



Universitas Muhammadiyah Malang, East Java, Indonesia

## Izdihar : Journal of Arabic Language Teaching, Linguistics, and Literature

p-ISSN: 2622-738X, e-ISSN: 2622-7371 // Vol. 4 No. 2 Agustus 2021, pp. 165-178



<https://doi.org/10.22219/jiz.v4i2.17069>



<http://ejournal.umm.ac.id/index.php/izdihar/index>



[izdihar.jurnalpba@umm.ac.id](mailto:izdihar.jurnalpba@umm.ac.id)

# Arabic Learning in Industrial Revolution 4.0: Problems, Opportunities, and Roles

Ahmad Fikri<sup>a,1</sup>, Abdul Muid<sup>b,2</sup>, Rosita Ilhami<sup>c,3</sup>, Norhidayah<sup>d,4</sup>, Aulia Mustika Ilmiani<sup>d,5</sup>, Muhammad Ikhlas<sup>e,6</sup>

<sup>a</sup>Institute Islam Negeri Kerinci, Indonesia

<sup>b</sup>Universitas Jambi, Indonesia

<sup>c</sup>Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia

<sup>d</sup>Institut Agama Islam Negeri Palangka Raya, Indonesia

<sup>e</sup>Central Luzon State University, Philippines

<sup>1</sup>Ahmadfikri@iainkerinci.ac.id, <sup>2</sup>abdulmuid02@unja.ac.id, <sup>3</sup>rositailhamioci621@gmail.com,

<sup>4</sup>norhidayah0995@gmail.com, <sup>5</sup>aulia.mustika.ilmiani@iain-palangkaraya.ac.id,

<sup>6</sup>muhammadikhlask@clsu.edu.ph

### ARTICLE INFO

#### Article History:

Received: 25/06/2021

Revised: 30/07/2021

Accepted: 31/08/2021

Published: 31/08/2021

#### \*Corresponding

#### Author:

Name: Abdul Muid

Email:

abdulmuid02@unja.ac.id

### ABSTRACT

Technological capabilities in the era of the industrial revolution 4.0 can facilitate the learning process. However, some Arabic language education students at Jambi University still find it difficult to learn Arabic and decide to change majors. This study finds out how the problems, opportunities, and roles of the Arabic language during the industrial revolution 4.0 in the Arabic language education study program at Jambi University. This research is a descriptive qualitative with data collection techniques: a) observation; b) interviews; and c) documentation. Meanwhile, data analysis techniques include: a) data reduction; b) data presentation; c) conclusions. Triangulation and discussion has been use to validate the data. The results show that: a) the problems of learning Arabic, such as: 1) differences background for the students; 2) students are less interested in learning Arabic; 3) no Arabic speaking environment; and 4) lecturers have not mastered technology; b) opportunities: the ability to speak Arabic provides an opportunity to get or create jobs not only in the education sector, but also in other sectors; while c) the role of Arabic is one of international language, diplomatic communication between countries in various fields, and learning knowledge from original Arabic sources.

Copyright © 2021, Muid et al

This is an open access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license



