and participatory approach. This is because learning has various types that focus on developing skills and knowledge in specific areas such as numerical, science, social, arts, technology and language learning.

One of the main challenges in language learning, especially Arabic, is how a teacher can deliver material in an interesting and effective way to facilitate students' understanding. Arabic, which has complex structures and cultural nuances, is often perceived as difficult by students (Almelhes, 2024). Therefore, creative pedagogical approaches are needed to attract students' interest and facilitate better understanding of the linguistic concepts. On the other hand, in this century, teachers are not only the conveyors of information, but also the facilitators of learning, mentors, classroom leaders, and users of educational technology (Nasution & Uqba, 2024). This certainly encourages teachers to use appropriate learning technology and media according to the characteristics of today's students.

With the rapid advancement of animation technology, animated video media has become a promising solution in learning procedures as it provides dynamic and engaging visual representations for students to better understand abstract concepts effectively. This media can serve as an effective tool to increase students' understanding and interest in learning Arabic. The implementation of animated video media in the learning curriculum is expected to create a more meaningful and contextualized learning experience. According to Rosyid in (Afriyadi et al., 2023) explains that learning video is a learning media that combines audio (sound) with visual forms (images) to convey a learning topic. In line with

the statement of Intaniasari et al. (2022) that learning videos are categorized as media with audio-visual types, which function as a means of conveying information, which in this case is learning material. So it can be concluded that learning videos are audio-visual media that convey messages to help students understand, be it in the form of lectures, podcasts, scribing, tutorials or animations. With this learning video, students not only gain linguistic knowledge, but can also apply Arabic in a broader cultural context.

Related to bibliometric analysis, Indriyanti et al. (2023) explained that bibliometric analysis is a form of meta-analysis of research data, which can assist researchers in studying bibliographic content and citation analysis of articles published in journals and other scientific works. In its implementation, bibliometric analysis is also often assisted by VOSviewer software in analyzing data. VOSviewer is known as one of the computer tools that can be used to display bibliometric maps. VOSviewer provides a text-mining function so that it can create and describe a network (correlation) in the citation of an article. The function of VOSviewer itself is to provide a display of information regarding bibliometric graphic maps (Martins et al., 2024). With VOSviewer, researchers can present bibliometric maps in an easy way so that they can interpret a network map.

Research on this research trend has been found in various journals and can be accessed through Google Scholar or other journal search websites. Some previous researchers who have conducted research on this topic include research conducted by Safrudin et al. (2024) with the title "Development of Arabic Language Learning Research: A Bibliometric Study on Scopus (2009-2024)" which resulted in the finding that Indonesia leads in the number of publications, followed by Malaysia and Tunisia, with significant international collaboration. The main focus in the development of Arabic language learning is e-Learning, bilingualism, and computational linguistics. The findings highlight the growth and shift in research focus over the past fifteen years. Then harmonious research was also conducted by Farisha et al. (2023) with the title "Analysis Of Research Trends In Arabic Language Education Using A Bibliometric Approach In Indonesian National Journals", showing that scientific articles related to Arabic language education have increased significantly in the last decade. The dominating research topics are studies covering classical Arabic literature, Arabic language learning in the Indonesian and Islamic contexts, and the challenges of Arabic language learning. Meanwhile, studies related to language learner behavior and linguistic aspects are rarely discussed and researched in Indonesia.

The research on bibliometric analysis related to research trends in the use of video learning media has also been conducted by Huda & Anwar (2024) with the title "Trends in the Use of Animated Teaching Media in Learning Islamic Religious Education: A Review of Bibliometric Analysis" which shows that there is an increase in research on the topic of animated media in Islamic Religious Education over the past 10 years (2014-2024) with a peak in 2022 of 196 publications, also explained productive researchers and topics that can be further developed in Islamic Religious Education research. Although many researchers have conducted research related to research trends using bibliometric analysis in the world of education, especially in Indonesia, so far no researcher has conducted mapping using bibliometric analysis of related publications indexed by Google Scholar using VOSviewer software on the use of animated video media, especially in Arabic language learning.

