

CHAPTER V

CONCLUSION AND SUGGESTION

5.1. Conclusion

Based on the results analysis done, and then concluded:

1. There is difference in student cognitive achievement score of students taught using the inquiry-based model combined with multimedia and those taught using the traditional method. Inquiry-based model combined with multimedia affect on student cognitive achievement by increasing score in experiment class is 4.15% higher than control class.
2. Students' learning activity in learning Environmental Pollution and Management topic that taught by inquiry-based learning combined with multimedia is more active than students' learning activity that taught by traditional method in SMAN Negeri 1 Perbaungan. It is show from the percentage of student activity in experiment class is higher than control class.
3. There is no effect of the inquiry-based model combined with multimedia to student cognitive achievement in Environmental Pollution and Management Topic for Grade X in SMA Negeri 1 Perbaungan Academic Year 2012/2013.

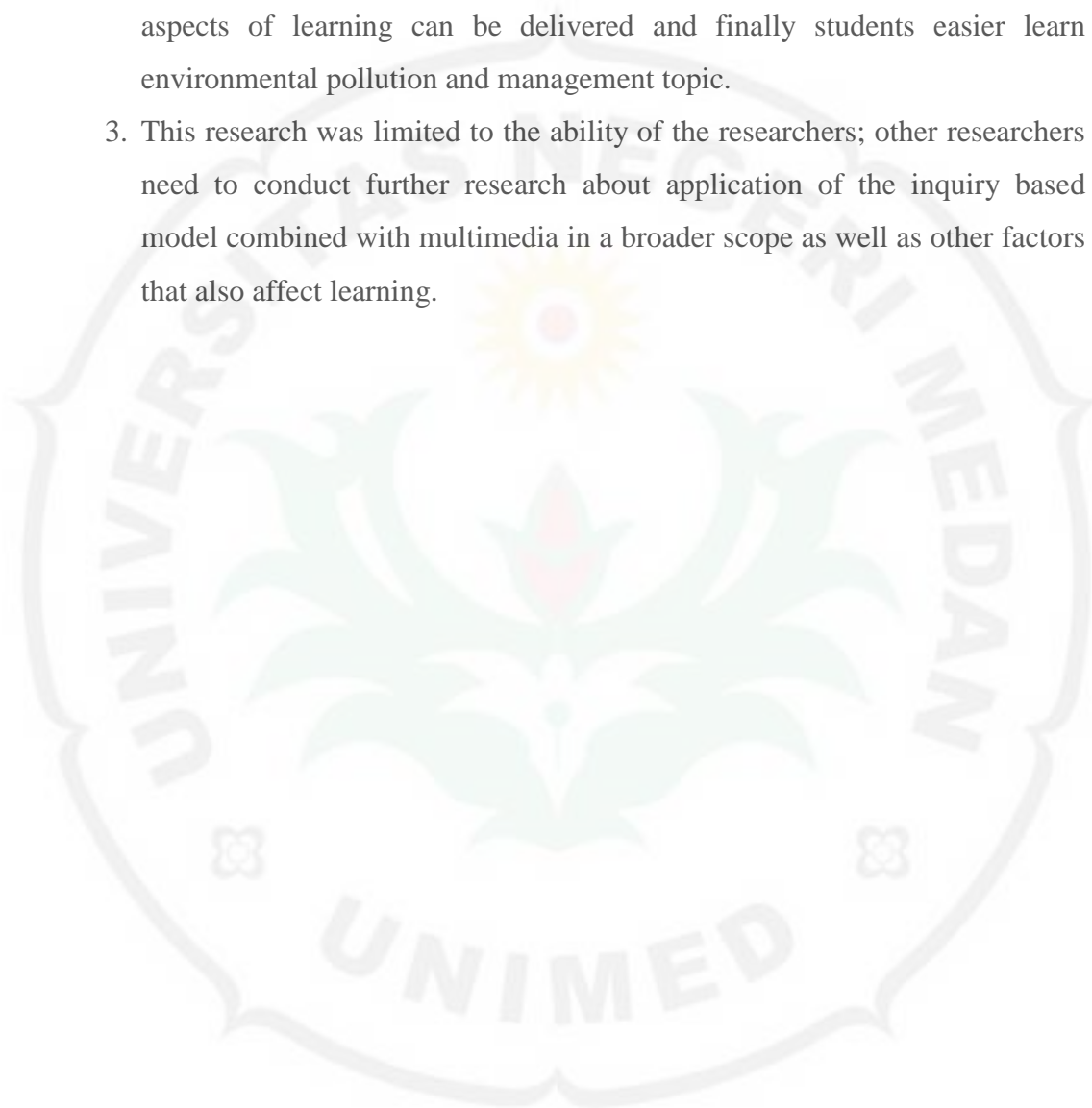
5.2. Suggestion

Based on the result and conclusion above, the researcher recommended:

1. Teacher should do many new ways in teaching and learning process so it can be interesting to learn and also utilize facilities in school such us apply inquiry based model combined with multimedia in teaching and learning process.
2. In preparing for implementation inquiry based model combined with multimedia in learning, teacher preparation should be maximal , start from lesson plan to the tools that will be used, in order to manage time well so all

aspects of learning can be delivered and finally students easier learn environmental pollution and management topic.