### Keywords

Arabic Learning; Industrial Revolution 4.0; The Role of Arabic Language

### مستخلص البحث

يمكن للقدرات التكنولوجية في عصر الثورة الصناعية 4.0 تسهيل عملية التعلم. ومع ذلك، لا يزال بعض طلاب تعليم اللغة العربية في جامعة جامبي يجدون صعوبة في تعلم اللغة العربية ويقررون تغيير التخصصات. تكتشف هذه الدراسة كيفية مشاكل وفرص وأدوار اللغة العربية خلال الثورة الصناعية 4.0 في برنامج دراسة تعليم اللغة العربية بجامعة جامبي. يعتبر هذا البحث نوعيًا وصفيًا باستخدام تقنيات جمع البيانات: (أ) الملاحظة؛ (ب) المقابلات؛ (ج) التوثيق. وفي الوقت نفسه، تشمل تقنيات تحليل البيانات ما يلي: (أ) تقليل البيانات؛ (ب) عرض البيانات؛ (ج) الاستنتاجات. تم استخدام التثليل والمناقشة للتحقق من صحة البيانات. وأظهرت النتائج ما يلي: (أ) مشاكل تعلم اللغة العربية مثل: (١) اختلاف الخلفيات لدى الطلاب. (٢) يقل اهتمام الطلاب بتعلم اللغة العربية. (٣) لا توجد بيئة ناطقة باللغة العربية. (٤) لم يتقن المحاضرون التكنولوجيا. (ب) الفرص: توفر القدرة على التحدث باللغة العربية فرصة للحصول على وظائف أو استخدامها ليس فقط في قطاع التعليم، ولكن أيضًا في قطاعات أخرى؛ بينما (ج) دور اللغة العربية هو دور اللغة الدولية، والتواصل الدبلوماسي بين الدول في مختلف المجالات. وتعلم المعرفة من المصادر العربية الأصلية.

تعليم اللغة العربية: الثورة الصناعية 4.0: الدور للعربية

كلمات أساسية

## INTRODUCTION

The industrial revolution is such an interesting discussion because it could affect almost all orders of life, including education (Bloem et al., 2014). According to Yuyu in her writing, there will be several challenges in industrial 4.0 because humans use technology more and more (Yuliati & Saputra, 2019). One of the challenges is how to prepare technology-based quality education for the future (Yuliati & Saputra, 2019). Quality education certainly affects the progress of a country.

One of the most important things at this time is the mastery of foreign languages to establish communication (Nasir, 2014) and be able to compete with various people from around the world (Izzan, 2010). Along with the journey of human life, the variety of languages is also increasing. Among the world's languages, Arabic is the oldest and longest used (Andriana, 2015)

The starting point for the glory of the development of the Arabic language began with the decline of al-Qur'an in the Arabic language which is the greatest miracle in the world (Sauri, 2020). Therefore, Arabic indirectly plays a role as a means of communication for all Muslims in the world.

In addition, understanding the teachings of Islam cannot be separated from knowledge of Arabic because the primary sources of Islamic knowledge come from among scholars using Arabic. Furthermore, Umar bin Khattab r.a said: "You are greedy in learning Arabic because Arabic is part of your religion" (Setyawan & Anwar, 2020). From the words of Umar bin Khattab, we can conclude that Arabic is an important language, not only as a means of communication but also as part of religion. Like Arabic as the language of the Koran, it is more famous and popular than Arabic as a more functional communication tool (Primaningtyas & Setyawan, 2019).

Along with the times, the industrial revolution 4.0 with technological sophistication helpfully in learning Arabic (Adisianto dkk., 2020). Another convenience is also because Indonesian vocabulary absorbs a lot of Arabic vocabulary (Handriawan, 2015). Nonetheless, these various facilities have not motivated prospective students or students to learn Arabic. Based on the data of students in the Arabic language education study program at Jambi University, found that the number of Arabic languages education enthusiasts is still very lack compared to 3 times as many English education students.

In addition, based on initial interview with the ex-student of the Arabic language education student at Jambi University, not many are interested in learning Arabic for various reasons. For example, Arabic is very difficult to learn because there are too many grammar rules, even difficulty in reading Arabic script. Furthermore, fearness of not having good job prospects in the future

because most public schools have not made Arabic a compulsory subject. As a result, some students choose to change majors.

In this case, there was several studies related to education in the era of the industrial revolution 4.0. First, (Nurcholis & Hidayatullah, 2019) discusses, the challenges of Arabic as a communication tool in the industrial revolution 4.0 era at the postgraduate IAIN Tulung Agung. This study explains some of the problems of learning Arabic in the era of the industrial revolution 4.0. namely, students who are not interested in learning Arabic, lecturers who have not mastered technology, and low internet signals for learning. In addition, the challenge is the demand to liven up Arabic in the national and international and be able to answer the challenges of the industrial revolution 4.0 era to use Arabic as a communication tool.