Based on the above problems, the purpose of this study is to conduct bibliometric analysis with computational mapping of articles related to the use of animated video media in Arabic language learning indexed by Google Scholar in the last 10 years (2014-2024) using VOSviewer software. It is hoped that this research can help other researchers determine the reference of research themes to be taken based on trends and gaps from the results of this study, especially those related to animated video media in Arabic language learning.

METHODS

This research design is a quantitative descriptive analysis with bibliometric methods using the help of the VOSviewer application for mapping. The data collection technique uses the help of Publish or Perish (PoP) software sourced from the Google Scholar database with the Maximum number of results option of 500. To obtain data in the Publish or Perish software, researchers use the keywords "Arabic Language Learning, Media, Animated Video, Arabic Learning, Video" with a range of the last 10 years (2014-2024).
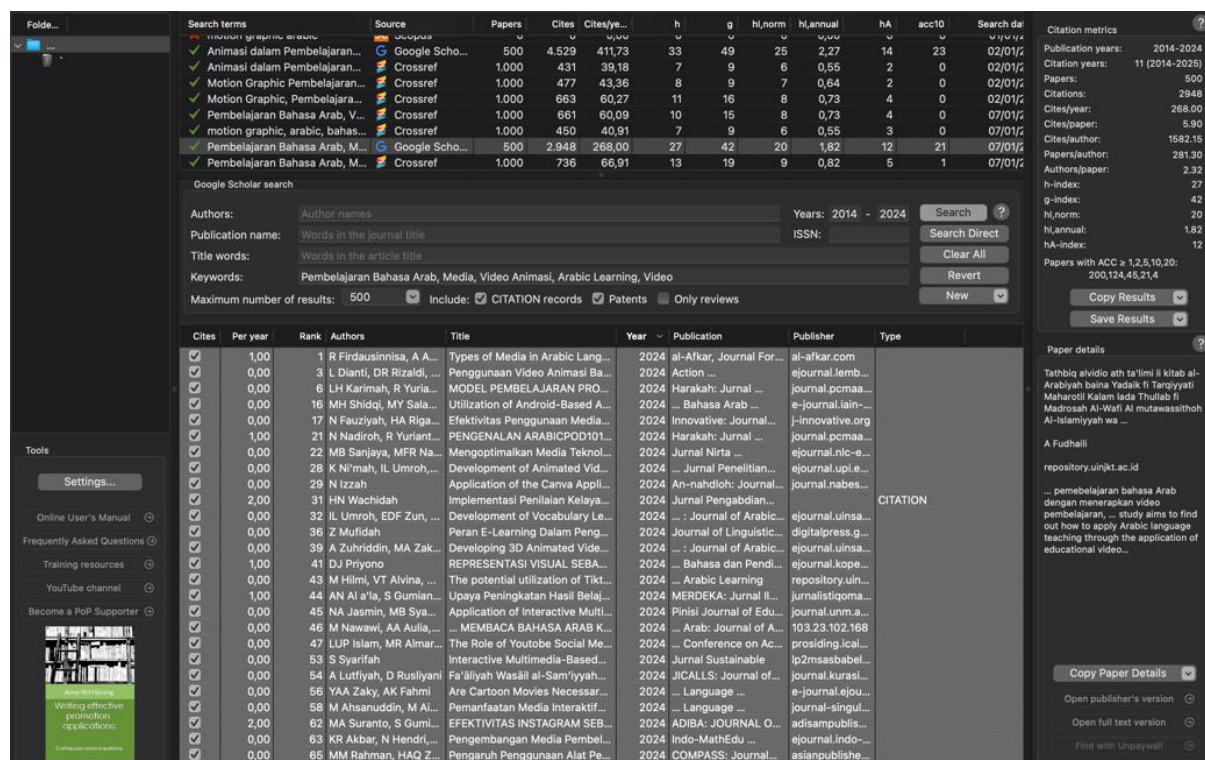
Figure 1. Data collection using Publish or Perish software

After the data is obtained, the next step is to re-examine the metadata of each data obtained, such as name, title, year, source, publisher, url, doi and ISSN. Then grouping is done through Microsoft Excel software based on the year of publication and type of article. Furthermore, the data is analyzed using the help of VOSViewer software to map the level of productivity of researchers and the development of research publications in order to determine trends and gaps in the topic of using animated videos in Arabic language learning.

