

DAFTAR PUSTAKA

- Abidin, H.Z., Andreas, H., Gamal, M., Hendrasto, M., Suganda, O.K., Purbawinata, M.A., Meilano, I., & Kimata, F. (2006). The Deformation of Bromo volcano (Indonesia) as detected by GPS surveys methods. *Journal of Global Positioning System*. Vol. 3, no. 1-2, p (16-24).
- Abou Najm, M.R., Mohtar, R.H., Cherkauer, K.A., French, B.F. (2010). Effect of Integrating Hydrologic Scaling Concepts on Students Learning and Decision Making Experiences. *Advances in engineering Education*, vol. 02, issue 01-p11.
- Adair, J. (2007). *Decision Making and Problem Solving Strategies*. United States: Kogan Page.
- Adetunji, O.O., Ba, J.C.M., Ghebreab, W., Joseph, J.F., Mayer, L.P., & Levine, R. (2012). Geoscience awareness program: A program for broadening participation of students in geosciences. *Journal of Geoscience Education* 60, p (234-240).
- Alberico, I., Petrosino, P., & Lirer, L. (2011). Volcanic hazard and risk assessment in a multi-source volcanic area: the example of Napoli city (Southern Italy). *Nat. Hazards Earth Syst. Sci.*, 11, p (1057-1070).
- Almquist, H., Stanley, G., Blank, L., Hendrix, M., & Rosenblatt, M. (2011). An integrated field-based approach to building teachers' geoscience skill. *Journal of Geoscience Education* 59, p (31-40).
- American Geoscience Institute (AGI). (2013). Earth and Space Science Education in US Secondary Schools. Key Indicators & trends. www.geoentr.org.
- Armienta, M.A., Cruz-Reyna, D., Cruz, O., Ceniceros, N., Aguayo, A., & Marin, M. (2011). Flouride in ash Leachates: Environmental implications at Popocatepetl Volcano, Central Mexico. *Natural Hazards and Earth System Science*, 11, p (1949-1956).
- Anderson, O.W., & Krathwohl, D.R. (2001). *A Taxonomy for Learning, Teaching, and Assessing. A revision of Bloom's taxonomy of educational objectives*. New York: David McKay Company.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu165

- Antwi, S.K., & Hamza, K. (2015). Qualitative and Quantitative research paradigm in business. *European Journal of Business and Management*. www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.7, No.3, 2015.
- Apedoe, X.S., Walker, S.E., & Reeves, T.C. (2006). Integrating Inquiry-based Learning into Undergraduate Geology. *Journal of Geoscience Education*, v. 54, n. 3, p. 414-421.
- Arikan, E.E., & Ünal, H. (2015). Investigation of Problem-Solving and Problem-Posing Abilities of Seventh-Grade Students. *Educational Sciences: Theory & Practice*. 15(5), p(1403-1416).
- Baber, L.D., Pifer, M.J., Colbeck, C., & Furman, T. (2010). Increasing diversity in the geoscience: recruitment programs and student self-efficacy. *Journal of Geoscience Education* v. 58, n.1, p (32-42).
- Bakkour, D., Enjolras, G., Kast, R., & Thouret, J.C. (2013). *The Adaptive Governance of Natural Disasters: Insight from the 2010 Mount Merapi Eruption in Indonesia*. Document de Recherche Unite de Formation et de Recherche d' Economia-Brazil.
- Barclay, E.J., Renshaw, C.E., Taylor, H. A., & Bilgie, A.R. (2011). Improving decision making skill using an online volcanic crisis simulation: impact of data presenting format. *Journal of Geoscience Education*. 59, p (85-92).
- Becattini, N., Cascini, G., & Rotini, F. (2015). OTSM-TRIZ Network of Problems for evaluating the design skills of engineering students. World Conference: TRIZ FUTURE, TF 2011-2014. *Procedia Engineering*, 131, 689 – 700.
- Becerril, L., Bartolini, S., Sobradelo, R., Marti, J., Morales, J.M., & Galindo, I. (2014). Long-term volcanic hazard assessment on El Hierro (Canary Islands). *Nat. Hazards Earth Syst. sci.*, 14, p (1853-1870), doi:10.5194/nhess-14-1853-2014.
- Beckem II, J.M., & Watkins, M. (2012). Bringing life to learning: immersive experiential learning simulations for online and blended courses. *Journal of Asynchronous Learning Networks*. Vol. 16. Issue 5, p(61-70).

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu166

- Bell, A.F., Kilburn, C.R.J., & Main, I.G. (2015). *Volcanic eruption, real forecasting of*. Encyclopedia of Earthquake Engineering, doi:10.1007/978-3-642-36197-5_43-1. © Springer-Verlag Berlin Heidelberg 2021.
- Bell, A.F., Naylor, M., Heap, M.J., & Main, I.G. (2011). Forecasting volcanic eruption and other material failure phenomena: an evaluation of the failure forecast method. *Geophysical Research Letters*. 38, L15304, doi:10.1029/2011GL048155.
- Betzner, J.P., & Marek, E.A. (2014). Teacher and Student Perceptions of Earth Science and Its Educational Value in Secondary Schools. *Creative Education*, 5, p(1019-1031).
- Bird, D.K., & Gísladóttir, G. (2012). Residents' attitudes and behavior before and after the 2010 Eyjafjallajökull eruptions-a case study from southern Iceland. *Bull Volcanol*, 74, p (1263-1279), doi:10.1007/s00445-012-0595-z.
- Blake, R.A., Liou-Mark, J., & Chukwigwe, C. (2013). An effective model for enhancing underrepresented minority participation and success in geoscience undergraduate research. *Journal of Geoscience Education*. 61, p(405-414).
- Bockheim, J.G. (2013). Paleosols in the Transantarctic Mountains: indicators of environmental change. *Solid Earth*, 4. p(451-459), doi:10.5194/se-4-451-2013.
- Bodzin, A.M., and Anastasio, D. (2006). Using Web-based GIS for Earth and Environmental Systems Education. *Journal of Geoscience Education*, v. 54, n. 3, p. 297-300.
- Brahmantyo, B., Mihardja, D., K., Santoso, B., & Tjasyono, B. (2009). *Pengantar Ilmu dan Teknologi Kebumian*. Fakultas Ilmu dan Teknologi Kebumian. Institut Teknologi Bandung.
- Brey, P. (2008). *Virtual Reality and Computer Simulation*, Ed. Himma, K. and Tavani, H., Handbook of Information and Computer Ethics, John Wiley & Sons.
- Bronto, S. (2006). Fasies gunungapi dan aplikasinya. *Jurnal Geologi Indonesia*. Vol. 1, no. 2, p(59-71).

