EXPLORING THE POTENTIAL OF GALUNGGUNG VOLCANO REGION TO DEVELOP GEOGRAPHIC EDUCATION FIELD LABORATORY

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Introduction

- The need for geography development research requires detailed, and in-depth analysis. Therefore, the minimum standard requirements for geography laboratories are needed. The need for applied research in geography must be able to provide solutions related to location suitability.
- A geographic study model for field laboratories is needed, becau its presence is able to help problems with certain geographical symptoms that occur in the community. Field laboratories are needed to support learning in the classroom.
- Practicum in the laboratory, field observations and field trips are fundamental parts of many earth sciences and environmental science courses
- Identification of mountain galunggung area can be done based on the level of need in teaching.

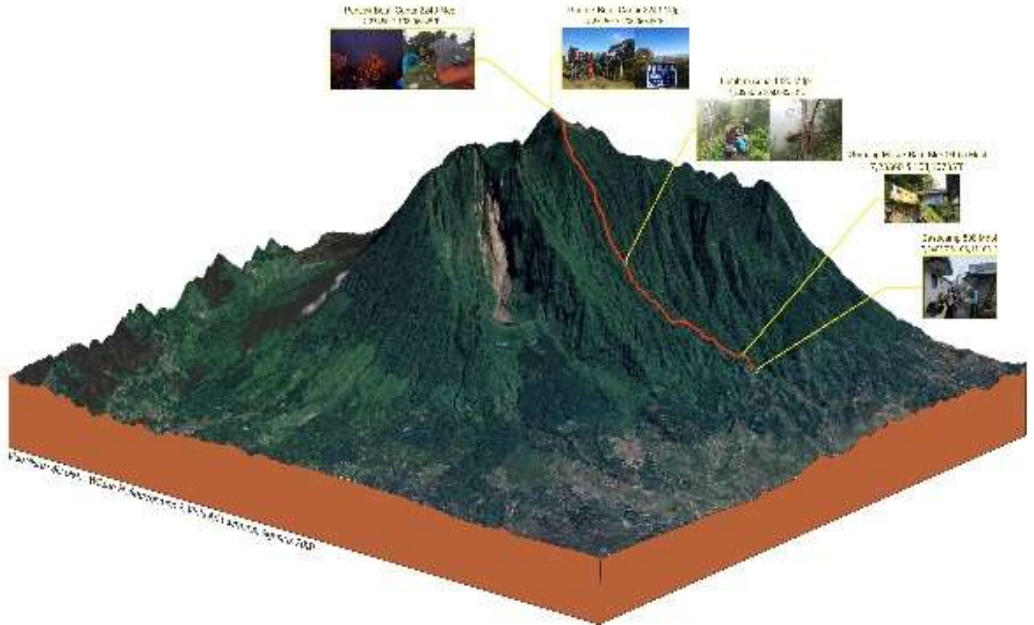
- Geography is best learned through investigation of field observations, or exploring a geosphere phenomenon. Geographical phenomena are often at the core of topics and problems that are directly relevant to student life

- Experience in the field is a mixture of objective and subjective reality
- Some things to consider in learning activities in the field include possible approaches, strategies and tools available
- Remembering outdoor learning that involves the natural environment provides an opportunity to improve academic achievement and social emotional intelligence for students
- One way to develop understanding of a scientific study is by learning from experience. The involvement of students in practicum in the field can be shown to make perfecting their conceptual knowledge, which then leads to an in-depth understanding of a theory

