A Bibliometric Analysis of Chemistry Education Research (CER) Published in International Journals (2001-2020): Status of CER in Turkey

Strand number: 13

Mustafa Sözbilir[a], Dilek Teke[b]

[a] *Atatürk University, Turkey*

[b] *Atatürk University, Turkey*

* Corresponding author: sozbilir@atauni.edu.tr

As an established field of practice, chemistry education research (CER) could be considered as the teaching and learning of chemistry. The wider scope of CER covers areas of enquiry such matters as the chemistry curriculum; how learning of chemistry is assessed; the discipline specific aspects of how teachers are prepared for and developed in their work; the design of teaching resources that represent chemical knowledge in ways informed by knowledge of human learning processes or to support particular pedagogies (Taber, 2019, p.1). Chemistry education plays important role in enhancing the quality of teaching and research as well as ensuring that students are equipped with good knowledge and skills industry and society to meet human needs for food, health care products and other materials aimed at improving the quality of life (Nnamdi, 2014). Therefore, identifying the status and changes in trends in CER is important. It is necessary to reveal the trends in the literature in order to develop solutions to meet these needs in chemistry education. With the determination of trends, current developments in chemistry education will be revealed and it will contribute to the planning of future research. The aim of this study is to determine the distribution of the number of citations and documents on the basis of country, author, organization and keywords of the publications in the "Web of Science (WoS)" in the last 20 years in international journals on chemistry education and identify how Turkey contributed to the CER literature.

This is a document analysis study. The “articles” and “review articles” related to chemistry education in WoS were subjected to a bibliometric analysis. The data are obtained from 3285 articles and reviews made published between 2001 and 2020. The analysis of the data is done with Bibliometric analysis by using the VOSviewer 1.6.17 software.

The results showed major trends such as an increase in the number of papers published. While, at the beginning (2001-2005) America, England, the Netherlands and Israel were at the forefront, later years (2006-2020) America, Turkey and Germany are become the main publishers in CER internationally. Further analysis and results would be presented according to the distribution of the citations and documents on the basis of country, organization and keywords.

References:

Nnamdi, E. (2014). The role of chemistry education in national development. *The International Journal of Engineering And Science (IJES)*, *3*(3), 12-17. https://www.theijes.com/papers/v3-i3/Version-3/C0333012017.pdf

Taber, K.S. (2019). Progressing chemistry education research as a disciplinary field. *Disciplinary and Interdisciplinary Science Education Research (DISER)*, *1*, Article number: 5, 1-8. https://doi.org/10.1186/s43031-019-0011-z

מכון ויצמן למדע
WEIZMANN INSTITUTE OF SCIENCE

מדור כנסים
משרד סגן הנשיא
Conferences Section
Office of the Vice President

12.5.22

To: Mustafa Sözbilir
sozbilir@atauni.edu.tr

Welcome to the "ECRICE 2022 Chemistry Teaching and Learning in a Global Unified World", conference

Dear Mustafa Sözbilir,

I'm happy to invite you to speak at the "ECRICE 2022 Chemistry Teaching and Learning in a Global Unified World", conference, that will be held at the Weizmann Institute of Science, Rehovot, Israel, July 11-13, 2022

If you accept our invitation, we will include you as a Keynote Speaker on the conference website. We are able to sponsor your registration fee and the cost of stay of 4 days in the Weizmann guesthouse.

For more information on the conference:
https://www.weizmann.ac.il/conferences/ECRICE2022/

If you have any further questions, please do not hesitate to contact us.

Looking forward to seeing you in Israel,

With best regards,

Naomi

+972 (0)8 934 4929 weizmann.conferences@weizmann.ac.il www.weizmann.ac.il/ConferenceUnit
Weizmann Institute of Science, 234 Herzl St., P.O.Box 26, Rehovot 7610001, Israel | מכון ויצמן למדע, הרצל 234, ת.ד. 26, רחובות 7610001, ישראל

Naomi Dicken
Conferences Section
Office of the Vice President
Weizmann Institute of Science

מכון ויצמן למדע
WEIZMANN INSTITUTE OF SCIENCE

מדור כנסים
משרד סגן הנשיא
Conferences Section
Office of the Vice President

July 18, 2022

CERTIFICATE OF ATTENDANCE

This is to certify that

Mustafa Sözbilir

Participated in the

ECRICE 2022 Chemistry Teaching and Learning in a Global Unified World

That was held on

July 11-13, 2022



Naomi Dicken
Conferences Section
Office of the Vice President
Weizmann Institute of Science