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu167

- Brunkhorst, B.J. (2002). A working model for evaluating academic excellence in geoscience education, undergraduate, and K-12. *Journal of Geoscience Education*, v. 50, n. 1, p(72-77).
- Buchsbaum, D., Blumberg, B., Breazeal, C., & Meltzoff, A.N., (2005). *A simulation-theory inspired social learning system for interactive characters.* Paper presented at the 14th IEEE International Workshop on Robot and Human Interactive Communication (RO-MAN 2005), Nashville, TN.
- Buddington, A.M. (2006). A field-based, writing intensive undergraduate course on Pacific Northwest Geology. *Journal of Geoscience Education*, 54 (5), 584-587
- Burton, E.P., & Mattietti, G.K. (2011). Cognition and self-efficacy of stratigraphy and geologic time: implications for improving undergraduate student performance in geological reasoning. *Journal of Geoscience Education* 59, p (163-173).
- Çalışkan, O. (2011). Virtual field trips in education of earth and environmental science. *Procedia Social and Behavioral Sciences*, 15, 3239-3243.
- Carayannis, G.P. (1992). The tsunami generated from the eruption of the volcano of Santorin in the Bronze Age. *Natural Hazards* 5, p (115-123). Kluwer Academic Publishers.
- Carneiro, C.D., & Gonçalves, P.W. (2011). *Earth System Science for undergraduate Geology and Geography courses.* Campinas, Brazil. *TERRÆ* 7(1-2):29-40, 2010.
- Cessna, A. (2009). Subduction Zone. www.universitytoday.com. Diakses tanggal 27 Oktober 2014.
- Chang, C. Y. (2010). Does problem solving = prior knowledge+reasoning skill in earth science? An exploratory study. *Per Sci Educ* 40:103-116 published on line: 4.
- Church, M. (2013). Refocusing geomorphology: field work in four acts. *Geomorphology*, 200 (15), 184-192.
- Clark, S.K., Libarkin, J.C., Kortz, K.M., & Jordan, S.C. (2011). Alternative Conceptions of Plate Tectonics Held by Nonsense Undergraduates. *Journal of Geoscience Education*, 59, p(251–262).

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu168

- Comfort, L.K. (2006). Developing Decision-Making Skills for Uncertain Conditions: The Challenge of Educating Effective Emergency Managers. *Journal of Public Affairs Education*. 19(1), 53–71.
- Courtland, L. M., Connor, C., Connor, L., & Bonadonna, C. (2012) "Introducing Geoscience Students to Numerical Modeling of Volcanic Hazards: The example of Tephra2 on VHub.org," *Numeracy*: Vol. 5: Iss. 2, Article 6. DOI: <http://dx.doi.org/10.5038/1936-4660.5.2.6>
- Creswell, J.W., & Clark, V.L.P. (2007). *Designing and Conducting Mixed Methods Research*. Thousand Oaks: California.
- Creswell, J.W. (2008). *Educational Research Planning, Conducting, and Evaluating Quantitative and Qualitative Research. Third Edition*. New Jersey: Pearson Education-Upper Saddle River.
- Crosweller, H.S., Arora, B., Brown, S.K., Cottrel, E., Deligne, N.I., Guerero, N.O., Hobbs, L., & et al. (2012). Global database on large magnitude explosive volcanic eruptions (LaMEVE). *Journal of Applied Volcanology*. 1:4.
- Danks, S., & Bedford, H.E. (2011). *The ADDIE model: designing, evaluating instructional coach effectiveness*. ASQ Primary and Secondary Education Brief, Vol. 4, No. 5.
- Dohaney, J., Brogt, E., Kennedy, B., Wilson, T.M, & Lindsay, J.M. (2015). Training in crisis communication and volcanic eruption forecasting: design and evalution of authentic role-play simulation. *Journal of Applied Volcanology*. 4:12. doi:10.1186/s13617-015-00301.
- Dominick, J., Buffington, L., Rowland, L., & Warren, R. (2000). *Undergraduate research: A review of the research literature*. Diakses dari <https://view.officeapps.live.com/www.adelaide.edu>.
- Donovan, A., Eiser, J. R., & Sparks, R., S., J. (2014). Scientists' views about lay perceptions of volcanic hazard and risk. *Journal of Applied Volcanology*. 3:15 doi:10.1186/s 13617-014-0015-5.
- Dove, M.R. (2008). Perception of volcanic eruption as agent of change: on Merapi volcano, Central Java. *J. Volcanol. Geotherm*; Res 172, p(329-337).

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu169

- Doyle, E.E.H., McClure, J., Paton, D., & Johnston, D.M. (2014). Uncertainty and decision making: volcanic crisis scenarios. *International Journal of Disaster Risk Reduction* 10 p(75-101).
- Duruk, U., Akgün, A., Doğan, C., & Gülsuyu, F. (2017). Examining the Learning Outcomes Included in the Turkish Science Curriculum in Terms of Science Process Skills: A Document Analysis with Standards- Based Assessment. *International Journal of Environmental & Science Education*, v 12, no 2, p(117-142).
- Edgar, S.M., & Alexei, S.A. (2015). Knowledge in Engineering: A View from the Logical Reasoning. *International Journal of Computer Theory and Engineering*, Vol. 7, No. 4.
- Efstratia, D. (2014). Experiential education through project based learning. *Procedia - Social and Behavioral Sciences*, 152, 1256–1260.
- Egorov, Y. (2007). Tsunami wave generation by the eruption of underwater volcano. *Nat. Hazards Earth Syst. Sci.*, 7. p(65-69).
- Einarsson, P. (2008). Plate boundaries, rifts and transforms in Iceland- Reviewed research article. *JÖKULL*, no. 58, p(35-58).
- Ellison, C.J., Mahoney, J.R., & Crutchfield, J.P. (2009). *Prediction, Retrodiction and the Amount of Information Stored in the Present*. Santa Fe Institute Working Paper 09-05-017 arxiv.org:0905.3587 [cond-mat.stat-mech].
<http://csc.ucdavis.edu/~cmg/papers/pratisp.pdf>.
- Engin-Deniz, M., Ari, A., Akdeniz, S., & Özteke, H.İ. (2015). The Prediction of Decision Self Esteem and Decision Making Styles by Mindfulness. *International Online Journal of Educational Sciences*, 7 (1), 45-50
- English. M.C., & Kitsantas, A. (2013). Supporting student self-regulated learning in problem-and project-based learning. *Interdisciplinary Journal of Problem-based Learning*, 7 (2).
- Erickson, J. (2001). *Quakes, Eruptions, and Other Geologic Cataclysms. Revealing the Earth Hazards, Revised Edition*. New York: Facts on File, Inc.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu170