RESULTS

Number of Publications on the Use of Animated Teaching Media in Arabic Learning

Based on the results of the Google Scholar database through the Publish or Perish (PoP) software and after clustering through Microsoft Excel software, the data shows that there is an increase in publications on research on animated video media in Arabic language learning from 2014 to 2024. The highest publication occurred in 2024 which amounted to 165 publications (33%) and the lowest in 2015 with 1 publication (0.2%).
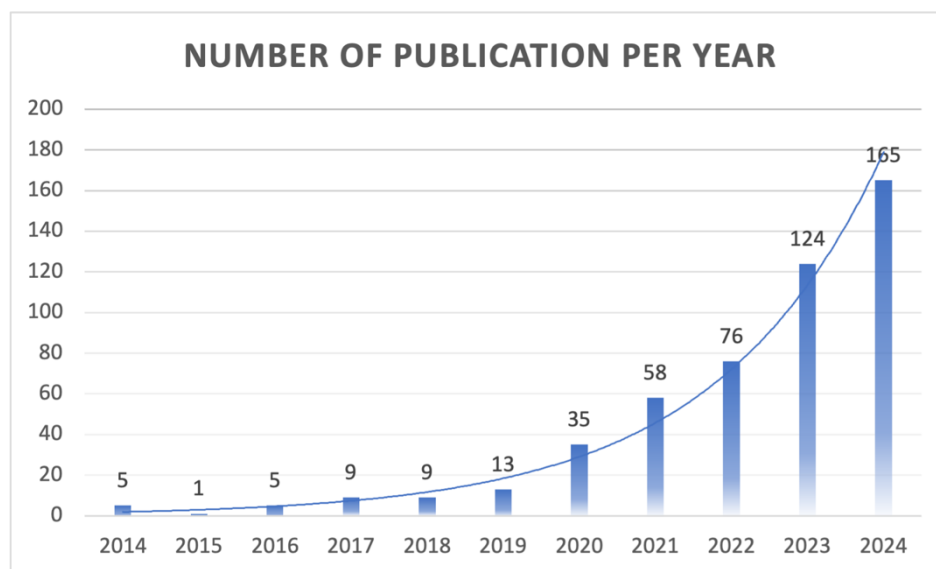
Figure 2. Number of Publications from 2014 to 2024

The significant increase in the number of publications on the utilization of animated video media in Arabic language learning from 2014 to 2024 reflects the growing interest among researchers and educators. In 2024 alone there were 165 publications which shows that this research topic is not only of interest to academics but also to educational practitioners who are looking for innovative ways to improve their language learning. The mere number of publications in 2015 illustrates that the study is still in its infancy where the concept of using animated media in education may not have been fully understood or accepted. Over time, many studies have highlighted the benefits of animated videos in increasing student interest, explaining abstruse concepts, and improving Arabic language skills in a visually appealing way.

Main Source in Publication on the Use of Animated Teaching Media in Arabic Learning