Method

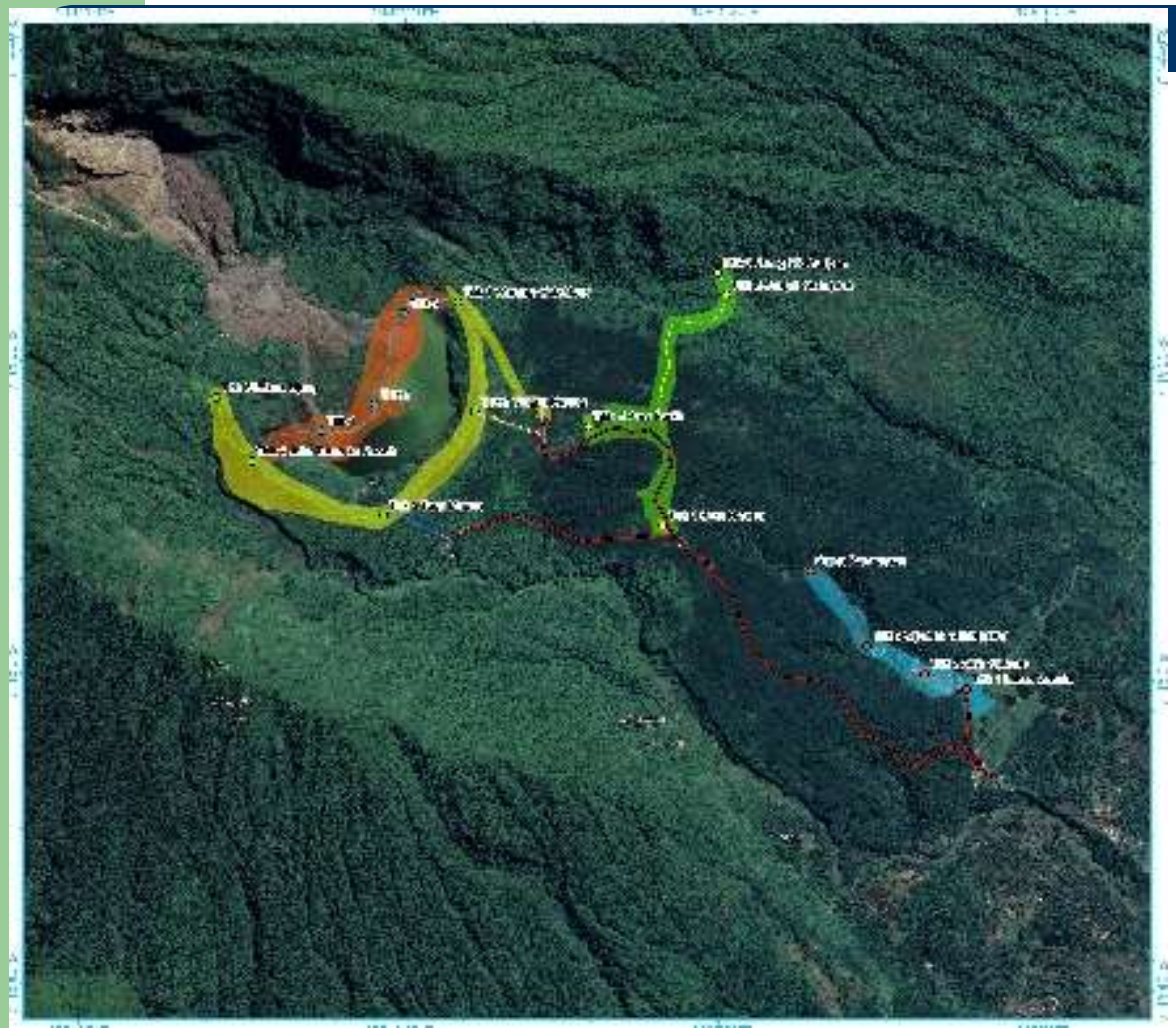
The research location was carried out in the Gunung Galunggung area, Tasikmalaya, West Java, Indonesia.

The method used in this research is descriptive. This research was conducted in three stages namely; preliminary studies of needs analysis, field analysis studies through observation and overlay of satellite imagery and analysis of field functions for learning. Phase 1 Preliminary Study, Phase 2 field analysis study through observation and overlaying of satellite imagery. Stage 3 analysis of field functions for learning



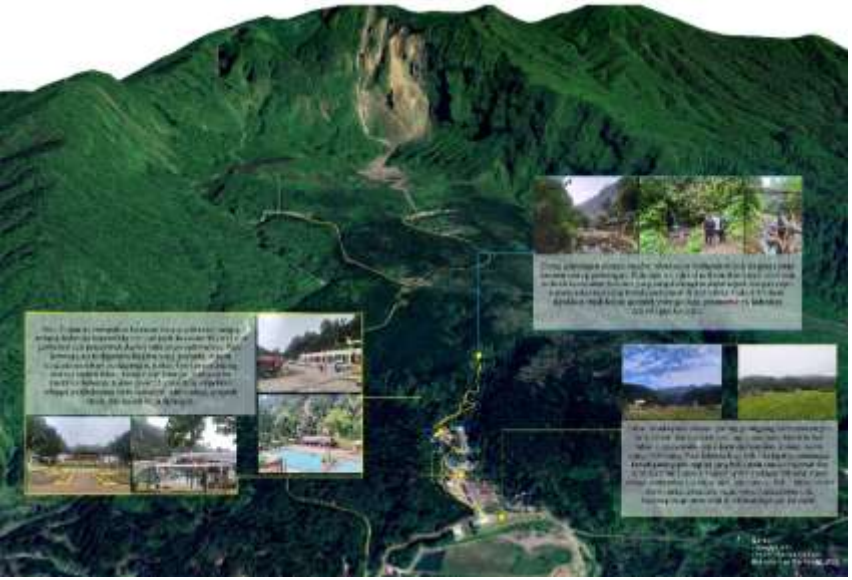
Result and Discusion

Field laboratories in this study include integrated laboratory, where the field laboratory in question has a function as a place of education and teaching, research, and community service to students and lecturers.



