Systematic Literature Review: Teachers’ Educational Interaction with Students in Learning in Indonesia

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**ABSTRACT**

**Background:** Educational interaction between teachers and students in learning is a definite thing, and if it is not carried out well, it will trigger learning problems at school. Research on educational interactions is trending and has become an important study in education. This research aims to analyze the academic interactions of teachers and students in learning at school. **Method:** This research uses the SLR (Systematic Literature Review) method. Data was collected by documenting and reviewing previous articles related to interaction and education. Article searches were carried out by searching for articles using the Scopus database. The subjects studied in this research are education, social interaction, interpersonal communication, human relations, interaction, interpersonal relations, students, and teaching. The initial database was 113,234, and then the researchers re-specified it so that it was found to be 475 documents. **Results and Discussion:** The research results show that articles dominate discussions about educational interactions, and there is still very little study of reviews, book chapters, and letters. Social sciences, health, and computer science dominate the subject of discussion. National institutions, especially in the health sector, are more dominant in funding studies on educational interactions. From the Scopus database obtained, publications about academic interactions in learning are still scarce. **Conclusion:** Findings on educational interactions in Indonesia show that the study of interactions and education has still been a trend in recent years.

**Keywords:** Educational Interaction, Teacher, Student

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**INTRODUCTION**

A teacher is an individual who has a crucial role in the professional education process. They provide instruction, direct and support students in understanding and achieving the knowledge, skills, and principles essential for their personal and academic growth (Griesbach et al., 2021). The role of teachers is very influential in shaping students’ personalities and positive views on the learning process and life. Teachers’ duties include teaching subject matter and classroom management, assessing student development, developing successful teaching methods, and various other educational activities (Ifeakor & Odo, 2020). An educator is also expected to be able to understand and respond to the personal needs of each student to achieve optimal learning outcomes (Ndukwe & Daniel, 2020). It should be remembered that teachers’ duties are not only limited to the school environment but can also involve education outside of school, such as informal education or in the context of lifelong learning. Overall, educators are crucial parties in educational progress and unleashing students’ full potential.

The importance of the role of educators in the educational environment should be given special attention (Nurlela & Eri Purwanti, 2020). Terrén emphasizes the significance of pedagogically controlled dialogue between educators and students. This conversation clearly showed how important autonomy is as a primary value in democratic education. This dialogue assumes that students are active individuals, capable of discussing naturally and acting in solidarity (Terrén, 2002). Just like the concept of inquiry, a discussion emerged by proposing a reflective educational philosophy whose assumptions have been outlined previously. In the learning context discussed here, this concept has intellectual and moral aspects (Nuryana et al., 2020). A recent document on primary education states that communication is at the heart of teaching methods: between individuals and other individuals, between individual and shared knowledge, between the present and the past, and between different ways of thinking (Alexander, 2009). Based on this understanding, it is clear that interaction and communication in learning are significant. With the interaction that exists between teachers and students, the process of knowledge transformation can be carried out.

Interactions can be called educational interactions if they consciously aim to educate and lead students toward maturity (Ratanawongs et al., 2008). In this case, the main thing is the interaction's aim and purpose because the activity was planned or intentional. Awareness and gaps in involving oneself in the learning process for students and teachers will give rise to various learning interactions (Liberna, 2015). Educational interaction is communication between educators...
and students in an organized educational process to achieve desired results (Idrus & Mareta, 2022). Interacting academic relationships involves regulatory processes that involve interactive elements in developing students' potential logically, humanely, and dialogically (Nurmalisa, 2018). That way, educational communication runs full of meaningful activities because it contains new rules teachers must teach students (Busching & Krahé, 2020). Academic communication is carried out face-to-face.

The problem or obstacle that often arises nowadays is that there are still many unidirectional teaching and learning interactions carried out by teachers (Viscione et al., 2019). The function and role of the teacher become dominant, and the role of students becomes passive and uncreative and only listens to information from the teacher. There is still a wrong assumption that students are seen as objects, so students are less able to develop their potential. Apart from that, the current reality is that education only prioritizes scientific aspects and students' intelligence. The moral, character, and ethical aspects as a basis for forming national character and culture are put aside (Liansari, Yosi et al., 2022).

From this discussion, it is clear that exploring educational interactions between teachers and students is very important. Several previous studies, namely (Aliyyah et al., 2022; Ma et al., 2022; Nurwahyudi & Sungkowo, 2023; Zaifullah et al., 2021), also studied in-depth the educational interactions between teachers and students in various educational settings. However, researchers found no review articles that focused on educational interactions between teachers and students. Most research focuses on the relationship between academic interactions and interests, learning outcomes, and morals. Therefore, this research aims to identify educational interactions between teachers and students in school learning by reviewing literature reviews.