After knowing the number of publications in the last 10 years through data grouping in Microsoft Excel software, it is also known that there are 3 sources of publication in the data that has been obtained, namely E-Journal, Repository and E-Proceeding. Where each number of publications is in accordance with the graph below:
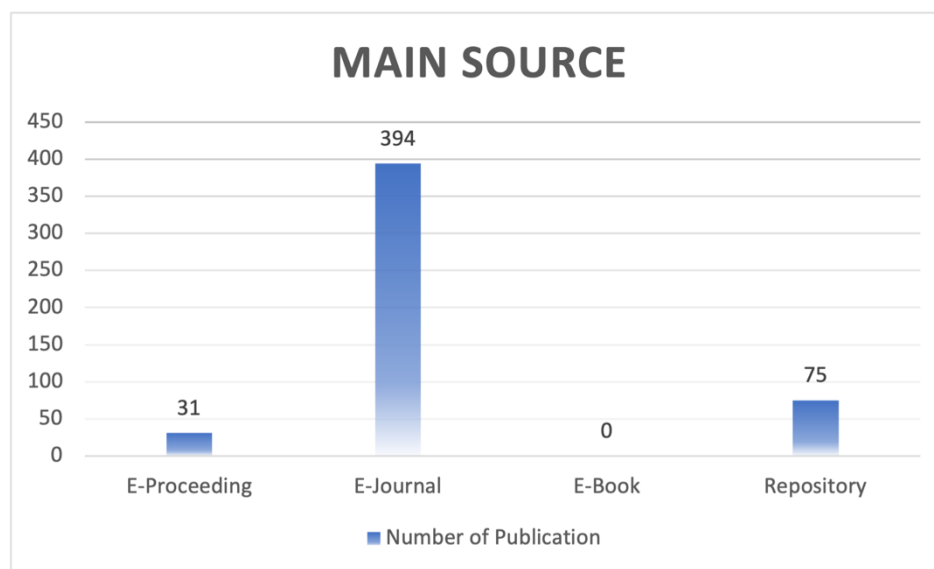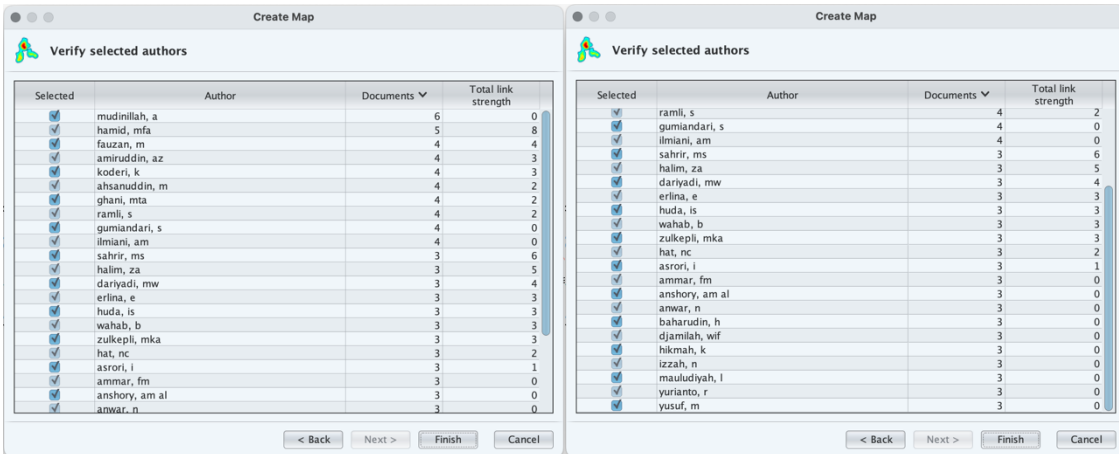
Figure 3. Publication Sources

The results of the graph show that the largest source of publication is E-Journal with 394 publications. Followed by Repository with 75 publications, E-Proceeding with 31 publications, and no publications in E-Book. With further analysis of the publication sources, we can identify that the predominance of E-Journals in research publications shows a strong tendency among researchers to publish their research results on platforms that have wider access and rigorous peer-review. E-Journals not only provide better visibility, but also often have a higher reputation among academics.

Meanwhile, the presence of Repository and E-Proceedings as fewer publication sources suggests that despite efforts to document research across multiple platforms, E-Journals remain the top choice. This may reflect the need for researchers to gain academic recognition and greater impact from their publications. The nil presence of E-Books also indicates that researchers prefer to disseminate their findings in the form of journal articles, which are considered more relevant and immediately accessible to the academic community. This opens up opportunities for further research into the factors that influence the choice of publication sources in the field of Arabic language learning, as well as suggesting the need for more initiatives to promote publication in less common formats such as E-Books.

Productive Researchers on the Use of Animated Teaching Media in Arabic Learning

To find out productive researchers in research on animated video media in Arabic language learning, VOSviewer software is used to process data that has been obtained from Publish or Perish (PoP). On the Create VOSviewer menu, Create a map based on bibliographic data is selected, until when the Choose threshold - Minimum number of documents of an author is selected 3. So that of the 887 authors in the data from PoP, only 29 authors appear who meet the threshold of 3 publications.

