ISSN: 2442-3750 (print) ISSN: 2527-6204 (online) Volume 8, Issue 3, November 2022

Nationally Accredited based on the Decree of the Minister of Research, Technology and Higher Education of Indonesia, Number 105/E/KPT/2022 as a SINTA 2 journal (2021-2026).

JPBI (Jurnal Pendidikan Biologi Indonesia), ISSN 2442-3750 (print); ISSN 2527-6204 (online), publishes a scientific papers on the results of the study/research and review of the literature in the sphere of biology education in primary education, secondary education, and higher education. Additionally, this journal also covers the issues on environmental education. This journal collaborates with Asosiasi Lesson Study Indonesia (ALSI)/Indonesian Association of Lesson Study. Editor accepts the article has not been published in other media with the writing format as listed on page manuscript writing guidelines.

JPBI (Jurnal Pendidikan Biologi Indonesia) was established in 2015, published three times a year, on March, July, and November. Started by Volume 3, Number 3, November 2017, the journal was only published by using one language namely English. The journal has been indexed in ERIC, DOAJ, BASE, Garuda, Google Scholar, SINTA, and others.

JPBI (Jurnal Pendidikan Biologi Indonesia), in English is the "Indonesian Journal of Biology Education". The word "Indonesia" does not mean that the article is only written by an author from Indonesia, but it is more meaningful: (1) the journal publisher is from Indonesia and (2) the article needs to be related to conditions in Indonesia or countries that have the same conditions so that the article is expected to have implications and contributions to overcome Biology Education problems in Indonesia or possibilities to be applied in Indonesia.

Editorial Team

Editor-in-Chief

Prof. Dr. Hadi Nur, Scopus ID: 6602169746; Department of Chemistry, Universitas Negeri Malang, East Java, Indonesia

Managing Editor

Assoc. Prof. Dr. Atok Miftachul Hudha, Scopus ID: 57209580278; Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia

Section/Handling Editor

- 1. Mr H. Husamah, Scopus ID: 57195803428; Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia
- 2. Mrs Diani Fatmawati, Scopus ID: 57188975423; Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia
- 3. Mr Ahmad Fauzi, Scopus ID: 57190423577; Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia

Editorial Advisory Regional Africa

Prof. Dr. Anthony Kudjo Donkor, Scopus ID: 55794169000; University for Development Studies, Tamale, Ghana

Editorial Advisory Regional America and Europe

Assoc. Prof. Dr Siti N. Hidayati, Scopus ID: 6602160347; Department of Biology, Middle Tennessee State University, Murfreesboro, United States

Editorial Advisory Regional South Asia

Dr. Shahin Gavanji, Scopus ID: 54883969200; Chairman of World Academy of Medical Sciences (WAMS); Department of Biotechnology, Faculty of Advanced Sciences and Technologies, University of Isfahan, Isfahan, Iran, Islamic Republic of

Editorial Advisory Regional Southeast Asia

Prof. Dr. Henita Rahmayanti, Scopus ID: 57193697371, Department of Population and Environmental Education, Universitas Negeri Jakarta, The Special Capital of Jakarta, Indonesia

Editorial Board

- Prof. Dr. Nuryani Y Rustaman, Scopus ID: 55872695700; Science Education Departement, Indonesia University of Education (UPI), West Java, Indonesia
- Prof. Dr. Nobuyasu Katayama, Scopus ID: 7102706409; Tokyo Institute for Biology Education; and Department of Biology, Faculty of Education, Tokyo Gakugei University, Koganei, Japan, Japan
- Prof. Dr. Dongryeul Kim, Scopus ID: 57037347100, Biology Education Major, Department of Science Education, College of Education, Daegu National University of Education, Daegu, Korea, Republic of
- Prof. Dr. Animesh Ku. Mohapatra, Scopus ID: 35729036800; Department of Life Science, Regional Institute of Education (NCERT), Bhubaneswar, Odisha, India