3. This research was limited to the ability of the researchers; other researchers need to conduct further research about application of the inquiry based model combined with multimedia in a broader scope as well as other factors that also affect learning.



THE
Character Building
UNIVERSITY

REFERENCES

- Alberta Education, (2004), *Focus On Inquiry: A Teacher's Guide To Implementing Inquiry-Based Learning*, Learning and Teaching Resources Branch, Canada.
- Arikunto, S., (2011), *Dasar-Dasar Evaluasi Pendidikan*, Penerbit Bumi Aksara, Jakarta
- British Columbia Institute of Technology, (2010), *Writing Learning Outcomes*, BCIT Learning and Teaching Centre, Willingdon Avenue
- Brown, Patrick J. P., (2010), Process-oriented guided-inquiry learning in an introductory anatomy and physiology course with a diverse student population, *Advan in Physiol Edu* 34:150-155
- Cecie S., Christine A. E., Lisa S., (2011), *Biology: Concepts and Applications, Eighth Edition*, Brooks/Cole, Belmont
- Dunlosky J., Katherine A. R., Elizabeth J. M., Mitchell J. N., and Daniel T. W., (2013), Improving Students' Learning with Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology, *Association for psychological science*, 14(1): 4-58
- Galileo Educational Network. (2004). What is inquiry? *Inquiry & ICT*. Retrieved July 12, 2004, from <http://www.galileo.org/inquiry-what.html>
- Howard D. R and Jennifer A. M.,(2005), Using a Module-based Laboratory To Incorporate Inquiry into a Large Cell Biology Course, *Cell Biology Education*, 4: 249-260
- Jauhari, M., (2011), *Implementasi PAIKEM dari Behavioristi ksampai Konstruktivistik Sebuah Penegembangan Pembelajaran Berbasis CTL*, Prestasi Pustaka Raya, Jakarta
- Karmana, Oman, (2000), *Cerdas Belajar Biologi*, Grafindo Media Pratama, Bandung.
- Kirschner, P., John, S., Richard, E. C.,(2004), Why Unguided Learning Does Not Work: An Analysis of the Failure of Discovery Learning, Problem-Based Learning, Experiential Learning and Inquiry-Based Learning, *Educational Psychologist*
- Liliasari, 2007, *Scientific concept and generic science skills relationship in the 21th century science education*, Science education program graduate school Indonesia university of education
- Mayer, R. E., (2005), *The Cambridge Handbook of Multimedia Learning*, Cambridge University Press, New York

- Muljatiningrum, A., Nuryani, Y.R., Adi Rahmat, (2008), Pembelajaran Inkuiri untuk Mengembangkan Kemampuan Dasar Bekerja Ilmiah dan Berpikir Kreatif Pada Konsep Bioteknologi, *Current Issues on Research and Teaching in Science Education*, ISBN 978-979-98546-4-2
- Opara , Jacinta A., (2011), Inquiry Method and Student Academic Achievement in Biology: Lessons and Policy Implications, *American-Eurasian Journal of Scientific Research* 6 (1): 28-31
- Pratiwi et. all, (2007), Biologi Jilid I untuk SMA Kelas X, Erlangga, Jakarta
- Prawihartono, S. dan Hidayati, S., (2007). *Sains IPA 3 SMA/MA*. Jakarta: PT Bumi Aksara
- Rivers, D. B.,(2002), Using A Course-Long Theme For Inquiry-Based Laboratories In A Comparative Physiology Course, *Advances in Physiology Education*, 26:317-326
- Rusman, (2010), *Model Pembelajaran Mengembangkan Profesionalisme Guru*, Penerbit Raja Grafindo Persada, Jakarta.
- Sconul, (2004), *Learning Outcomes and Information*, Society of Collage, National and University Library, United kingdom.
- Solomon, E.P., Linda R. B., Diana W. M., (2011), *Biology* 9 Edition, Brooks/Cole, Belmont
- Sudjana, N.,(2008),*Penilaian Hasil Belajar Mengajar*, PT Remaja Rosdakarya, Bandung.
- Sutikno, W., A. Isa, (2010), Keefektifan Pembelajaran Berbantuan Multimedia Menggunakan Metode Inkuiri Terbimbing Untuk Meningkatkan Minat dan Pemahaman Siswa, *Jurnal Pendidikan Fisika Indonesia*, 6 : 58-62
- Tobing., (2012), *The Effectiveness of Laboratory Experiment Method to Increase Activity and Students' Achievement on Teaching Salt Hydrolisis.*, Skripsi, FMIPA, Unimed, Medan
- Trianto, (2009), *Mendesain Model Pembelajaran Inovatif Progresif*, Kencana: Jakarta.