Figure 4. Productive Researchers

Based on the results of the data obtained from VOSviewer, it is known that the development map based on the author produces 18 clusters. It is also known that the most productive researchers are Mudinillah, A. with a total of 6 publications and Hamid, MFA. with a total of 5 publications. Then researchers with 4 publications each include Fauzan, Amiruddin, Koderi, Ahsanuddin, Ghani, Ramli, Gumiandari and Ilmiani. While other researchers each have a total of 3 publications.

On the other hand, there are 858 researchers who have less than 3 publications. The existence of 858 researchers who have publications below the threshold of 3 reflects the challenges that many researchers may face, such as limited access to resources, institutional support, or the ability to produce published scientific work. This suggests the need for greater support from education and research institutions to assist these researchers in improving their productivity, whether through training, funding, or collaboration opportunities. The findings also open up further discussion on developing strategies to increase publications among less productive researchers in this field.

Research Progress Map on the Use of Animated Teaching Media in Arabic Learning

The development map of research publications on animated video media in Arabic language learning is obtained from the results of VOSviewer software. In the bibliometric paradigm, an analysis called co-occurrence analysis is carried out, this analysis involves observing important keywords or terminology that appear together in scientific articles (You et al., 2021). By analyzing the co-occurrence of keywords contained in the title and abstract of a scientific work, it will be possible to identify a concept or topic that is often associated in the scientific literature. This can help in understanding research trends and identifying relationships between certain topics. The results of the co-occurrence analysis based on VOSviewer software are as follows:
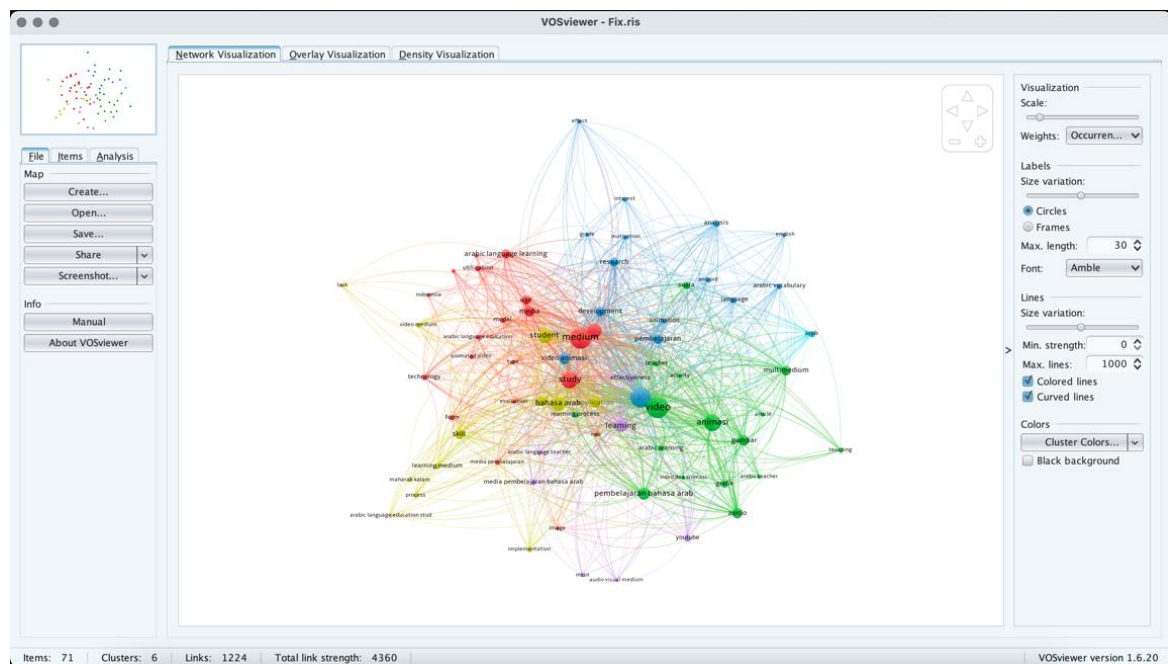
Figure 5. Network Visualization

Based on the VOSviewer data above, it is known that there are 71 items related to animated video media in Arabic language learning, with 1224 links and a total link strength of 4360 which are categorized into 6 clusters with the following details:

- Cluster 1 consists of 20 items including *animated video, arabic language, arabic language education, arabic language learning, evaluation, form, image, Indonesia, instructional medium, media, media pembelajaran, medium, model, outcome, role, study, technology, type, use, utilization.*

- Cluster 2 consists of 16 items including *activity, animasi, arabic learning, arabic teacher, article, audio, gambar, grafik, learning process, multimedium, pembelajaran bahasa, suara, teacher, teaching, video, video dan animasi.*

- Cluster 3 consists of 15 items including *analysis, android, animation, arabic, arabic vocabulary, development, effect, english, grade, interest, language, motivation, pembelajaran, research, video animasi.*

- Cluster 4 consists of 12 items including *application, arabic language education, bahasa, bahasa arab, implementation, lack, learning medium, maharah kalam, process, skill, student, video medium.*

- Cluster 5 consists of 7 items including *arabic language teacher, audio visual medium, effectiveness, learning, media pembelajaran bahasa arab, mtsn, youtube.*

- Cluster 6 consists of 1 item, namely *arab.*

Then to find out what studies are fairly new and fairly old, it can be seen from the overlay visualization map, which generally works on the principle of a heatmap (Kraus et al., 2020). It uses colors to illustrate how new or old a topic is among the research topics in the dataset. The results of the overlay visualization can be seen in the following figure:
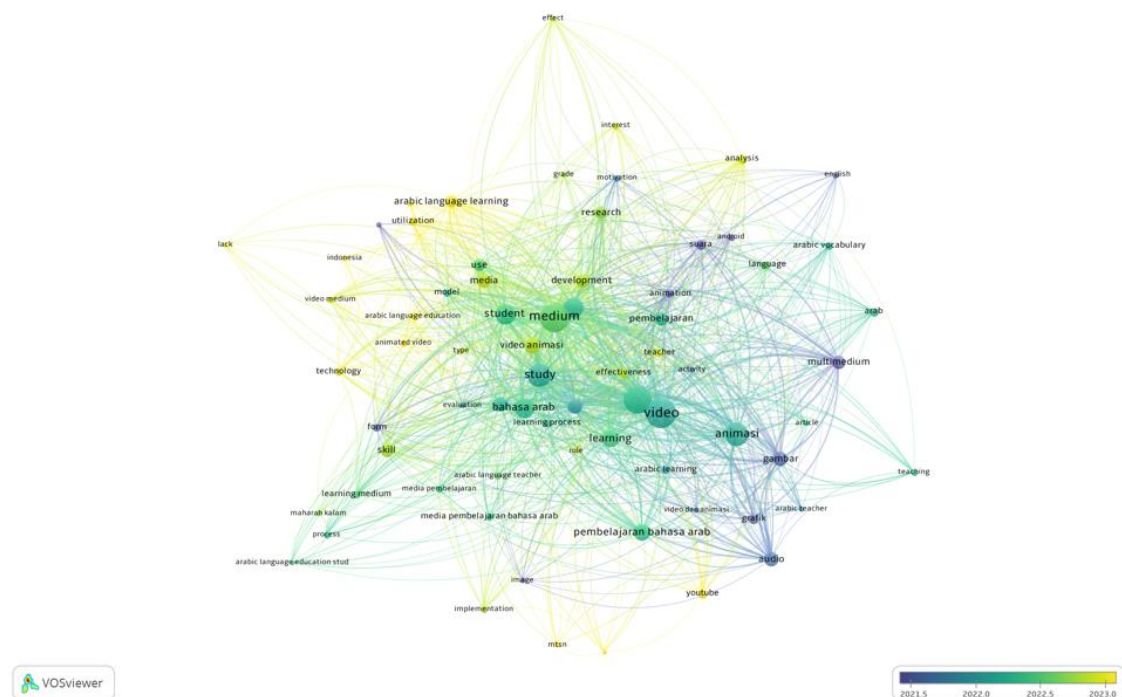

Figure 6. Network Visualization

The overlay visualization above shows that the brighter a research topic is, the more recent it is, and vice versa. Thus, the topics included in the purple network map

which include *form, image, audio, picture, multimedium, sound, android* and other topics are old studies (in 2021). Meanwhile, the research topics included in the yellow network map which include *youtube, video medium, mtsn, effect* and others are newer studies than before (in 2023).