**METHOD**

This research adheres to the principle of content analysis, namely focusing on findings from various studies published in scientific journals in the Scopus database. The method used in this research is SLR (systematic literature reviewer) (Helmi et al., 2023; Makis Setiawan et al., 2021). The research data was obtained from the Scopus database from 2015 to 2024. From 113,234 data, the researchers re-specified it so that they found 475 documents about educational interactions spread across various Scopus databases. Literature review research does not involve collecting primary data, so it does not require special research instruments as in empirical research (Hidayah et al., 2021). However, to facilitate the literature review research process, researchers compile a control list or evaluation form that helps you select, evaluate, and organize relevant literature. The research aspects examined in this research are the number of publications per year, type of research, research subject, topic of discussion, data collection instruments, and data analysis.

<table>
<thead>
<tr>
<th>Table 1. Aspects and categories of research data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspects</strong></td>
</tr>
</tbody>
</table>
| By country | A1. Indonesia  
A2. Malaysia  
A3. USA  
A4. Japan  
A5. Australia |
| Documents per year from sources | B1. Journal Of Phisic conference series  
B2. ACM International Conference proceeding series  
B3. IOP conference series  
B4. International journal of emerging technology in learning  
B5. Indian Journal of Public Health Research and Development |
| Research sponsor | C1. Bina Nusantara University  
C2. University of Indonesia  
C3. Indonesian Ministry of Technology Research and Education  
C4. Education fund management institution  
C5. Malang State University |
| Subject area of study | D1. Computer sains  
D2. Social science  
D3. medicine  
D4. engineering  
D5. other |
| Publication Type | E1. Paper conference  
E2. article  
E3. review  
E4. Book chapter  
E5. letter |
| affiliate | F1. Indonesian University of Education  
F2. University of Indonesia |
The flow of research carried out in this study is described as follows: Identification of research topics: Select the topic or research area to be studied, namely educational interactions. Find sources by using academic databases, digital libraries, scientific journals, and other trusted sources to search for material related to the topic. The academic database used is Scopus. Select the highest quality and most suitable documents for inclusion in the research. Expanding inclusion and exclusion criteria will help select the most relevant sources. Identify and record the main findings of each selected document. Compare and contrast results from multiple sources to identify common patterns or conclusions. Determine the presentation structure according to your needs. Prepare a review of findings clearly and systematically. Include appropriate citations or references from each source used. Ensure the literature review is directly related to the research objectives and questions. Be sure to include a complete bibliography of each material included in the research. After writing a literature review, always check and correct for clarity, consistency, and appropriateness. Be sure to perform a plagiarism check to ensure that all information is cited accurately and that there is no copyright infringement. The data analysis carried out is that each item is classified into a certain category based on certain aspects that meet the specified category.

RESULTS AND DISCUSSION

Results

Educational interactions must depict an active two-way relationship with a certain amount of knowledge as the medium to make the interaction meaningful and creative. All elements of educational interaction must proceed within the bounds of educational goals. Therefore, educational interaction shows a two-way active relationship between teachers and students concerning educational goals. The teaching and learning process is a process of interaction between two human elements, such as educators as those who teach, students as those who learn, and students as the main subject. The teaching and learning process is a process of interaction between two elements: educators and students. As a system arranged in such a way, educational interaction contains several principles needed to support the educational interaction process. Educational interaction as part of education is an interesting area of study. The analysis results with VOSviewer show data about interaction and education, as shown in Figure 1 below.

<table>
<thead>
<tr>
<th>University</th>
<th>Publication time</th>
</tr>
</thead>
<tbody>
<tr>
<td>F4. Sebelas Maret University</td>
<td>G2. 2017-2018</td>
</tr>
<tr>
<td>F5. Gadjah Mada University</td>
<td>G3. 2019-2020</td>
</tr>
<tr>
<td></td>
<td>G4. 2021-2022</td>
</tr>
<tr>
<td></td>
<td>G5. 2023-2024</td>
</tr>
</tbody>
</table>

Data analysis with the help of Vosviewer in the last eight years, from 2015 to 2023, from the Scopus database shows that the research trend with the theme of educational interaction is still
The following are specific findings in each study area in the Scopus database. Analysis of data from the Scopus database with search limitations regarding education, social interaction, interpersonal communication, human relations, interaction, interpersonal relations, student, and teaching shows that Indonesia has quite a large manuscript database. If you look at the distribution of countries, you can see the data showing the data distribution in the following two figures.

![Figure 2: Distribution of educational interaction documents by country for 2015-2023](image)

The data distribution above shows that Indonesia has 475 documents that examine education, social interaction, interpersonal communication, human relations, interaction, interpersonal relations, students and teaching, originating from Indonesia, 19 documents from Malaysia, 12 documents from Japan, 11 documents from the USA, 11 documents from Australia. Ten documents, seven documents from the Netherlands, five from Singapore-England-Netherlands-Taiwan, three from Canada, and at least one from Zambia.

Analysis of data from the distribution and boundaries that researchers, namely looking at years, have determined shows that the distribution of the research database on educational interactions can be explained in Figure 3 below.

![Figure 3: Distribution of educational interaction documents by year](image)
The distribution of data per year regarding educational interactions shows that from the beginning of 2015 to 2022, the research trend tends to increase continuously. In 2015, nine documents were published, and in 2021, there were 92 documents. However, in 2023, the number of documents about educational interactions will decrease to 14.

