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Science and
Science
Education

Proceedings

The 3rd AISTSSE

Trends in Science and Science Education

7 October 2016

Organized by:

Faculty of Mathematics and Natural Sciences

Medan State University

North Sumatera-Indonesia

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Preface I

Welcome to the 3rd Annual International Seminar on Trends in Science and Science Education 2016. This is the third time we are hosting this seminar and we are proud to inform you that this seminar is an annual event in our calendar and will be held every year since 2014. We are inviting international recognized speakers from several countries to share their latest discoveries to all of us in Biology, Chemistry, Physics, Mathematics and Science Education fields. Well known researchers in science and science education will share their experiences and knowledge so we can have up to date the information. This is one of the goals of this seminar.

As science researcher we realize the importance of information exchange among us. The new information enlighten our mind and give us ideas on what to do next in our research and how to do it. This new information often become the basic for our next project in particular, and become the upcoming year research trends in general. Information exchange also keeps us updated, allow us to give and receive suggestions and critics which will lead us to better results. Thus, we need a forum where we can share and exchange information. Seminar, conference and other scientific gathering are media for us to do so.

We would like to thank to all the researchers who responded to our call for papers and participant of this seminar. Let us share information about our latest discoveries in science and science education and set the trends for the upcoming year. Let us collaborate and create new opportunities for a better and more holistic research.

Finally, we convey our thanks to the Rector of State University of Medan, Prof. Dr. Syawal Gultom, M.Pd and all the vice rector for the support and attention to this seminar and also to all of the committee members for their work in ensuring the run of this seminar. Once again, welcome to the 3rd Annual International Seminar on Trends in Science and Science Education 2016.

Medan, 7 October 2016

Dr. Asrin Lubis, M.Pd.
Dean Faculty of Mathematics and Natural Sciences
State University of Medan

Preface II

First, let us be thankful to the one and all-powerful God that on this fine morning we are still given bodily and spiritual health and can gather together in this room, on our beloved capital city of North Sumatra, Medan.

A warm and special welcome goes to our keynote speakers, Dr. Mohd. Sazali Khalid (from University Tun Hussein Onn Malaysia), Prof. Dr. Janchai Yingprayoon (Suan Sunandha Rajabhat University, Thailand), Rabeta bt. Mohd. Salleh, Ph.D (University Sains Malaysia), Dee-Jean Ong (R.E.A.L. Education Group Malaysia) and Dr. Anna Ratna Wulan (from Universitas Pendidikan Indonesia).

The special welcome also goes to all invited speakers from top Universities all over Indonesia.

This seminar, The 3rd International Seminar on Trends in Science and Science Education 2016 is an annual seminar organized by Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Medan. This is the third year seminar following the successful first and second year seminar held in 2014 and 2015. This year seminar is focusing on the contribution of research to the development of technology. The committee expects the information exchange among researchers in this seminar will encourage collaboration among the different actors in science and science education community so as to achieve a better result for the benefit of the community. This third annual international seminar will be held from October 7 – 8, 2016.

The committee are really honored to have attention from approximately 200 speakers and participants from three different countries. They come from Thailand, Malaysia and of course Indonesia. About 20 universities from all over Indonesia participate in this event. It is expected that those who participate in the seminar will afterwards be familiar and able to interact with their international counterparts in their scientific area. This is in line with the vision of Universitas Negeri Medan to become a world class and character building university.

The committee received more than 100 seminar abstracts and full papers from science education, biology, chemistry, physics, and mathematics sciences. Most of the abstract have been edited and bound into an abstract collection book which is a part of the seminar kit. The seminar full papers are now in editing stage by the committee before publish in seminar proceeding that will be available in both printed and on-line forms, in the next January 2017. Please, remind the committee if you want to get the copy of the seminar proceeding.

This year seminar is a special event because it is held together with the annual meeting of all mathematics and natural science faculties from LPTK in

Indonesia or Forum MIPA LPTK Indonesia. The meeting will be held from October 7-9, 2016, in Medan and Parapat. This forum is intended to built collaboration among LPKT's in Indonesia.

I would like to take this opportunity to acknowledge the important role of the honorable Prof. Dr. Syawal Gultom, M.Pd, rector of Universitas Negeri Medan for giving us his full support and attention and for providing his precious time to be with us and to honour us by opening this seminar.

Our sincere thanks also goes to the honorable Dr. Asrin Lubis, M.Pd, Dean of Fakultas Matematika dan Ilmu Pengetahuan Alam, who havelead and encourage all the committeemembers to be always focused and worked hard even in a very short period of time to prepare the seminar.

My sincere thanks also goes to all members of the committee and to all staff of Fakultas Matematika dan Ilmu Pengetahuan Alam for their continuous support and hard work because without their assistance this seminar may not have taken place today.

Finally, I conclude my speech by kindly inviting Honourable Prof. Dr. Syawal Gultom, M.Pd, Rector of Universitas Negeri Medan, to give special direction and officially open the seminar. We wish you good luck and success in this endeavor.

Thank you very much

Prof. Dr. Herbert Sipahutar, MS., M.Sc.
Chairman AISTSSE 2016

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