Furthermore, the last step in bibliometric analysis is to look at the density visualization map, which is an analysis feature that can visualize the density or density of a particular set of elements in a map, which is generally used to analyze the relationship or similarity between these elements (McAllister et al., 2022). The results of density visualization can be seen in the following figure:
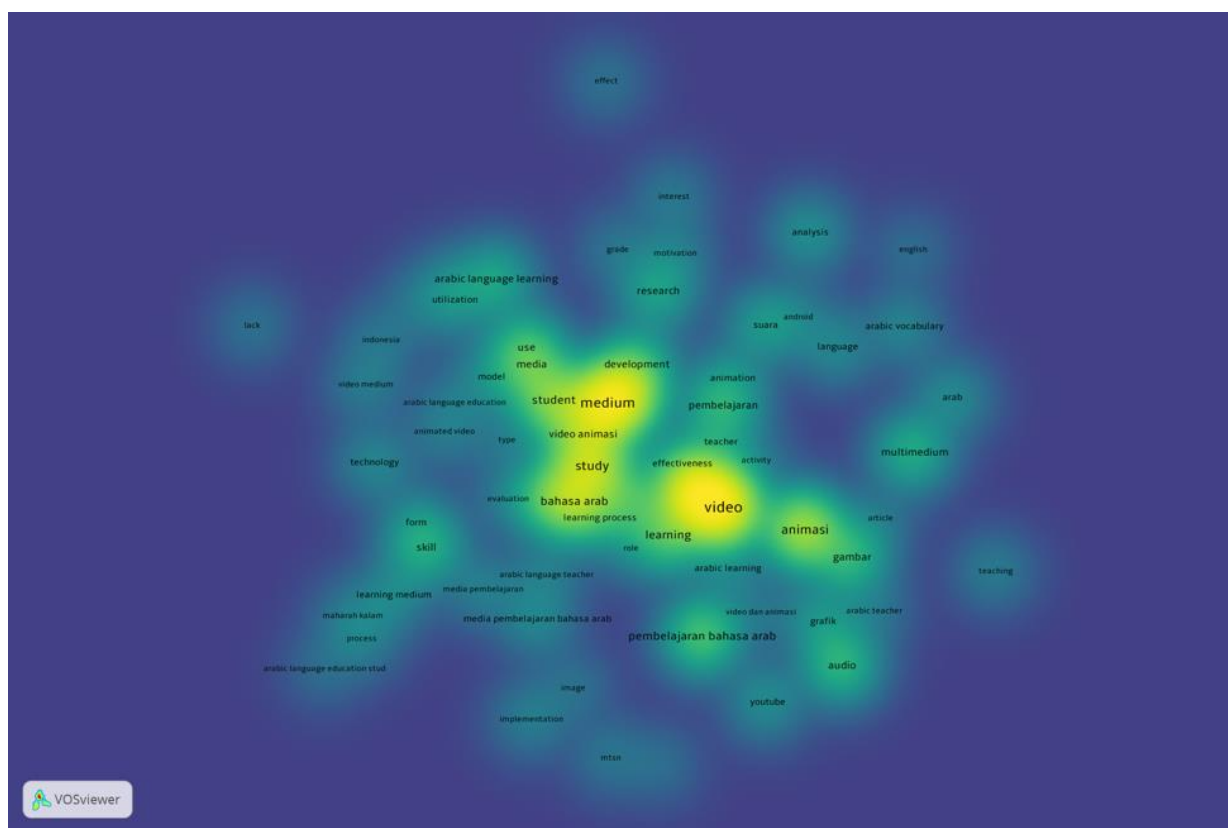
Figure 7. Density Visualization

The Density Visualization image shows that the brighter the color and the larger the circle surrounding the item or keyword, the more dense or frequent the item appears in a research article (H. Saputra, 2022). So based on the image above, items with high density include *medium, video, animated video, student, animation, study, arabic*. Likewise, if the color fades close to the background color, then the number of studies related to that item is only a few, including *english, interest, effect, grade, article, arabic language teacher, lack, type*.