- ESDM. (2008). Pengenalan Gunungapi. Diakses dari <http://www.esdm.go.id>.
- Esteves, H., Fereira, P., Vasconcelos, C., & Fernandes, I. (2013). Geological Fieldwork: A Study Carried Out With Portuguese Secondary School Students. *Journal of Geoscience Education* 61, 318–325.
- Esteves, H., Fernandes, I., & Vasconcelos, C. (2015). A Field-Based Approach To Teach Geoscience: A Study With Secondary Students. *Procedia - Social and Behavioral Sciences* 19i, p(63 – 67).
- Etherington, M. B. (2011). Investigative Primary Science: A Problem-based Learning Approach. *Australian Journal of Teacher Education*, 36(9). <http://dx.doi.org/10.14221/ajte.2011v36n9.2>.
- Evans, J.D. (1996). *Straightforward Statistics for the Behavioral Sciences*. Brokes/ Cole Publishing. Pacific Grove.
- FEMA. (2005). *Decision Making and Problem Solving Independent Study*. Diakses dari <https://training.fema.gov/emiweb/downloads/is241.pdf>
- Fermeli, G., Steininger, F., Dermitzakis, M., Melendez, G., & Page, K. (2014). Literacy and students' interest on geosciences-findings and result of GEOschols project. *Geophysical Research Abstracts Vol. 16*, EGU2014-8678.
- Fillipe de Baros, J., Almeida, P.A., & Cruz, N. (2012). Fieldwork in geology: teachers' conception and practices. *Procedia-Social and Behavioral Sciences* 47, p(829-834). doi:10.1016/j.sbspro.2012.06.743.
- Fischer K., Ford, H.A., Abt, D.L., & Reyhert, C.A. (2010). The lithosphere-asthenosphere boundary. *Annu. Rev. Earth Planet. Sci.* 38, p(551-575), doi:10.1146/annurev-earth-040809-152438.
- Finucane, M.L., & Gullion, C.M. (2010). Developing a tool for measuring the decision-making competence of older adults. *Psychol Aging*, 25(2): 271–288. doi: [10.1037/a0019106](https://doi.org/10.1037/a0019106).
- Frölicher, T.L. Joos, F., & Raible, C.C. (2011). Sensitivity of atmospheric CO₂ and climate to explosive volcanic eruptions. *Biogeosciences*, 8, p(2317-2339), doi:10.5194/bg-8-2317-2011.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu171

- Frölicher, T.L., Joos, F. and Raible, C.C. & Sarmiento, J.L. (2013). Atmospheric CO₂ response to volcanic eruptions: The role of ENSO, season, and variability. *Global Biogeochemical Cycles*, Vol. 27, p(239-251). doi:10.1002/gbc.20028.2013.
- Gabler, R.E., Brazier, S., Sager, R.J., & Wise, D.L. (1982). *Essentials of Physical Geography*. Second Edition. Philadelphia: Saunders College Publishing.
- Gill, S.E., Marcum-Dietrich, N., & Becker-Klein, R. (2014). Model My Watershed: Connecting Students' Conceptual Understanding of Watersheds to Real-World Decision Making. *Journal of Geoscience Education*, 62, p(61-73).
- Gilbert, J.K. (ed.), (2005). *Visualization in Science Education*, 9 27. Diakses dari
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.461.6589&rep=rep1&type=pdf>.
- Gilbert, J.K. (2010). The role of visual representations in the learning and teaching of science: An introduction. *Asia-Pacific Forum on Science Learning and Teaching*, Volume 11, Issue 1, Foreword, p.1.
- Goert, J.D., Pallant, A.R., & Daniels, J.T.M. (2010). Unpacking inquiry skills from content knowledge in Geoscience: A research perspective with implications for assessment design. *International Journal of Learning Technologies*, 5(3), 310-334.
- Goldsmith, D.W. (2011). A Case-based Curriculum for Introductory Geology. *Journal of Geoscience Education* 59, 119–125.
- Goldsmith, S.T., Trierweiler, A., Welch, S.A., Bancroft, A.M., Von Bargen, J.M., & Carey, A. (2013). Transforming a university tradition into geoscience teaching and learning opportunity for the university community. *Journal of Geoscience Education* 61, p(280-290).
- González-Mellado, A.O. & De la Cruz-Reyna, S. (2010). A simple semi-empirical approach to model thickness of ash-deposits for different eruption scenarios. *Nat. Hazards Earth Syst. Sci.*, 10, p(2241-2257). doi:10.5194/nhess-10-2241-2010.
- Gosselin, David; Manduca, Cathy; Bralower, Timothy J.; and Mogk, David, "Transforming the Teaching of Geoscience and

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu172

- Sustainability". (2013). Papers in Natural Resources. 498. *EOS*, Vol. 94, No. 25, p (221–222).
- Grant, M.M. (2011). Learning, beliefs, and products: Students' perspectives with project-based learning. *Interdisciplinary Journal of Problem-based Learning*, 5 (2).
- Greenbank, P. (2010). *Developing Decision-making Skills in Students: an active learning approach*. Teaching and Learning Development Unit Edge Hill University.
- Gruber, F.E., & Mergili, M. (2013). Regional-scale analysis of high-mountain multi hazard and risk indicator in the Pamir (Tajikistan) with GRASS GIS. *Nat. Hazards Earth Syst. Sci*, 13. p(2779-2769). doi:10.5194/nhess-13-2779-2013.
- GSA. (2011). *Expanding and Improving Geoscience in Higher Education*. Diakses dari https://cccesd.acadiau.ca/gsa_position_paper_1.pdf
- Gudmundsson, A. (2012). Strengths and strain energies of volcanic edifices: implications for eruptions, collapse calderas, and landslides. *Nat. Hazards Earth Syst. Sci*, 12. p(2241-2258). doi:10.5194/nhess-12-2241-2012.
- Guertin, L.A. (2000). Using logic problems in introductory-level geoscience courses to develop critical reasoning and basic quantitative skills. *Journal of Geoscience Education*, v 48, p(423-427).
- Guevara-Murua, A., Williams, C.A., Hendy, E.J., Rust, A.C., & Cashman. (2014). Observation of stratospheric aerosol veil from a tropical volcanic eruption in December 1808: is the unknown~1809 eruption? *Clim.Past*, 10, p(1707-1722); doi:10.5194/cp-10-1707-2014.
- Hake, R.R. (2002). Relationship of individual student normalized learning gains in mechanics and gender, high-school physics, and pretest scores on mathematics and spatial visualization. *Physics Education Research Conference* p(1-14). Boise-Idaho
- Hallar, A.G., McCubbin, I.B., Hallar, B., Levine, R., Stockwell, W.R., Lopez, J.P., & Wright, J.M. (2010). Science in the mountains: A unique research experience to enhance diversity in the