Furthermore, research about education 4.0: new challenges of learning. This study says that the challenge of education today is to innovate to develop technology-based education, such as mobile phones, computers, and other things (Puncreobutr, 2016). Afterward, there was a study on teaching Arabic to Malaysian university students using technology based on education 4.0 principles, explains that learning Arabic still uses traditional methods while the students are very dependent on technological sophistication (Mohd dkk., 2019). Therefore, educators need to present interest learning for the younger generation readiness to face challenges in the era of industrial revolution 4.0.

Based on a preliminary study and some related literature, the current study focus on discussing the problems, roles, and opportunities of learning Arabic during the industrial revolution 4.0 in the Arabic language education study program at Jambi University.

## METHOD

Based on the data, this research is descriptive qualitative research by collecting some information (Creswell, 2005) to find out the problems, opportunities, and roles of learning Arabic during the industrial revolution 4.0 in the Arabic Language Education Study Program of Jambi University and narrating it (Yusuf, 2016). While the data collection techniques, researchers used observation, interviews, and documentation.

The observation step that used to find out the problems, opportunities, and roles of learning Arabic in the industrial revolution 4.0 era through the zoom application. Furthermore, interviews conducted with the informants, such as: a) students and ex-students of Arabic language education to find out the problems in learning Arabic; and b) Arabic language education lecturers to find out the problems, opportunities, and roles of learning Arabic during the industrial

revolution 4.0 era in the Arabic language education study program. Lastly, the documentation steps used to collect document which related to teaching, and recapitulation number of students Arabic language education study program of Jambi University. After all the data was collected, the theory of data analyzed techniques by (Miles et al., 2014) was used. The steps taken by researchers are reducing data, presenting data, and drawing conclusions. Furthermore, to validate the data that has been obtained, the researcher confirms the results of the study to the informant. Lastly, triangulation and discussion was used to validate the data.

## RESULTS & DISCUSSION

### Arabic Language Problems in the Industrial Revolution 4.0

Industrial revolution 4.0 provides several challenges in education. Namely, educators and students have to adapt to learning. Harto argues, the industrial revolution 4.0 requires educators to have several competencies (Harto, 2018): First, Educators must adapt to technological advances because the students in the industrial revolution cannot be separated from technology. This requires educators to recognize, understand, master, and create learning innovations through technology (Sarjun & Mawarni, 2019). So that learning will be more active, efficient, and interest; (2) Educators must be able to optimize abilities and develop the character values of students (Syamsuar & Reflianto, 2019).

In addition to the things above, educators must also be able to become designers, managers, and assessors of learning achievement, in this case, Arabic. As explained by Gagne in Widaningsih, that the function of educators such as (Widaningsih, 2019): (1) Design the learning process, the functions to design learning starting from the initial activities before learning, the title of the lesson, determining the media and learning methods to be used, decide the learning objectives, and conclude the learning activities; (2) Organise the learning process, which means the educators manage the learning to be more effective, efficient, and conducive; (3) Evaluate the learning process, which means the educators can follow the learning development of students. So, educators know the problems of students and find the right solution for these problems.

These challenges need solutions to answer the various problems that exist. Such as the problems at Arabic language education of Jambi University in the industrial revolution 4.0:

### Students with different backgrounds

Based on the data from various generations at Arabic education program study of Jambi University, only a few students graduated from Islamic boarding schools

**Table 1.** Arabic students based on high school background (2013-2020)

Year	Islamic Boarding School	Senior High School	Total
2013	5	8	13
2014	7	24	31
2015	7	16	23
2016	12	12	24
2017	5	18	23
2018	8	25	33
2019	2	20	25
2020	5	16	21

Table 1 shows the data from the students' statements from each batch at the Arabic education study program of Jambi University. From these data, it is clear that the number of students graduated from Islamic boarding schools each year is very small, except for the 2016 batch with 12 graduated students from Islamic boarding schools and 12 graduates from general high school. These different backgrounds certainly present their challenges in learning Arabic.

