BOOK OF PROGRAM

msceis-IWALS

International Joint Conference 2025

The 10th Mathematics, Science, and Computer Science Education International Seminar joint with The 11th International Workshop on Advanced Learning Sciences

2025, November 7th - 8th
8:00 AM - 5:00 PM

Hybrid Mode (Onsite and Online)
Auditorium of JICA Building FPMIPA A Dr. Setiabudhi St. 229 - Bandung, West Java, Indonesia

ORGANIZED BY:

UPI FPMIPA 國立臺灣師範大學 NATIONAL TAIWAN NORMAL UNIVERSITY

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CONFERENCE — Day 1 (Friday, November 7, 2025)

<table>
<tr><th>Time</th><th>Activities</th></tr>
<tr><td>07.00 – 08.00</td><td>Registration</td></tr>
<tr><td>08.00 – 09.00</td><td>Opening Ceremony
MC: Vidia Afina Nuraini, M.Sc.

Zoom link (for online participants):


https://bit.ly/msceis2025
Meeting ID: 439 479 3227
Passcode: msceis2025</td></tr>
<tr><td>08.00 – 08.10</td><td>Performance: SASEFI Medley Angklung</td></tr>
<tr><td>08.10 - 08.15</td><td>MC open the ceremony</td></tr>
<tr><td>08.15 – 08.20</td><td>Singing National Anthem Indonesia Raya</td></tr>
<tr><td>08.20 – 08.25</td><td>Conference Report from the MSCEIS-IWALS' Chairman</td></tr>
<tr><td>08.25 – 08.35</td><td>Welcoming remark from Vice Rector of NTNU</td></tr>
<tr><td>08.35 – 08.45</td><td>Welcoming remark from Rector of UPI</td></tr>
<tr><td>08.45 – 08.55</td><td>Performance: SASEFI dance performance</td></tr>
<tr><td>08.55 – 09.00</td><td>Introducing the 1st moderator</td></tr>
<tr><td>09.00 – 09.45</td><td>Plenary Speaker 1 and Discussion (online)
Prof. Brian Yuliarto, Ph.D. – Ministry of Higher Education, Science, and Technology, Indonesia
Moderator: Dr. Eka Cahya Prima, S.Pd., M.T.</td></tr>
<tr><td>09.45 – 10.15</td><td>Coffee Break (in front of FPMIPA Auditorium 2nd and 3rd floor)</td></tr>
<tr><td>10.15 – 11.00</td><td>Plenary Speaker 2 and Discussion (offline)
Prof. Dr. Mustafa Sözbilir – Ataturk University, Türkiye
Moderator: Tuszie Widiyanti, Ph.D.</td></tr>
<tr><td>11.00 – 11.45</td><td>Plenary Speaker 3 and Discussion (offline)
Prof. Chun-Yen Chang, Ph.D – National Taiwan Normal University, Taiwan
Moderator: Irma Rahma Suwarma, Ph.D.</td></tr>
<tr><td>11.00 – 12.00</td><td>Poster Session</td></tr>
<tr><td>12.00 – 13.30</td><td>Lunch Break</td></tr>
<tr><td>13.30 – 14.15</td><td>Plenary Speaker 4 and Discussion (online)
Prof. dr. P. H. M. (Paul) Drijvers – Utrecht University, Netherlands
Moderator: Prof. Al Jupri, M.Sc., Ph.D.</td></tr>
<tr><td>14.15 – 15.00</td><td>Invited Speaker session (offline)
<table>
<tr><th>Speakers</th><th>Moderators</th><th>Room</th></tr>
<tr><td>Prof. Dr. Mustafa CAKIR
(Marmara University, Türkiye)</td><td>Puti Siswandari, S.Pd., M.Si.</td><td>S-302 (OF03)</td></tr>
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Common Themes and Trends in Chemistry Education Research (CER): A Bibliometric Study based last 50 Years

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Abstract

Although the development of chemistry as a basic science goes back to 18th century, the history of chemistry education research is quite new. Chemistry, which was seen as a part of medical science rather than an independent science until the mid-18th century, started to be established as an independent scientific discipline in England and America. One of the main problems that emerged after the acceptance of chemistry as a discipline was the standardization of the chemistry content to be taught. This need has led to the need for curriculum development. Although professional curriculum development studies started at the university level, it was only in the second half of the 20th century that these studies became widespread and chemistry education research emerged. Although many publications that were considered as chemistry education research which were published starting from 1920s, especially in the Journal of Chemical Education, were not based on empirical research, but rather on personal experiences and opinions. Although teaching chemistry started in the 18th century along with the development of modern chemistry as an independent discipline, the history of chemistry education research dates back to the 1960s. As a relatively new discipline, chemistry education research is located at the intersection of chemistry and educational sciences. Chemistry education research includes a series of activities that aim to determine the content to be taught (curriculum); how to teach and with which methods and techniques this content can be taught (methodology); how and how much of this content can be learned by students (measurement and evaluation knowledge) and whether all these processes are carried out effectively and whether the problems experienced are identified and overcome. In this respect, chemistry education is a hybrid discipline as a research field. By its nature, it requires both basic knowledge of educational sciences, knowledge of basic research methods and knowledge of chemistry. In this talk, the course of development of chemistry education research from past to present will be presented, and then the topics that are currently being studied will be presented by subjecting them to a comprehensive analysis based on data. In the study, bibliometric analysis methods will be used together to discuss the current status of the studies and future trends.

Keywords: Chemistry education research Bibliometrci analysis, research trends

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