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu173

- geosciences. *Journal of Geoscience Education*, v.58, n.2, p(95-100).
- Hamza, V.M., & Vieira, F.P. (2012). Global distribution of the lithosphere-asthenosphere boundary: a new look. *Solid Earth*. 3, p(199-212); doi:10.5194/se-3-199-2012.
- Hariyono, E. (2016). *Pengantar Geosains Fokus Kajian Gunungapi (Seri Sains Kebumian Edisi 1)*. Surabaya: Unesa University Press.
- Hariyono, E., & Liliyasari. (2017). *The characteristics of volcanic eruption in Indonesia*. In Volcanoes. In Tech Open Access. ISBN 978-953-51-5610-9.
- Hariyono, E., Liliyasari, & Madlazim. (2014). Membangun literasi geosains dalam memahami dinamika gunung berapi. *Prosiding Seminar Nasional Pendidikan IPA 2014 di Prodi Pendidikan IPA-FMIPA Unesa*. Pada tanggal 20 Desember 2014.
- Hariyono, E., Liliyasari., Tjasyono, B., & Madlazim. (2016). Volcanic eruption crisis and the challenges of geoscience education in Indonesia. *AIP Conference Proceedings* 1708 (2016), 080004; doi: 10.1063/1.4941190.
- Hariyono, E., Liliyasari., Tasyono, B., & Rusdiana, D. (2017). VLP: an interactive simple virtual model to encourage geoscience skill about volcano. *IOP Conf. Series: Journal of Physics: Conf. Series* 895 (2017) 012142; doi:10.1088/1742-6596/895/1/012142
- Harlen, W. (2010). *Principles big ideas of science education*. Published by the Association for science education college Lane, Hatfield, Herts. www.ase.org.uk.
- Harpp, K.S., & Sweeny, W.J. (2002). Simulating a volcanic crisis in the classroom. *Journal of Geoscience Education*, v. 50, n. 4, p. 410-418.
- Harpp, K.S., Koleszar, A.M., & Geist, D.J. (2005). Volcanoes in the classroom: A simulation of an eruption column. *Journal of Geoscience Education*, v. 53, n.2, p(173-175).
- Haynes, K., Barclay, J., & Pidgeon, N. (2008). Whose reality counts? Factors affecting the perception of volcanic risk. *Journal of Volcanology and Geothermal Research*. 172 (2008) 259–272.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu174

- Hicks, A., Barclay, J., Simmons, P., & Loughlin, S. (2014). An interdisciplinary approach to volcanic risk reduction under conditions of uncertainty: a case study of Tristan da Cunha. *Nat. Hazards Earth. Syst. Sci.*, 14. p(1871-1887); doi:10.5194/nhess-14-1871-2014.
- Hope, M. (2009). The importance of direct experience: a philosophical defense of field work in human geography. *Journal of Geography in Higher Education*, 33 (2), 169–182.
- Hopper, L.J., Schumacher, C., & Stachnik, P. (2013). Implementation and Assessment of undergraduate experiences in SOAP: An atmospheric science research and education program. *Journal of Geoscience Education*, v. 61, p. 415-427.
- Huang, J., Zhao, D., & Zheng, S. (2002). Lithospheric structure and its relationship to seismic and volcanic activity in southwest China. *Journal of Geophysical Research*, vol. 107, no. b10, 2255; doi:10.1029/2000JB000137.
- Ibrahim, G., Subardjo., & Sendjaja, P. (2010). *Tektonik dan Mineral di Indonesia*. Jakarta: Badan Meteorologi Klimatologi dan Geofisika.
- ICSU. (2012). *Report of the ICSU Ad-hoc. Review Journal on Science Education International Council for Science*. Paris.
- IGEO. (2014). 7th International Conference on Geoscience Education (GeoSciEd). September 5-9 September 2014. Hyderabad India.
- Iguchi, M., Ishihara, K., Surono, & Hendrasto, M. (2011). Learn from 2010 eruption at Merapi and Sinabung volcanoes in Indonesia. *Annals of Disas. Prev. Rest. Inst., Kyoto Univ.*, 54B.
- Iles, C. E., G. C. Hegerl, A. P. Schurer, and X. Zhang (2013), The effect of volcanic eruptions on global precipitation, *J. Geophys. Res. Atmos.*, 118, 8770–8786, doi:10.1002/jgrd.50678.
- Ishiyama, J. (2002). Does early participation in undergraduate research benefit social science and humanities students? *College Student Journal*, 36 (3), 380-386.
- Jenkins, S.F., Barsotti, S., Hincks, T.K., Neri, A., Phillips, J.C., Sparks, R.S.J., Sheldrake, T., & Vougioukalakis, G. (2015). Rapid emergency assessment of ash and gas hazard for future eruptions at