**Table 2.** The results of interview with the students batch 2016

Researcher	Student
Is there difference in studying between graduate from senior high schools and Islamic boarding schools? And what obstacles did you experience during the lesson?	Surely the Islamic boarding school graduate are more active in class, while the senior high school graduate are sometimes difficult to learn, especially in Nahwu and Shorof. The problem is a little difficult enough to translate Arabic into Indonesian, but it likes a piece of cake for the Islamic boarding school graduate.

Table 2 shows the interview result with the students batch 2016. the results of the interview that explains the differences in Arabic language abilities of the Islamic boarding schools' graduates and the senior high schools graduate. Because the alumni of Islamic boarding schools are more active in learning Arabic than senior high school alumni. Demanded educators to follow the learning rhythm of students so that no students get difficult in learning.

### Students Are Less Interested In Learning Arabic and Feeling That They Are In The Wrong Major

The results of the researcher's interview with students from the 2018 class about interest in learning Arabic, explained that:

**Table 3.** The results of interview with the students batch 2018

Researcher	Student
How many Arabic students are in your class? And are all interested in learning Arabic?	We only consist of 24 students. 12 students were the Islamic boarding schools graduate, while the others 12 students were senior high schools graduate. Some of us have also changed majors and campuses.
Is Arabic education program study your first choice? And why did you change majors?	Honestly, Arabic education program study is my last choice. Because I also do not know the future job prospects. Then, after I attended several semesters in the Arabic education study program, I found it difficult to follow and understand Arabic learning. That's the reason I changed program.

Table 3 describes the results of the identification of students' lack of interest in learning Arabic. Some also feel that they are in the wrong major, so they prefer not to continue their education in the Arabic language study program. Recapitulation of the new, active, non-active, and graduated students in the Arabic language education study program of Jambi University was needed to verify further information. Here, the researchers attach a recapitulation of students from the 2013-2020 batches.

**Table 4.** The recapitulation students

Year	New Student	Active Student	Nonactive Student	Total
2013	19	-	6	13
2014	31	-	6	25
2015	27	5	3	19
2016	35	10	6	19
2017	26	13	2	11
2018	44	35	9	-
2019	50	49	1	-
2020	21	21	-	-

Based on Table 4, it showed that the highest number of non-active students are in the 2018 batch with 9 students from 44 students, the 2013 batch with 6 students from 19 students, the 2014 batch with 6 students from 31 students, and the 2016 batch with 6 students from 35 students.

The data above also support information from the results of interviews with 2018 students who explained that many of them had changed program.

### No Arabic Speaking Environment

Based on the results of observations, the researchers found that students were not assured to communicate using Arabic so it was difficult to create an Arabic-speaking environment. In addition, based on the results of interviews between researchers with alumni of Islamic boarding schools who study in Arabic education programs, it is explained that Arabic language skills decrease because there is no Arabic habituation in the class. The following are the results of the interview:

**Table 5.** The results of interview with student batch 2019

Researcher	Student
Can studying Arabic in the Arabic education study program improve Arabic language skills?	I don't think so. Because, in the Arabic study program, the Islamic boarding schools graduate have to repeat the lesson. Meanwhile, there is no Arabic environment to develop Arabic language skills. In addition, I observe other friends who are non-islamic boarding schools graduate get difficult to improve their Arabic language skills.

Table 5 shows The results of interview with student batch 2019. It is explained that Arabic language skills decrease because there is no Arabic habituation in the class.