In general, it can be stated that some topics that are rarely researched and can be developed based on the topic of animated video media in Arabic language learning include *english, interest, effect, grade, article, arabic language teacher, lack, and type*. These topics indicate that there are under-explored research opportunities, which can lead to a deeper understanding of how animated video media can be applied in the context of Arabic language learning. For example, research into the impact of animated video media on students' interest in learning Arabic could provide insight into the effectiveness of this learning method. In addition, an exploration of the role of Arabic language teachers in using animated videos as a teaching tool can help in improving pedagogical practices. Research that focuses on the aspects of *type, effect* and *grade* can also provide important information on how the use of other types of media can affect student learning outcomes at different levels of education. Thus, developing research on these under-researched topics will not only enrich the literature in this area, but can also make a significant contribution to the practice of Arabic language teaching and learning.

DISCUSSION

The results of this study show a significant increase in the number of publications on animated video media in Arabic language learning over the last decade (2014-2024). The peak of publications in 2024 indicates that this topic is increasingly relevant amid advances in educational technology. This finding answers the research objective, which is to map the trends and gaps in research related to animated media for Arabic language learning. The increase in publication trends indicates that animated media has become an integral part of innovative learning methods in the context of Arabic language. Scientifically, this result can be interpreted based on Everett Rogers' diffusion of innovation theory, which states that the adoption of new technologies takes time to become widely accepted (Mbatha, 2024). In the early years of the study (e.g. 2015), the lack of publications may have been due to a lack of awareness of the effectiveness of animated media in learning. However, over time, various studies have supported the benefits of this medium, which is reflected in the increasing number of publications.

The results of this study are consistent with previous studies, such as the findings of Huda & Anwar (2024), which showed a similar trend in Islamic religious education, where animated media proved effective in increasing students' interest. However, this study

also found that some topics, such as the impact of animated media on students' interest, its effectiveness in different educational levels (grade), and the role of the Arabic language teacher in using this media, are still under-researched. This suggests that there are opportunities to explore new aspects that have not been widely discussed in previous research.

The uniqueness of this research lies in its specific focus on Arabic language learning, which has its own linguistic and cultural challenges. Compared to previous studies that mostly discuss e-learning or bilingualism in general, this research makes a new contribution by mapping the trends in the use of animated media using VOSviewer-assisted bibliometric analysis. This approach not only provides a quantitative overview of research developments, but also identifies unexplored themes. However, there are some differences to note. Some previous studies, such as Safrudin et al. (2024), emphasized more on e-learning in general, whereas this study specifically highlights animated media. This highlights the novelty of this study in providing more focused and relevant data for Arabic language teaching. In addition, the lack of research on specific topics, such as the effects of animated media on cultural context-based learning, suggests that there is still room for further exploration.

The implication of this research is the importance of developing more contextual and culture-based animation media for Arabic language learning. Future research can focus on: (1) exploration of the role of teachers in integrating animated media into the curriculum; (2) study of the effectiveness of animated media in improving Arabic language skills at various levels of education; and (3) development of animated media that pay attention to cultural and linguistic values of Arabic.

CONCLUSION

Based on the presentation of the results of the analysis and discussion that has been presented, this study provides a conclusion that research publications related to animated video media in Arabic language learning in the last 1 decade have relatively increased with a peak in 2024 as many as 165 publications. This shows that Arabic writers and researchers began to have a high awareness of the urgency of publication in accredited journals in the field of Arabic language education. In addition, based on the results of the study, it is

known that productive researchers in this topic are Mudinillah, A. with a total of 6 publications and Hamid, MFA. with a total of 5 publications.

On the other hand, this research has limitations in data coverage that only relies on the Google Scholar database with a certain time span and focuses on specific keywords, so there is a possibility that it does not cover all related research. In addition, the analysis methods used, such as VOSviewer, have limitations in describing deeper relationships between topics. For future research, it is recommended to expand data sources, use a more comprehensive mixed-method approach, and explore other aspects such as the effectiveness of animated media on various age groups or more specific levels of education.

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