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu175

- Santorini Volcano, Greece. *Journal of Applied Volcanology*. 4.16. doi:10.1186/s13617-015-0033-y.
- Jerald, C.D. (2009). *Defining a 21st century education*. The center for public education. <http://www.centerforpubliceducation.org>.
- Jóhannesdóttir, G., & Gisladóttir, G. (2010). People living under threat of volcanic hazard in southern Iceland: vulnerability and risk perception. *Nat. Hazards Earth Syst. Sci.* 10, p(407-420).
- Kalelioğlu, F., & Gülbahar, Y. (2014). The Effects of Teaching Programming via Scratch on Problem Solving Skills: A Discussion from Learners' Perspective. *Informatics in Education*, 2014, Vol. 13, No. 1, 33–50.
- Karamustafaoğlu, S. (2011). Improving the Science Process Skills Ability of Science Student Teachers Using I Diagrams. *Eurasian J. Phys. Chem. Educ.* 3(1):26-38, 2011.
- Kelman, I., & Mather, T.A. (2008). Living with volcanoes: The sustainable livelihoods approach for volcano-related opportunities. *Journal of Volcanology and Geothermal Research* 172, p(189–198).
- Kelso, P.R., & Brown, L.M. (2008). A geoscience curriculum for the 21st century. The Leading Edge. *The society exploration geophysicist*, p(1334-1337).
- Kemp, D.D. (2004). *Global Environmental Issue- A Climatological Approach. 2nd Edition*. New York: Taylor & Francis e-Library.
- Khan, S. (2012). Disasters: contribution of hazards cape and gaps in response practices. *Nat. Hazards Earth Syst. Sci.*, 12. p(3775-3787). doi:10.5194/nhess-12-3775-2012.
- King, C. (2008). Geoscience education: an overview. *Studies in Science Education*. Vol. 44. No. 2. p (187-222).
- King, T.A., & Tarrant, R. A. C. (2013). Children's knowledge, cognitions and emotions surrounding natural disasters: An investigation of year 5 students, Wellington, New Zealand. *Australasian Journal of Disaster and Trauma Studies*. Volume 2013-1.
- Kireeti, A.S., & Reddy, D.S. (2015). Case based learning (CBL), a better option to traditional teaching for undergraduate students in

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu176

- curriculum of Paediatrics. *Asian Journal of Biomedical and Pharmaceutical Sciences*, 5(45), 2015, 39-41.
- Koretsky, C.M., Petcovic, H.L., & Rowbotham, K.L. (2012). Teaching environmental geochemistry: An authentic inquiry approach. *Journal of Geoscience Education* 60 (311-324).
- Kortz, K.M., and Kraft, K.J. (2016). Geoscience Education Research Project: Student Benefits and Effective Design of a Course-Based Undergraduate Research Experience. *Journal of Geoscience Education*, 64 (1), 24-36.
- Kraft, J van der H., Srogi, L., Husman, J., Semken.S., & Fuhrman, M. (2011). Engaging students to learn through the affective domain: A new framework for teaching in the geosciences. *Journal of Geoscience Education* 59, p(71-84).
- Krishnan, V. (2013). *The Early Child Development Instrument (EDI): an item analysis using classical test theory (CTT) on Alberta's data*. Early Child Development Mapping (ECMap) Project. Community Partnership (CUP), Faculty of Extension, University of Alberta. ItemAnalysisCTTCUPWebsite_10April13.pdf.
- Kurdziel, J.P., & Libarkin, J.C. (2002). Research methodologies in science education: students' ideas about the nature of science. *Journal of Geoscience Education*, v.50 n.3 p(332-329).
- Kusky, T. (2008). *The Hazardous Earth Volcanoes Eruption and Other Volcanic Hazards*. Facts on File, Inc: New York.
- LaDue, N.D., & Manning, C.B. (2015). Next Generations Science Standard: a call to action for the geoscience community. *GSA Today*, v.25, n.2, doi:10.1130/GSATG233GW.1.
- Lallemand, S., Heuret, A., Faccenna, C., & Funiciello, F. (2008). Subduction dynamics as revealed by trench migration. *Tectonics*, 27, TC3014, doi:10.1029/2007TC002212.
- Laštoviča, J., Beig, J., & Marsh, D.R. (2014). Response of the mesosphere-termosphere-ionosphere system to global change-CAWSES-II contribution. *Progress in Earth and Planetary Science*. 1:21.
- Lee, J.S., Blackwell, S., Drake, J., & Moran, K. A. (2014). Taking a leap of faith: Redefining teaching and learning in higher education

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu177

- through project-based learning. *Interdisciplinary Journal of Problem-based Learning*, 8 (2).
- Lewis, E.B., & Baker, D. R. (2010). A Call for a New Geoscience Education Research Agenda. *Journal of Research in Science Teaching* 47:2 (2010), pp. 121–129; doi: 10.1002/tea.20320. Copyright © 2009 Wiley Periodicals, Inc.
- Leydens, J.A., & Santi, P. (2006). Optimizing Faculty Use of Writing as a Learning Tool in Geoscience Education. *Journal of Geoscience Education*, 54 (4), 491-502.
- Libarkin, J.C., & Kurdziel, J.P. (2006). Ontology and the teaching of earth system science. *Journal of Geoscience Education*, v. 54, n.3. p(408-413).
- Libarkin, C.J., & Schneps, M.H. (2012). Elementary children's retrodictive reasoning about earth science. *International Electronic Journal of Elementary Education*. 1, p(47-62).
- Liliawati, W. (2014). *Pengembangan Program Perkuliahian IPBA Terintegrasi yang Mengakomodasikan Kecerdasan Majemuk Berorientasi Penanaman Karakter Diri dan Penguasaan Konsep*. Universitas Pendidikan Indonesia. Disertasi.
- Locke, S., Libarkin J., & Chang, C.Y. (2012). Geoscience education and global development. *Journal of Geoscience Education* 60, p(199-200).
- Luo, W., Pelletier, J. Duffin K., et al. (2016). Advantages of computer simulation in enhancing student's learning about landform evolution: a case study using the Grand Canyon. *Journal of Geoscience Education*, v. 64, p. 60-73.
- Markley, C.T., Miller, H., Kneeshaw, T., & Herbert, B.E. (2009). The Relationship between Instructors' Conceptions of Geoscience Learning and Classroom Practice at a Research University. *Journal of Geoscience Education*, v. 57, n. 4, p. 264-274.
- Martin, M.O., Mulis, I.V.S., Foy, P., & Stanco, G.M. (2012). *TIMSS 2011 International Results In Science*. Boston College: TIMSS and PIRLS International Study Centre.
- McGregor, S.L.T., & Murnane, J. A. (2010). Paradigm, methodology and method: Intellectual integrity in consumer scholarship.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu178