- Prof. Dr. Aloysius Duran Corebima, Scopus ID: 56857563800; Department of Biology, Universitas Kanjuruhan Malang, Malang, East Java; Prof. Emiritius at Universitas Negeri Malang, Indonesia
- Prof. Dr. Muhammad Faizal A. Ghani, Scopus ID: 49861280500; Department Of Educational Management, Planning, and Policy Faculty Of Education, University of Malaya, Kuala Lumpur, Malaysia
- Prof. Dr. Imran Parvez, Scopus ID: Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh
- Assoc. Prof. Ziyn Engdasew, SCOPUS ID: 56006357200; School of Educational Sciences, Adama Science and Technology University, Ethiopia
 Assoc. Prof. Dr Siti N. Hidayati, Scopus ID: 6602160347; Department of Biology, Middle Tennessee State University, Murfreesboro, United
- States
 Assist. Prof. Dr Hidayah Binti Mohd Fadzil, Scopus ID: 56256057000; Department of Mathematics and Science Education, Faculty of Education, University of Malaya, Kuala Lumpur, Malaysia
- Assit. Prof. Pratchayapong Yasri, Scopus ID: 36543463100; Institute for Innovative Learning, Mahidol University, Nakhon Pathom, Thailand
- Assoc. Prof. Dr. Ruqiah Ganda Putri Panjaitan, Scopus ID: 55656556500, Biology Education Program, Mathematics and Natural Science Education Department, Teaching and Education Faculty, Universitas Tanjungpura, Indonesia
- Assoc. Prof. Dr Puguh Karyanto, Scopus ID: 57202219619, Department of Biology Education, Faculty of Teacher Training and Education, Universitas Sebelas Maret, Surakarta, Central Java; Head of Indonesian Consortioum for Biology Education, Indonesia
- Assoc. Prof. Dr. Agus Sutanto, Scopus ID: 57210971026; Department of Biology Education, University of Muhammadiyah Metro, Lampung, Indonesia
- Assoc. Prof. Dr. Yuni Pantiwati, Scopus ID: 57190660805, Biology Education, Postgraduate, Universitas Muhammadiyah Malang, Indonesia
- Assoc. Prof. Dr. Marheny Lukitasari, Scopus ID: 57201676274; Department of Biology Education, University of PGRI Madiun, East Java, Indonesia
- Mr Ilmi Zajuli Ichsan, Scopus ID: 57209737062; Department of Biology Education, Faculty of Mathematics and Sciences, Universitas Negeri Jakarta, Special Region of Jakarta, Indonesia

Copy Editor and Proofreader

- Assist. Prof. Tien Tien Lee, Ph.D; Scopus ID: 55220444400; Department of Chemistry; Faculty of Science & Mathematics; Sultan Idris Education University, Malaysia
- Fuad Jaya Miharja, Scopus ID: 57208113299, Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia
- Dwi Setyawan, Scopus ID: 57201433886, Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia
- Dr Arsad Bahri, Scopus ID: 56857333400; Department of Biology, State University of Makassar (UNM), South Sulawesi, Indonesia

Administration

- 1. Tutut Indria Permana, Scopus ID: 56598093500; Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia
- 2. Fendy Hardian Permana, Scopus ID; Department of Biology Education, University of Muhammadiyah Malang, East Java, Indonesia
- 3. Mr. Moh Mirza Nuryady, Scopus ID; 56809465100, Department of Biology Education, Universitas Muhammadiyah Malang, ID, Indonesia

Editorial Office

Department of Biology Education, Faculty of Teacher Training and Education, University of Muhammadiyah Malang 3rd Campus, 1st Floor, BioEdu Room, Tlogomas Street No. 246 Malang, East Java, Indonesia Postal Code: 65144 Phone: +62341- 464318 Ext.120 Fax: 0341- 460782 E-mail: jpbi@umm.ac.id / journal.educationalbiology@gmail.com Website: http://ejournal.umm.ac.id/index.php/jpbi

TABLE OF CONTENT

The inquiry investigation group learning model: Improving students' critical thinking skills, cognitive learning outcomes, and scientific attitudes	205-215
Mery Pattipeilohy, Dominggus Rumahlatu, Sriyanti, I. A Salmanu, Kristin Sangur Implementation of free inquiry approach based on blended learning on creative thinking and student collaboration skills	216-225
E. Ernawati, Tri Maniarta Sari	
Biology learning tasks variation during COVID-19 pandemic and its effect on	226-235
students' self-efficacy	
Dewi Utami Tuzzahra, Adi Rahmat, Yanti Hamdiyati	
Environmental literacy of biology teacher candidates in supporting the Walisongo	236-245
Eco Green Campus program	
Ndzani Latifatur Rofi'ah, Noor Amalia Chusna	
The effect of problem-based learning during the pandemic on self-confidence and	246-254
social interaction of high school student	
Siti Latifah Nursa'idah, Romy Faisal Mustofa, Egi Nuryadin	
The environmental attitude of the prospective biology teachers in Indonesia	255-264
Abdulkadir Rahardjanto, H. Husamah, Samsun Hadi, Nurdiyah Lestari, Diani Fatmawati	005 074
Learning assessment model in biology education during the COVID-19 pandemic Yuni Pantiwati, Tasya Novian Indah Sari, Mia Nurkanti	265-274
Improving critical thinking and problem-solving skills through POGIL combined with	275-286
digital mind map	
Mafazatud Diniyyah, Herawati Susilo, B. Balqis, Ahmad Kamal Sudrajat	
Revealing the effect of local-based teaching materials toward scientific reasoning,	287-295
argumentation, and problem-solving in biology classroom	
Maisuna Kundariati, Lailatul Maghfiroh, Sri Endah Indriwati, Fatchur Rohman, Bagus Priambodo	
Implementation of the student facilitator and explaining model assisted by media	296-301
game on the students' explaining skills	
Prathini Khafifah Handayani, Asep Ginanjar Arip, Sofyan Hasanuddin Nur	