### Educators Not Mastered The Technology

Industrial revolution 4.0 is synonymous with technology-based life (Smajic et al., 2021), including the world of education. Thus, educators need to provide technology-based learning (Teo et al., 2021). However, the technological facilities at Jambi University are not sufficient to present technology-based Arabic learning.

**Table 6.** The results of interview with lecturer

Researcher	Student
In your opinion, what are the challenges of learning Arabic in the industrial revolution 4.0?	Industrial revolution 4.0 requires us to adapt to technological advances. But, the first challenge lies in the facilities of Jambi University Arabic education program like there was no Arabic language laboratory. This lab is very important to support students' Arabic proficiency. Another challenge is lecturers who have not been able to master technology well to present interest learning.

Table 6 is a description of the Jambi University Arabic language education lecturer. Based on some of the problems above, Arabic language activists need to find solutions and get opportunities. Due to students are very close to technology. Thus, educators should create an interesting learning atmosphere with the help of technology (Venkitakrishnan, 2021). Also, Al-'Usaili said that educators should have 3 skills (Zainuri, 2019): (1) Arabic proficiency; (2) Knowledge of Arabic language and culture; and (3) Arabic teaching skills.

In this case, there is several solution, including: (1) Arrange a special class for students who are not familiar with Arabic; (2) Holding seminars with Arabic students who are successful in their fields, holding study tours to domestic or foreign campuses to foster motivation for Arabic language students at Jambi University; (3) Getting used and active to speaking Arabic (Wargadinata dkk., 2020) during class learning and requiring Arabic environment in the Jambi University Arabic language study program; (4) Establashing ma'had 'aly specifically for Arabic language program; (5) Conducting education technology training for the lecturers of the Arabic education; and (6) Build to develop a language laboratory.

### Arabic Language Opportunities in the Industrial Age 4.0

Technological capabilities in the industrial revolution 4.0 should provide many opportunities to establish cooperation in various sectors (Sharma et al., 2021).The most basic thing to establish such cooperation is language skills.

Meanwhile, based on the data of the alumni of the Jambi University Arabic education program, the industrial revolution 4.0 also provides many opportunities for Arabic language activists to work not only in the education sector but also in the private sector such as DMK (Data Media Kreasi) which requires Arabic translators, tour guides for Eastern, the Arabian who travels to Indonesia or vice versa, document translation services, etc.

Arabic also opens up opportunities for work in various countries. Currently, Arabic is the language spoken by about 24 countries. In addition, Arabic is also a second international language (Murtosiah, 2020). Thus, in addition to English, we also need to learn Arabic to learn it to facilitate communication and establish cooperation with various Arab countries.

The other Arabic language opportunities are (Syafaah, 2019): (1) Increasing Arabic to make it easier to understand and study various Islamic scholarships (Ni'mah & Maryanto, 2020) such as the science of hadith, fiqh, interpretation, etc; (2) Increasing teacher capability; (3) Becoming an activist, civilize, and develop research methodologies that focus on Arabic to introduce Arabic to various groups (Ni'mah & Maryanto, 2020); (4) Becoming an Arabic translator; (5) Intensification of access and cooperation with foreign affiliation; (6) Developing Arabic language learning media; (7) Encouraging academic works such as books, articles, new theories, etc; and (8) Good Arabic language skills allow users to fill domestic and foreign departments that require Arabic.

### **The role of Arabic in the industrial revolution 4.0**

Arabic has a very important role in the industrial revolution 4.0 because Arabic is the language of al-Qur'an that will guide humankind and an international language that will facilitate communication between countries. As Muna explains, Arab countries are very strong in defending their language and use it as a language negotiation, education, trade, etc (Muna, 1980).