- International Journal of Consumer Studies*, 34(4), 419-427.
Posted with Permission from WileyBlackwell.
- McLellan, & Christine V. (2006). *The Nature of Science and the Scientific Method*.
The Geological Society of America, August 2006,
<http://www.geosociety.org/educate/NatureScience>.
- Metas, A.C., & Constantinou, C.P. (2006). *The Development of Optimisation Decision-making Skills Within the Area of Technology Education Through a Technology Fair*. International Research Conference 2006.
https://dspace.lboro.ac.uk/dspace/bitstream/2134/2855/1/mettasco_nstantinou.pdf
- Mettas, A., & Norman, P.E. (2011). A grounded theory approach to the development of a framework for researching children's decision-making skills within design and technology education. *Design and Technology Education: An International Journal* 16.2.
- Mishra, S., & Iyer, S. (2015). An exploration of problem posing-based activities as an assessment tool and as an instructional strategy. *Research and Practice in Technology Enhanced Learning*. 10:5 DOI 10.1007/s41039-015-0006-0.
- Mogk, D.W., & Goodwin, C. (2012). Learning in the field: synthesis of research on thinking and learning in the geoscience. *Geological Society of America Special Papers* 2012; 486; 131-163. doi: 10.1130/2012.2486(24).
- Mora, G. (2010). Peer instruction and lecture tutorials equally improve student learning in introductory geological classes. *Journal of Geoscience Education*, v. 58, n. 5, p. 286-296.
- Murray, K.S., Napierlski, J., Luera, G., Thomas-Brown, K.,& Reynolds-Keefer, L. (2012). Brodening diversity in the geoscience through teacher-student workshops that emphasize community-based research project. *Journal of Geoscience Education* 60, p(179-188).
- Nadelson, L.S, & Viskupic, K. (2010). Perceptions of the nature of science by geoscience students experiencing two different courses of study. *Journal of Geoscience Education*, v.58, n.5, p(275-285).

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu179

- Naikar, N. (2017). Cognitive work analysis: an influential legacy extending beyond human factors and engineering. *Applied Ergonomics*, 59, 528-540.
- National Research Council. (2001). *Basic research opportunities in Earth sciences*. Washington, DC: National Academy Press.
- Nelson, A.S. (2012). *Continental Drift, Sea Floor Spreading and Plate Tectonics*.
- Nelson, A.S. (2013). *Volcanic Landforms, Volcanoes and Plate Tectonics*.
- Nelson, K.G., Huysken, K., & Kilibarda, Z. (2010). Assessing the impact of geoscience laboratories on student learning: Who benefits from introductory labs? *Journal of Geoscience Education* 58, p(43-50).
- Neenan, E.E., & Roche, J. (2016). Geoscience Education in an Irish Context: A Need for Research. *Journal of Geoscience and Environment Protection*, 2016, 4, 1-8.
- Newcombe, N.S. (2012). *Two ways to help students with spatial thinking in geoscience*, in Kastens, K.A., and Manduca, C.A., eds., *Earth and Mind II: A Synthesis of Research on Thinking and Learning in the Geosciences*: Geological Society of America Special Paper 486, p. 85–86, doi:10.1130/2012.2486(14).
- NRC. (2012). *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*. Washington DC: The National Academic Press.
- Nunn, J.A., & Braud, J. (2013). A service-learning project volcanoes to promote critical thinking and the earth science literacy initiative. *Journal of Geoscience Education* 61, p(28-36).
- Oppenheimer, C. (2003). Climatic, environmental and human consequences of the largest known historic eruption: Tambora volcano (Indonesia) 1815. *Progress in Physical Geography* 27,2, p(230-259), doi:10.1191/0309133303pp379ra.
- Ormand, C.J., Manduca, C., Shipley, T.F., Tikoff, B., Hardwood, C.L., Atit, K., & Boone, A.P. (2014). Evaluating Geoscience Students' Spatial Thinking Skills in a Multi-Institutional Classroom Study. *Journal of Geoscience Education* 62, 146–154.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu180

- Palma, J.L., Courtland, L., Charbonnier, S., Tortini, R., & Valentine, G.A. (2014). Vhub: a knowledge management system to facilitate online collaborative volcano modeling and research. *Journal of Applied Volcanology*. 3:2.
- Parham Jr, T.L., Cervato, C., Gallus Jr, W.A., Larsen, M., Hobbs, J., Stelling, P., Greenbowe, T., Gupta, T., Knox, J.A., & Gill, T.E. (2010). The InVEST volcanic concept survey: Exploring student understanding about volcanoes. *Journal of Geoscience Education*, v. 58, n. 3, p(177-187).
- Park, M., Park, D., & Lee, R.E. (2009). A comparative analysis of earth science curriculum using inquiry methodology between Korean & the U.S. textbook. *Eurasia Journal of Mathematics, Science, & Technology Education*. 5 (4), p(395-441).
- Park, D., & Park, M. (2013). Examining the futures of earth science logical reasoning and authentic scientific inquiry demonstrated in a high school earth science curriculum. A case study. *Journal of Geoscience Education*, v. 61, p. 364-377.
- Petcovic, H.L., & Stokes, A. (2014). Geoscientists' perceptions of the value of undergraduate field education. *GSA Today*, 24 (7). doi: 10.1130/GSATG196A.1.
- Phillipson, G., Sobradelo, R., & Gottsmann, J. (2013). Global volcanic unrest in the 21st century: an analysis of the first decade. *Journal of Volcanology and Geothermal Research*. 264, p(183-196).
- Piburn, M.D., Kraft, K.H., & Pacheco, H. (2011). *A New Century for Geoscience Education Research*. Committee on the Status, Contributions, and Future Directions of Discipline-Based Education Research.
- Potter, S.H., Jolly, G.E., Neall, V.E., Johnston, D.M., & Scott, B.J. (2014). Communicating the status of volcanic activity: revising New Zealand's volcanic alert level system. *Journal of Applied Volcanology*, 3:14.
- Raga, G.B., Baumgardner, D., Ulke, A.G., Torres Brizuela, M., & Kucienska, B. (2013). The environmental impact of the Puyehue-Cordon Caulle 2011 volcanic eruption on Buenos Aires. *Nat.*