The results of the data obtained from the analysis that has been carried out looking at sources annually show that educational interaction documents are divided into several publisher sources. The following figure 4 shows the distribution of document publisher sources.

![Figure 4: Distribution of educational interaction documents based on sources](image)

The most dominant publisher that publishes educational interaction publications is the Journal of Physics Conference Series, which has published 178 documents over the last eight years. The ACM International Conference Proceedings Series has 24 documents. The IOP Conference Series consists of 16 documents; the minimum is one document in the Proceedings - Frontiers in Education Conference, FIE.

Data analysis regarding documents from the affiliation aspect shows ten classifications of universities with the most publications in the group, as in Figure 5 below.

![Figure 5: Distribution of educational interaction documents based on affiliation](image)
Analysis of data from 475 Scopus manuscripts originating from Indonesia shows that the Indonesian Education University produced documents for the last eight years with a total of 61 documents, Bina Nusantara University 35 documents, University of Indonesia 33 documents, Sebelas Maret University 30 documents, Bogor Institute of Technology 16 documents, Airlangga university 16 documents, Malang State University 15 documents, Padang State University 15 documents, State University of Jakarta 14 documents, Gadjah Mada University 13 documents.

From a summary of the Scopus database for the last eight years, it can be seen that various sponsors finance publications related to educational interactions. The following Figure 6 explains the funding sponsors for publications about educational interactions.

Figure 6: Distribution of educational interaction documents based on sponsors

From the 475 data obtained, it is known that Binus funded eight texts on educational interactions, the University of Indonesia 7 documents, the Indonesian Ministry of Technology Research and Education and the Indonesian Ministry of Technology Research and Education 4 documents each, the Education Institute funded management institutions, Malang State University, eleven March University, each with three documents.

Analysis of the grouping of manuscripts is divided into five categories of document types. Figure 7 below describes the specific analysis results.

Figure 7: Distribution of educational interaction documents based on document type
From the data distribution, 475 were grouped into five groups of document types. The most documents published in conference papers were 342, articles were 127, reviews were four, and book chapters and letters were one document each in the last eight years.

The final analysis is the distribution of documents seen from the subject area. The categorization can be grouped into ten classifications: decision science, medicine, engineering, social science, computer science, physics and astronomy, mathematics, material science, environmental science, and business, management, and accounting. Below is Figure 8, which explains the distribution of the percentage of subjects seen from the area.

![Figure 8: Distribution of educational interaction documents by subject area](image)

A detailed analysis of the image above is as follows. Physics and Astronomy 187 documents; Computer Science 135 documents; Social Sciences 109 documents; Engineering 87 documents; Medicine 55 documents; Decision Sciences 40 documents; Business, Management and Accounting and Environmental Science 24 documents each; Materials Science 18 documents and Mathematics 18 documents

**Discussion**

Educational interaction is a process or form of reciprocal relationship that occurs in an educational context between individuals or groups involved in the learning process (Rosário et al., 2023). This interaction involves exchanging information, ideas, and knowledge between teachers and students or students and fellow students (Harahap, 2022). In educational interactions, information and skills are transferred from the information giver (usually the teacher) to the information recipient (student or learner). This interaction also includes non-verbal communication, such as body language, facial expressions, and voice intonation, which can influence how information is conveyed and received (Rif'an & Azizi, 2020).

Educational interactions can occur in various contexts, including inside and outside the classroom, in online learning environments, and through various educational media. Educational interactions facilitate effective teaching and learning processes, motivate students to actively participate in learning, and enable them to understand and apply the knowledge gained. Educational interactions also include exchanging opinions, discussions, questions, and answers and giving and receiving feedback (El Iq Bali & Chairunniza’, 2020). These Educational interactions allow teachers to understand students’ needs and levels of understanding so they can adapt their teaching approaches to support student’s academic progress and overall development.

Educational interactions in Indonesia continue to develop along with the evolution of education and its challenges. Efforts to improve access, quality, and relevance of education continue to be the main focus in achieving national education goals. Trends in Indonesia show that the study of education has become one of the research trends in Indonesia in recent years. This data is proven from the vosViewer analysis as follows. This conclusion will help readers understand why your research is important to them after reading the paper. Conclusions are not simply a summary of the main topics or a restatement of the research problem. The conclusion, made in

**CONCLUSION**

Educational interaction is a transformation of knowledge carried out by educators and educated people. Educational interaction is important in education because it indicates the success of the educational process. Research findings on educational interactions in Indonesia show that the study of interactions and education has still been a trend in recent years. Studies on educational interactions in the education sector are minimal and dominated by the physical, computer, and engineering fields. Judging from the type, it can
be seen that conference papers dominate the documents. The next researcher can focus on producing book chapters, reviews, and letters. Researchers in education also still have an extraordinary opportunity to study educational interactions in the world of education because there are still very few works that focus on the field of education.

REFERENCES