In addition, Arabic can be used to understand various kinds of knowledge derived from Arabic works. Primaningtyas and Setyawan explain the role of Arabic as follows (Primaningtyas & Setyawan, 2019): (1) Arabic as the language of the Qur'an. By understanding Arabic, it will make it easier to understand the Qur'an (Al, 2021); (2) Arabic as the language of communication between humans and God. Also, as a tool to understand what is read. For example, humans perform prayers using Arabic; (3) Arabic as an international language (Aflisia dkk., 2020). Almost all over the world learn Arabic both in formal and non-formal schools. In addition, Arabic serves as a tool of diplomacy between countries in the fields of trade, politics, etc; (4) Arabic as a research tool that will introduce the history of Islamic civilization and Arabic culture through writing.

The roles of Arabic according to Ni'mah and Maryanto are (Ni'mah & Maryanto, 2020): (1) In the field of education, the presence of human resources who can speak Arabic makes it possible to contribute to education. For example, providing Arabic learning online and offline. In addition, contributing to the introduction of the Arabic language through works and research results, both journals and books; (2) In the political field, being a representative of the government abroad. Like, becoming an ambassador or a cooperation commission; (3) In the journalism sector, by mastering Arabic, it will be easy to know developments in another country such as to convey reality and news or to introduce Indonesia in various countries, especially in the Middle East; (4) The field of tourism, by becoming a tour guide for middle eastern people who want to visit Indonesia; (5) In the economic field, by becoming a Hajj travel manager, which is dominated by people who speak Arabic.

## CONCLUSIONS

Industrial revolution 4.0 rapidly changed almost all aspects of life, including education. At this time, everyone is required to be able to adapt and continue to innovate. There are several problems, opportunities, and the role of Arabic in the era of the industrial revolution 4.0. The problems are differences in educational background, students are less motivated to learn Arabic, there is no Arabic speaking environment, and lecturers have not mastered the technology. Because lecturers always use PowerPoint assistance without any innovation to create or try to teach using other learning media. Meanwhile, the revolution era provided opportunities for Arabic language learners to become translators, tour guides for tourism, develop technology-based Arabic learning, etc. Furthermore, the role of learning Arabic in the 4.0 revolution era is to produce a generation that would be ready to use technology to introduce Indonesia to the international world with Arabic language skills, continue to enliven Arabic in the national and international, and as a tool to learn about Islam from its source which Arabic writing.

## ACKNOWLEDGMENT

We would say thank you to our parents that always motivated us. Also, thank all lecturers and students in each year of the Arabic education program at Jambi University who would share their experiences. *Last but not least*, for sis Uci and friends who have given direction in the process of writing.

**BIBLIOGRAPHY**

- Adisianto, A. Z., Rois, I. N., & Putri, F. R. (2020). *Orientasi belajar bahasa Arab di era revolusi industri 4.0* (No. 0). *Prosiding Seminar Nasional Bahasa Arab Mahasiswa*, 4(0), 206–214. <http://prosiding.arab-um.com/index.php/semnasbama/article/view/572>
- Aflisia, N., Erihadiana, M., & Balqis, N. (2020). Teacher's perception toward the readiness to face multiculturalism in Arabic teaching and learning. *Izdihar : Journal of Arabic Language Teaching, Linguistics, and Literature*, 3(3), 197–210. <https://doi.org/10.22219/jiz.v3i3.14117>
- Al, M. A. A.-M. et. (2021). Reasons for choosing Arabic language as a third language: a case study in UITM Perak. *Psychology and Education Journal*, 58(2), 1527–1537. <https://doi.org/10.17762/pae.v58i2.2306>
- Andriana, K. (2015). Urgensi perencanaan pembelajaran bahasa Arab dalam pendidikan di sekolah. *Prosiding Konferensi Nasional Bahasa Arab*, 1(1), 188-197. <https://prosiding.arab-um.com/index.php/konasbara/article/view/22/20>
- Bloem, J., Van Doorn, M., Duivestein, S., Excoffier, D., Maas, R., & Van Ommeren, E. (2014). The fourth industrial revolution. *Things Tighten*, 8, 11–15. [https://www.scirp.org/\(S\(lz5mqp453edsnp55rrgict55\)\)/reference/referencespapers.aspx?referenceid=2019817](https://www.scirp.org/(S(lz5mqp453edsnp55rrgict55))/reference/referencespapers.aspx?referenceid=2019817)
- Creswell, J. W. (2005). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Merrill.
- Handriawan, D. (2015). Mempertegas kembali arah pembelajaran bahasa Arab (prespektif budaya terhadap tradisi belajar bahasa Arab di Indonesia). *al-Mahara*, 1 No.1, 43–63. <https://doi.org/10.14421/almahara.2015.011-03>
- Harto, K. (2018). Tantangan dosen PTKI di era industri 4.0. *Jurnal Tatsqif*, 16(1), 1–15. <https://doi.org/10.20414/jtq.v16i1.159>
- Izzan, A. (2010). *Metodologi Pembelajaran Bahasa Inggris*. Humaniora.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis*. SAGE.
- Mohd, K. N., Mohd Adnan, A. H., Yusof, A. A., Ahmad, M. K., & Mohd Kamal, M. A. (2019). *Teaching Arabic language to Malaysian University Students Using education technologies based on education 4.0*

- principles* (SSRN Scholarly Paper ID 3511137). Social Science Research Network (hlm. 38-51).  
<https://papers.ssrn.com/abstract=3511137>
- Muna, F. A. (1980). The Arab executive and his environment. Dalam F. A. Muna (Ed.), *The Arab Executive* (hlm. 5–25). Palgrave Macmillan UK.  
[https://doi.org/10.1007/978-1-349-16410-3\\_2](https://doi.org/10.1007/978-1-349-16410-3_2)
- Murtosiah, S. (2020). Urgensi bahasa Arab di era 4.0. *Jurnal LUGHOTI*, 2(01), 62-75. <http://e-jurnal.stitqi.ac.id/index.php/lughoti/article/view/195>
- Nasir, A. (2014). Bahasa Arab era klasik dan modern (tinjauan pembelajaran teoritis). *Arabia*, 6(1), 21-52.  
<http://dx.doi.org/10.21043/arabia.v6i1.1393>
- Ni'mah, N. L., & Maryanto, H. (2020). Kontribusi sarjana pendidikan bahasa Arab dalam mewarnai dunia kerja di era revolusi industri 4.0. *Prosiding Seminar Mahasiswa IV*, 4(0), 529–541.  
<https://prosiding.arab-um.com/index.php/semnasbama/article/view/622>
- Nurcholis, A., & Hidayatullah, S. I. (2019). Tantangan bahasa Arab sebagai alat komunikasi di era revolusi industri 4.0 pada pascasarjana IAIN Tulungagung. *Arabiyatuna: Jurnal Bahasa Arab*, 3(2), 283–298.  
<http://dx.doi.org/10.29240/jba.v3i2.999>
- Primaningtyas, M., & Setyawan, C. E. (2019). Urgensi bahasa Arab dalam pendidikan Islam di Era Revolusi Industri 4.0. *SALIHA: Jurnal Pendidikan & Agama Islam*, 2(2), 49–66.  
<http://staitbiasjogja.ac.id/jurnal/index.php/saliha/article/view/29>
- Puncreobutr, D. V. (2016). Education 4.0: New challenge of learning. *St. Theresa Journal of Humanities and Social Sciences*, 2(2), Article 2, 92-97.  
<http://www.stic.ac.th/ojs/index.php/sjhs/article/view/Position%20Paper3>
- Sarjun, A., & Mawarni, A. (2019). Pengembangan intervensi konseling naratif berbasis digital dalam menjawab tantangan era revolusi industri 4.0. *Indonesian Journal of Educational Counseling*, 3(3), 211–216. <https://doi.org/10.30653/001.201933.100>
- Sauri, S. (2020). Sejarah perkembangan bahasa Arab dan lembaga Islam di Indonesia. *INSANCITA*, 5(1), 73–88. <https://doi.org/10.2121/incita-jisisea.v5i1.1332>