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu181

- Hazards Earth Syt. Sci.*, 13. p(2319-2330), doi:10.5194/nhess-13-2319-2013.
- Ramamurthy, M.K. (2006). A new generation of cyberinfrastructure and data services for earth system science education and research. *Adv. Geosci.*, 8, 69–78.
- Rankey, E.C., & Ruzeck, M. (2006). Symphony of the Spheres: Perspectives on Earth System Science Education. *Journal of Geoscience Education*, v. 54, n. 3, May, 2006, p. 197-201.
- Reger, J.P. (1983). Teaching Decision Making in Geoscience Courses. *Journal of Geological Education*, 1983, v. 31, p. 304.
- Reich, M., Hough, R.M., Deditius, A., Utsunomiya, S., Ciobanu, C.L., & Cook, N.J. (2011). Nanogeoscience in ore systems research: Principles, methods, and applications. Introduction and preface to the special issue. *Ore Geology Reviews* 42 (1-5).
- Reisberg, L. (1998). Research by undergraduate proliferates, but is some of it just glorified homework? *Chronicle of Higher Education*, 44 (37), A45-A46.
- Remmen, K.B., & FrØyland, M. (2013). How students can be supported to apply geoscience knowledge learned in the classroom to phenomena in the field: An example from high school students in Norway. *Journal of Geoscience Education* 61. P(437-452).
- Renshaw, C.E. (2016). Looking back: What do geoscience graduates value most from their academic experience?. *GSA Today*, v. 26, no. 6, doi: 10.1130/GSATG253GW.1.
- Roberts, D., Bradley, E., Roth, K., Eckmann, T., & Still, C. (2010). Linking physical geography education and research through the development on an environmental sensing network and project based learning. *Journal of Geoscience Education*, v. 58, n. 5, p(262-274).
- Robock, A. (2000). Volcanic eruptions & climate, in *Volcanism and the Earth's Atmosphere*, *Geophys. Monogr.* vol. 139. Edited by A. Robock and C. Oppenheimer, pp. 191-219, AGU, Washington, D.C. ISBN: 0-87590-998-1.
- Ruddell, B.L. (2013). Applying information theory in the geosciences to quantify process uncertainty, Feedback, Scale. *Eos*, Vol. 94, No. 5.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu182

- Schwendtner, B., Papathoma-Köhle, M., & Glade. (2013). Risk evolution: how can changes in the built environment influence the potential loss of natural hazards? *Nat. Hazards Earth Syst. Sci.*, 13, p(2195-2207). doi:10.5194/nhess-13-2195-2013.
- Scott, K.S. (2014). A multilevel analysis of problem-based learning design characteristics. *The Interdisciplinary Journal of Problem-Based Learning*, 8.(2).
- Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, *Interpretive, and Critical Research Paradigms*. *English Language Teaching*; Vol. 5, No. 9; 2012. Published by Canadian Center of Science and Education.
- Self, S. (2005). Effects of volcanic eruptions on the atmosphere and climate in *Volcanoes and the Environment*. Edited by: Joan Martí and Gerald G.J. Ernst. New York: Cambridge University Press.
- Self, S. (2006), The effects and consequences of very large explosive volcanic eruptions,. *Philos. Trans. R. Soc. A*, 364(1845), 2073–2097, doi:10.1098/rsta.2006.1814.
- Selva, J., Marzocchi, W., Papale, P., & Sandri, L. (2012). Operational eruption forecasting at high-risk volcanoes: the case of Campi Flegrei, Naples. *Journal of Applied Volcanology*. 1:5.
- Seymour, E., Hunter, A., Laursen, S., & Deantoni, T. (2004). Establishing the benefits of research experiences for undergraduates in the sciences: First findings from a three-year study. *Science Education*, 88 (4), 493-534.
- Semken, S., Freeman, C.B., Watss, N.B., Neakrase, J.J., Dial, R.E., and Baker, D.R. (2009). Factors That Influence Sense of Place as a Learning Outcome and Assessment Measure of Place-Based Geoscience Teaching. *Electronic Journal of Science Education* Volume 13, No. 2 (2009), p(136-159).
- Shanon-Baker, P. (2016). Making pedagogies meaningful in mixed methods research. *Journal of Mixed Methods Research*, 10 (4) p(319-334)

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu183

- Slezin, Y.B. (2003). The mechanism of volcanic eruptions (a steady state approach). *Journal of Volcanology and Geothermal Research* 122 (2003) 7-50.
- Smith, G.A., & Bermea, S.B. (2012). Using Students' Sketches to Recognize Alternative Conceptions About Plate Tectonics Persisting From Prior Instruction. *Journal of Geoscience Education* 60, 350–359 (2012).
- Sparks, R.S.J., & Aspinall, W.P. (2004). *Volcanic Activity: Frontiers and Challenges in Forecasting, Prediction and Risk Assessment*. http://dutiosc.twi.tudelft.nl/~risk/extrafiles/EJcourse/Sheets/Spark_sAspinall_VolcanicActivity.pdf.
- Stern, R. J., (2002). Subduction zones, *Rev. Geophys.*, 40(4), 1012, doi:10.1029/2001RG000108, 2002.
- Strahler, A. N., & Strahler, A. (1989). *Elements of Physical Geography. Fourth Edition*. New York: John Wiley & Sons.
- Subandi, M.A., Achmad. T., Kurniati, H., & Febri, R. (2014). Spirituality, gratitude, hope and post-traumatic growth among the survivors of the 2010 eruption of Mount Merapi in Java, Indonesia. *Australasian Journal of Disaster and Trauma Studies*. Volume 18 (1).
- Summers, E.J. & Dickinson, G. (2012). A Longitudinal investigation of project-based instruction and student achievement in high school social studies. *Interdisciplinary Journal of Problem-based Learning*, 6 (1).
- Sunderlin, D. (2009). Integrative mapping of global-scale processes and patterns on “imaginary Earth” continental geometries: A teaching tool in an Earth History course. *Journal of Geoscience Education*. v. 57, n. 1, January, 2009, p. 73-81.
- Surono, Jousset, P., Pallister, J., Boichu, M., Buongiorno, M.F., et al..(2012). The 2010 explosive eruption of Java's Merapi volcano – a '100-year' event. *Journal of Volcanology and Geothermal Research*, Elsevier, 241-242, p(121-135).
- Surpless, B., Bushey, M., & Halx, M. (2014). Developing scientific literacy in introductory laboratory courses: a model for course