Potential of Mount Galunggung Region for Geographic Education Field Laboratory Development

No	Indicator	Description
1	Content (Courses that can conduct learning activities and Practicum in the Galunggung Mountain Area)	Physical Geography: Geomorphology, Geology, Hydrology, Biogeography, Meteorology, Land Geography, Ecology Social Geography: Agricultural Geography, Village Geography **Mix Geography**: Remote Sensing practicum, Land Conservation and Reclamation, Tourism Geography.
2	Availability of Infrastructure Facilities	1. Have easy access (adequate transportation facilities and infrastructure) 2. Having an open space (landscape and cultural landscape) that is unique to learning activities, research, and community service that can be designed with delineation as needed. 3. Have classrooms for the evaluation of field results at the Galunggung Mountain Volcano Post



Stations I

Stations II

Stations III & IV

Conclusion

Galunggung Volcano has the potential to be developed into a geography education field laboratory.
The Geography Education Field Laboratory can be judged as a role model for learning needs that are carried out outdoors. The learning process at the Geography Education Field Laboratory can provide real experiences to students, meaning that the experience will be more concrete, so students will avoid misperceptions from discussing subject matter. Learning activities in field laboratories provide opportunities for students to: build conceptual understanding, verification, correct conceptualization, develop skills, train psychomotor abilities, foster scientific attitudes and develop collaborative skills.

References

[1] M. Rickinson *et al.*, *A review of research on outdoor learning*, no. March. London: National Foundation for Educational Research and King's College London, 2004.

[2] J. Dillon and I. Dickie, "Learning in the natural environment: Review of social and economic benefits and barriers," no. May, pp. 1–48, 2012.

[3] V. Ramasundaram, S. Grunwald, A. Mangeot, N. B. Comerford, and C. M. Bliss, "Development of an environmental virtual field laboratory," *Comput. Educ.*, vol. 45, no. 1, pp. 21–34, 2005, doi: 10.1016/j.compedu.2004.03.002.

[4] J. Waite, R. Morrill, and Z. Dulli, *GeoCamp Iceland 2017 Field Guide*. Washington DC: National Council for Geographic Education, 2017.

[5] D. Butzow, "Using Sense of Place in the Classroom Using Sense of Place in the Classroom," vol. 8341, pp. 10–14, 2019, doi: 10.1080/19338341.2018.1559215.

[6] D. R. Garrison and N. D. Vaughan, *Blended Learning in Higher Education (Framework, Principles, and Guidlines)*, 1st ed., vol. 1, no. 4. San Francisco: Jossey-Bass, 2008.

[7] S. Z. Mirrahmi, N. M. Tawil, N. A. G. Abdullah, M. Surat, and I. M. S. Usman, "Developing conducive sustainable outdoor learning: The impact of natural environment on learning, social and emotional intelligence," *Procedia Eng.*, vol. 20, pp. 389–396, 2011, doi: 10.1016/j.proeng.2011.11.181.

[8] M. M. Peercy and F. J. Troyan, "Making transparent the challenges of developing a practice-based pedagogy of teacher education," *Teach. Teach. Educ.*, vol. 61, pp. 26–36, 2017, doi: 10.1016/j.tate.2016.10.005.

[9] S. Zulaikha, *Redesain Pendidikan Guru Teori, Kebjakan, dan Praktik*, I. Jakarta: Prenadamedia Group, 2015.

[10] W. Puspita, *Manajemen Laboratorium untuk Mahasiswa dan Umum*, I. Deepublish, 2020.

[11] H. Acar, "Learning Environments for Children in Outdoor Spaces," *Procedia - Soc. Behav. Sci.*, vol. 141, pp. 846–853, 2014, doi: 10.1016/j.sbspro.2014.05.147.

[12] D. S. Sinton, "Critical spatial thinking," *The International Encyclopedia of Geography*. John Wiley & Sons, Ltd., pp. 2–9, 2017, doi: 10.1002/9781118786352.wbieg0706.

[13] A. Hulseberg and A. Versluis, "Integrating information literacy into an undergraduate geography research methods course," *Coll. Undergrad. Libr.*, vol. 24, no. 1, pp. 14–28, 2017, doi: 10.1080/10691316.2017.1251371.

[14] N. J. Tate, C. H. Jarvis, and K. E. Moore, "Locating spatial thinking in teaching practice," *Comput. Environ. Urban Syst.*, vol. 29, no. 2, pp. 87–91, 2005, doi: 10.1016/j.compenvurbsys.2004.12.001.