- Setyawan, C. E., & Anwar, K. (2020). Peran bahasa Arab dalam pendidikan islam sebagai urgensitas menghadapi revolusi 4.0. *Lahjah Arabiyah: Jurnal Bahasa Arab Dan Pendidikan Bahasa Arab*, 1(1), 11–19. <https://doi.org/10.35316/lahjah.v1i1.571>
- Sharma, A. K., Bhandari, R., Pinca-Bretotean, C., Sharma, C., Dhakad, S. K., & Mathur, A. (2021). A study of trends and industrial prospects of Industry 4.0. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2021.04.321>
- Smajic, H., Sanli, A., & Wessel, N. (2021). Education 4.0: Remote learning and experimenting in laboratory for automation. Dalam M. E. Auer & D. Centea (Ed.), *Visions and Concepts for Education 4.0* (hlm. 49–55). Springer International Publishing. [https://doi.org/10.1007/978-3-030-67209-6\\_6](https://doi.org/10.1007/978-3-030-67209-6_6)
- Syafaah, D. (2019). Inovasi pembelajaran bahasa Arab pada Prodi Bahasa dan Sastra Arab IAIN Tulungagung dalam menghadapi tantangan era industri 4.0. *Prosiding Konferensi Nasional Bahasa Arab*, 5(5), 849–859. <http://prosiding.arab-um.com/index.php/konasbara/article/view/556>
- Syamsuar, S., & Reflianto, R. (2019). Pendidikan dan tantangan pembelajaran berbasis teknologi informasi di era 4.0. *E-Tech: Jurnal Ilmiah Teknologi Pendidikan*, 6(2). <https://doi.org/10.24036/et.v2i2.101343>
- Teo, T., Unwin, S., Scherer, R., & Gardiner, V. (2021). Initial teacher training for twenty-first century skills in the Fourth Industrial Revolution (IR 4.0): A scoping review. *Computers & Education*, 170, 104223. <https://doi.org/10.1016/j.compedu.2021.104223>
- Venkitakrishnan, R. P. (2021). Curriculum Based Accessible Learning for Schools Using ICT Methods. Dalam M. E. Auer & D. Centea (Ed.), *Visions and Concepts for Education 4.0* (hlm. 24–31). Springer International Publishing. [https://doi.org/10.1007/978-3-030-67209-6\\_3](https://doi.org/10.1007/978-3-030-67209-6_3)
- Wargadinata, W., Maimunah, I., Febriani, S. R., & Humaira, L. (2020). Mediated Arabic language learning for higher education in covid-19 situation. *Izdihar: Journal of Arabic Language Teaching, Linguistics, and Literature*, 3(1), 59–78. <https://doi.org/10.22219/jiz.v3i1.11862>
- Widaningsih, I. (2019). *Strategi dan inovasi pembelajaran bahasa Indonesia di era revolusi 4.0*. Uwais Inspirasi Indonesia. <https://jurnal.univpgri-palembang.ac.id/index.php/Prosidingpps/article/view/3792>

- Yuliati, Y., & Saputra, D. S. (2019). STEM EDUCATION: Inovasi pembelajaran sains di era 4.0. *Prosiding Seminar Nasional Pendidikan, 1*, 1504–1509.  
<https://prosiding.unma.ac.id/index.php/semnasfkip/citationstylelanguage/get/apa?submissionId=220>
- Yusuf, A. M. (2016). *Metode Penelitian Kuantitatif, Kualitatif & Penelitian Gabungan*. Prenada Media.
- Zainuri, M. (2019). Perkembangan bahasa Arab di Indonesia. *Tarling : Journal of Language Education, 2*(2), 231–248.  
<https://doi.org/10.24090/tarling.v2i2.2926>