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu184

- design and assessment. *Journal of Geoscience Education* 62, p(244-263).
- Stetter, K.O. (2005). Volcanoes, hydrothermal venting, and the origin of life in *Volcanoes and the Environment*. Edited by: Joan Marti and Gerald G.J. Ernst. New York: Cambridge University Press.
- Stewart, T.R., & Lusk, C.M. (1994). Seven components of judgmental forecasting skill: Implication for research and the improvement of forecasts. *Journal of Forecasting* v.13, p(579-599).
- Stokes, A., Magnier, K., & Weaver, R. (2011). What is use field work? Conceptions of students and staff in geography and geology. *Journal of Geography in Higher Education*, 35 (1), 121-141.
- Switzer, A.C. (2009). *Assessing changes in high school students' environmental decision-making skills: some methodological contributions*. A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy (Education). In The University of Michigan.
- Takekawa, J., Mikada, H., & Goto, T. (2013). Effect of heterogeneities on evaluating earthquake triggering of volcanic eruptions. *Nat. Hazards Earth Syst. Sci.* 13, p(231-237). doi:10.5194/nhess-13-231-2013.
- Texier-Teixeira, P., Chouraqui, F., Perrillat Coulomb, A., Lavigne, F., Cadag, J.R., & Grancher, D. (2014). Reducing volcanic risk on Fogo Volcano, Cape Verde, through a participatory approach: which outcome? *Nat. Hazards Earth Syst. Sci.* 14, p(2374-2358). doi:10.5194/nhess-14-2374-2014.
- Tjasyono, B. (2003). *Geosains*. Bandung: Institut Teknologi Bandung.
- Tjasyono, B. (2004). *Klimatologi Edisi Ke-2*. Bandung: Institut Teknologi Bandung.
- Tjasyono, B. (2005). *Pengantar Ilmu Kebumian. Lokakarya Ilmu Kebumian*. Kerjasama antara BRKP-BMG-GM-KAGI 21-ITB Bandung 21-22 Juni 2005.
- Traversa, P., Lengliné, O., Macedo, O., Metaxian, J.P., Grasso, J.R., Inza, A., & Taipe, E. (2011). Short term forecasting of explosions at Ubinas volcano, Perú. *Journal of Geophysical Research*, 116, B11301. doi:10.1029/2010JB008180.

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu185

- Tronvoll, B., Brown, S. W., Gremler, D.D., Edvardsson. B. (2011). Paradigms in service research. *Journal of Service Management* Vol. 22 No. 5, 2011 pp. 560-585 q Emerald Group Publishing Limited 1757-5818 DOI 10.1108/09564231111174951.
- Tuswadi & Hayashi, T. (2014). Disaster prevention education in Merapi volcano area primary schools: focusing on student's perception and teacher's performance. *Procedia Environmental Sciences* 20, p(668-677).
- US General Accounting Office. (1990). Case Study *Evaluating Program-Evaluation and Methodology Division*. Transfer Paper 10.1.9. Washington, DC.
- Vavra, K.L., Janjic-Wattrip, V., Loerke, K., Phillips, L.M., Norris, S.P., & Macnab, J. (2011). *Visualization in Science Education*. ASEJ, Volume 41, Number 1, January 2011. P(22-30).
- Vendetti, M.S., Matlen, B.J., Richland, L.E., & Bunge, S.E. (2015). *Analogical Reasoning in the Classroom: Insights From Cognitive Science*. 5 International Mind, Brain, and Education Society and Wiley Periodicals, Inc. v.9 no. 2. P(100-106).
- Verschuren, P., & Doorewaard, H. (2010). *Designing a Research Project*. The Hague: Eleven International Publishing, from https://www.boomhogeronderwijs.nl/documenten/978905931572_3_inkijkexemplaar.pdf
- Walpuski, M., Tepner, O., Sumfleth, E., Dollny, S., Hostenbach, J., & Pollender, T. (2012). Multiple perspectives on students' scientific communication & reasoning in chemistry education. *Acta Didactica Norge*. Vol. 6 Nr. 1 Art. 11.
- Whelan, F., & Kelletat, D. (2003). Submarine slides on volcanic islands - a source for mega-tsunamis in the Quaternary. *Process in Physical Geography* 27.2, p(198-216).
- Wiersma, W., & Jurs, S.G. (1990). *Educational Measurement and Testing*. Second Edition. Needham Heights, Massachusetts: Allyn and Bacon.
- Willison, J. (2012). When academics integrate research skill development in the curriculum. *Higher Education Research and*

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu186

- Development*, 31(6), 905-919.
doi:10.1080/07294360.2012.658760
- Willison, J., & O'Regan, K. (2006). *Research skill development framework*. Retrieved from University of Adelaide, from <http://www.adelaide.edu.au/rsd/framework/rsd-framework.pdf>.
- Wilson, G., Wilson, T.M., Deligne, N.I., Cole, J.W. (2014). *Journal of Volcanology and Geothermal Research* 286 (2014) 148–182.
- Winson, A.E.G., Costa, F., Newhall, C.G., & Woo, G. (2014). An analysis of the issuance of volcanic alert levels during volcanic crises. *Journal of Applied Volcanology*. 3:14.
- Woodhouse, M. J., A. J. Hogg, J. C. Phillips, and R. S. J. Sparks (2013), Interaction between volcanic plumes and wind during the 2010 Eyjafjallajo'kull eruption, Iceland, *J. Geophys. Res. Solid Earth*, 118, 92–109, doi:10.1029/2012JB009592.
- Wulf, A.H. (2013). Portals for Undergraduate Research in Geology Curricula. *Eos*, Vol. 94, No. 6, 5 February 2013, p (61-68).
- Wysession, M.E., LaDue, N., Budd, D.A., Campbell, K., Conklin, M., Kappel, E., Lewis, G., Reynolds, R., Ridky, R.W., Ross, R.M., Taber, J., Tewksbury, B., & Tuddenham, P. (2012). Developing and Applying a Set of Earth Science Literacy Principles. *Journal of Geoscience Education* 60, 95–99 (2012).
- Wysession, M.E. (2013). *The Next Generation Science Standard and the Earth and Space Sciences*. Diakses dari http://nstahosted.org/pdfs/ngss/resources/201304_ngss-wysession.pdf.
- Wysession, M.E. (2014). The Next Generation Science Standard: A potential revolution for geosciences education, *Earth Future*, 2, p(299-302).
- Yacobucci, M.M. (2013). Integrating critical thinking about values into an introductory geoscience course. *Journal of Geoscience Education* 61, p(351-363).
- Zeiden, A.H., & Jayosi, M.R. (2015). Science process skills and attitudes toward science among palestinian secondary school students. *World Journal of Education* Vol. 5, No. 1; 2015, p(13-24).

Eko Hariyono, 2017

**PENGEMBANGAN PROGRAM VOLCANO LEARNING PROJECT (VLP)
DALAM PEMBELAJARAN GEOSAINS BAGI MAHASISWA CALON GURU
FISIKA**

universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu187