Journal of Turkish Chemical Society Section C: Chemistry Education (JOTCSC)
Vol. 5, Issue 2, September 2020, pp. 111-247. ISSN: 2459-1734
Türkiye Kimya Derneği Dergisi Kısım C: Kimya Eğitimi
Cilt 5, Sayı 2, Eylül 2020, sayfa 111-246. ISSN: 2459-1734

**Journal of the Turkish Chemical Society Section C: Chemical Education (JOTCS-C)**

https://dergipark.org.tr/jotcsc

A biannual, open-access chemical journal, hosted by Dergipark
(Published, in English and Turkish in every March and September)

## Editorial Board



## Editorial Advisory Board

**(sorted by the last names)**

## About the journal

JOTCS-C (Journal of the Turkish Chemical Society, Section C: Chemical Education) is an international, peer-reviewed open-access journal which evaluates innovative applications ranging from secondary education to university education and which publishes research articles and review articles containing in-depth analyses directly related to the chemical education. It is published in every September and March (biannually) and it is published in Turkish and English. Double-blind reviewing is applied.

In the journal, book reviews about secondary- and university-level, national and international chemistry textbooks, other sources about chemistry, and book reviews in the teaching and education of chemistry will be covered. Besides, a systematic review about teaching a specific chemical topic or experimental samplings about laboratory teaching can be placed in JOTCS-C.



## Aim of the Journal

Our journal aims to accept and publish chemical education papers, prepared in Turkey and other countries, after a strict peer-review process and serve its audience in an open-access fashion.

## Scope of the Journal

Our journal accepts to examine papers pertaining to all aspects of chemical education and after the peer-review process, publish if they are accepted.

## Peer-review Process

In our journal, we are using double-blind peer review in which neither the authors nor the reviewers know the identity of each other. 20 days are given to the reviewers for the peer-review process. We have prepared an evaluation form for peer review and reviewers fill in this form by selecting appropriate options. Also, blank areas are prepared on which the reviewers will write their opinions. After the first peer review process, according to the reviews, one of the following methods will be adopted.

In the first method, if two reviewers have recommended revisions, the editor reviews the recommendations and adds his/her extra recommendations to the recommendation letter and sends it to the authors. A maximum time of 2 weeks is given to the authors. Authors are requested to upload the revised manuscript containing the changes in a highlighted form and another document explaining

the changes. The revision is sent to the reviewers by the editor and their opinions are acquired again. If the reviewers find the revision adequate, the editor makes the last decision about the manuscript.

In the second method, if two reviewers decline the manuscript, the manuscript and reviewers' opinions are examined by the editor, and if the editor finds it necessary, he/she sends the manuscript to a third reviewer (most probably this reviewer will be one of the editorial advisory board members) and the last review is acquired. If a decision of decline is received, the manuscript is declined.

In the third method, after the first review, a decline and a revision/an acceptance is received from two reviewers, the editor examines the manuscript and the responses again. If the editor needs another reviewer, he/she sends the manuscript and receives the decision. If the final decision is decline, the manuscript is declined. If a revision is recommended, the first method is followed and the manuscript is sent to the authors for revision.

## Editorial

We have launched the second issue of our 5th year. It was not easy to strive to publish a qualified journal within five years, especially during an academic upgrade and similar criteria for researchers. At the end of this period, JOTCS-C indexed in DOAJ, DRJI, ASOS index, TEİ; and the Doi number for the articles was taken.

In this issue, five research papers were published. In the first paper, Çiftçi and Aydın (2020a) have examined the views of Science teachers on the EIN (Education Information Network) platform were examined. They used the descriptive survey model and the opinions of Science teachers were received with an Online Questionnaire. The questionnaire was administered to 398 science teachers working at the Ministry of National Education (MoNE). The question with the highest enough average level is "I give homework to my students through EIN" with an average of 4,09 and the question with the insufficient average level is "I have sufficient knowledge about EIN-like Education Platforms used in other countries" with an average of 2,56. In the light of these determinations, they suggested being used EIN and similar platforms in pandemic processes.

In the second paper, Demir and Çelik (2020) have studied the bibliometric profile of scientific studies in the field of the science curriculum. Bibliometric studies are considered very important in terms of determining the current status of scientific publications in the field and being a guide for researchers working in the field. In this study, 1716 studies published between the years 1970-2019 related to the science curriculum were examined from a bibliometric point of view, and trends and trends in this field were revealed. At the end of the study, it was concluded that there was a rapid increase in the number of publications in the field after 2010, and most studies were conducted in article type and English. However, it has been determined that the USA plays a key role in-country partnership and the journal with the most citation boom is School Science Review and the author is Rosalind Driver. Looking at the most studied subjects in the field, it was seen that the topics of student access and curriculum design came to the fore.

In the third study, Güneş-Yazar and Nakiboğlu (2020) have investigated the motivations of students in different fields in vocational and technical high schools. In this study, the chemistry motivation levels of the students of 4 Vocational and Technical Anatolian High Schools studying in the fields of Information Technologies, Machine Technology, Health Services and Food Technology in 2017-2018 and 2019-2020 academic years were determined and compared. When the chemistry motivation scores of the students for the 10th and 12th grades were compared, it was seen that it was at an acceptable level for both grades (=76,8056 and =77,0278) and that there was a slight increase in the 12th grade. However, it was concluded that this increase was not statistically significant. When the changes in the fields were compared, it was determined that the chemistry motivation score averages of the 10th and 12th-grade students studying in the fields of Information Technologies and Machine Technology decreased over the years, and the average scores of the students studying in the fields of Health Services and Food Technology increased over the years.

In the fourth article, Çiftçi and Aydın (2020b) have compared the learning outcomes of the solutions unit placed in both Turkey and Singapore Secondary School Chemistry Curriculums in terms of implication, expression and emphasis.

The survey model was utilised as the research model in this study. The data were collected through the document analysis technique. Learning outcomes were taken from Turkey and Singapore's Ministry of Education website. Compared learning outcomes were presented on the internet to 15 expert teachers who work at the Ministry of National Education. Reliability calculation was made according to the feedback received from them. The result of this calculation was found to be 71%. It was determined that the learning outcomes are not similar in terms of emphasis and expression, a few outcomes are similar in terms of implication.

In the last paper, Elmas and Gül (2020) have examined the relationship between the STEM education approach and the 2018 Science Curriculum in the context of STEM education's applicability at the classroom level. This study is a document analysis, and within this scope, the current science curriculum was examined in five different dimensions. Objectives and sentences in the current science curriculum were used as the unit of analysis. The program's aims, the teaching approach, the objectives, the teacher's roles, and the student were evaluated in terms of the STEM education approach's applicability. The program structure published in 2017 was evaluated within this scope compared to the update made in 2018. As a result of the document analysis, the STEM education approach was found to be convenient considering the program's purposes, the teaching approaches it supports, and the roles of the teacher and the student. Considering the objectives dimension, it has been found that the science curriculum tries to present the engineering design process through particular objectives and especially by using the act of "designing". In the 2017 curriculum, although there is a set of objectives that include all engineering design process steps in this context, the curriculum's objectives updated in 2018 focus mostly on "design", which is only one dimension of the engineering design process. In terms of the STEM education approach, it has been determined as a deficiency that the current program does not include all the objectives covering engineering design, at least in the appropriate order and complete.

Finally, I hope that the interest in JOTCS-C will continue increasingly in the following years. But my usual thought is that it is extremely important that publishing qualified papers that will contribute to chemistry education. It should not be forgotten that the primary purpose is not to write an article; our main goal is to find solutions to the problems in chemistry education with our studies. These studies are nothing more than just filling in our files unless they guide chemistry students, teachers and educators.

It was important to publish a qualified chemistry education journal in our country, and especially to carry out this process within the Turkish Chemical Society for us. I would like to thank on behalf of our editorial board all the authors who submitted articles, and all reviewers for their professional comments.

See you in the new issue in March 2021

Kind regards

Prof. Dr Canan NAKİBOĞLU
Editor-in-chief, JOTCS-C