Gender in Education: A Systematic Review of the Literature in Turkey

Sevilay Aydemir¹, Eda Öz², Gürcü Erdamar³
¹Indipendent Researcher, 0000-0002-8167-7544
²Ministry of Education, 0000-0003-2881-2513
³Gazi University, 0000-0001-6753-0151

To cite this article:

This article may be used for research, teaching, and private study purposes.

Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

Authors alone are responsible for the contents of their articles. The journal owns the copyright of the articles.

The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of the research material.
Gender in Education: A Systematic Review of the Literature in Turkey

Sevilay Aydemir 1*, Eda Öz 2, Gürçü Erdamar 3

1 Independent Researcher
2 Ministry of Education
3 Gazi University

Abstract

Many international and national measures have been taken to advance gender equality in education. The results of scientific research enlightened us on the ongoing problems of inequality in education despite these measures. This study aims to analyze the trend in gender studies in education in terms of year, subject of study, method and findings. The study presents a systematic analysis of 63 theses and 58 articles which were published on gender education in Turkey between 2002 and 2019. 121 studies selected by criterion sampling method were analyzed by content analysis. According to the research results, it was observed that the studies conducted centered on gender representations, gender perception and gender roles. It was determined that qualitative methods were mainly preferred in the studies analyzed. Based on the analysis of the findings of the research, it is possible to gather problem areas related to gender in education under four main titles. These are gender representations reflecting inequality in educational materials, traditional gender perception and attitudes in educational environments, the need for gender education and teacher attitudes and behaviors that are not based on equality. In line with the results of this study, recommendations were made to researchers and policymakers.

Keywords: Gender in education, Gender equity, Gender research, Systematic literature review, Document analysis

Introduction

The main motivational factor for the emergence of gender concept is to emphasize that this concept is different from sex and to draw attention to problem areas related to gender (Delphy, 1993). Oakley (1985, p. 159), who introduced the concept of gender to the literature, stated that sex refers to biological aspects while gender is the term with psychological and cultural meanings. According to this statement, gender is a condition acquired through certain social contexts (Lindsey, 2016, p. 4). Fine (2017) indicated that social context affects who we are, how we think and what we do, and therefore, thoughts, attitudes and behaviors are a part of social context (p. 22). The social context that plays the key role in the construction of gender is culture. Oakley (1985) stated that culture influences deciding on the roles for both sexes. In addition, women and men are stereotyped in different patterns by the society from early childhood to adulthood. Minds shaped by culture largely resist gender equality (Fine, 2017, p. 24). The traditional thoughts about society, norms, gender stereotypes, roles, and behaviors generate differences between men and women and inequalities. Therefore, gender discrimination is often a type of discrimination performed unconsciously and it is quite difficult to struggle against such discrimination (The European Students’ Union, 2008).

When the concept of gender is conceived as a cultural construction of gender roles, the crucial role of education system in the development of gender and gender related behaviors becomes even more evident. As Tezcan (1978) also noted, education is based on the culture of the society that produces it, and therefore, in a sense, education is the transmission of its or culture's. In education systems, society’s gender role stereotypes are conveyed to students through implicit or explicit messages in learning-teaching processes (TÜSIAD, 2000, p. 25). In this case, according to Sayılan (2012), education systems play a key role in regenerating and maintaining the prevailing gendered stereotypes and values embedded within the society in its cultural climate throughout the teaching process (p. 14).

* Corresponding Author: Sevilay Aydemir, sevilayaydemir84@gmail.com
Since education is a long-term investment, evaluating the effect of national and international steps taken and policies implemented to achieve gender equality in education both in the field of education and on social sphere requires a certain period. Scientific research in this field demonstrates that gender inequality in education still exists despite all the legislative regulations (Hançerli, 2019; Kitiş Çınar, 2013). These researches can provide an insight into whether gender equality policies developed in the field of education are sufficient. Studies in this field play a very important role in determining the causes of gender inequality in education and current problem areas and shedding light on policies, regulations and further studies to solve these problems. For this reason, it is important to analyze the subject areas deeper examining findings and recommendations of the studies conducted in the field of gender education. In the literature, there are other review studies exploring studies on gender (Çelik and Altnunbaş, 2019; Gürkan, 2018; Koyuncu Şahin and Çoban, 2019; Yıldırım, Taze, Kurban & Topal, 2019).

However, from various aspects, this study differs from existing literature review studies in the literature. First of all, the scope of this study is limited to the papers written in the field of education. In addition, this study provides a comprehensive assessment by analyzing the results of the studies and the thematic and methodological trends in the studies. The purpose of evaluating the existing studies is to identify problem areas related to gender equality in education and to assist decision makers and policy makers in this regard. In this context, answers to the following research questions were sought in line with the aim and objectives of the study. Regarding the studies on gender in education: (1) What is the distribution in terms of subject areas? (2) What is the distribution in terms of research method? (3) What is the distribution in terms of sample / study group? (4) What is the distribution in terms of themes on which findings center?

**Gender Inequality and Education**

Gender; it is shaped by discourse, language, practices, behaviors and relations, that is, by the socialization process (Adaçay, 2014). At the end of these socialization processes in the family and close environments, children reach school age with a gender identity. After family, the cultural construction of gender roles continues in schools (Bayhan, 2013, p. 154; Lindsey, 2016). Because school has an important role in transferring culture to individuals through education. Learning-teaching processes and the cultural climate of the schools are an effective tool in teaching and reproducing dominant gendered stereotypes and related values (Sayılan, 2012, p. 14).

Through written and visual texts, the materials used in gender roles education are conveyed and reinforced. In particular, implicit learning about gender roles can be realized through textbooks (Adaçay, 2014, p. 65). Research on this subject; showed that women and men are not represented in equal roles and equal ratios in textbooks, and that gender stereotypes and stereotypes take place in texts and images (Aratemur-Çimen & Bayhan, 2019; Çelik, Aydoğan Yenmez & Gökçe, 2019; Doğanay & Çapur, 2021; Demirhan, 2021; Kozalik and Kargi, 2019). This indicates that the steps taken on a national and global scale to make textbooks sensitive to gender equality are not as effective as expected. In addition, apart from scientific and academic research, within the scope of international conventions, systematic and regular data on the extent to which gender stereotypes are cleared from textbooks, educational programs and the daily life of the school are not available (Göğüş Tan, 2018, p.21).

Socio-cultural norms, gender perception of the society, traditional structure and economic factors, and the attitudes and behaviors of administrators and teachers are among the factors that cause gender discrimination in education (Engin-Demir & Çobanoğlu, 2012; Raina, 2012, p. 43). Gender roles are reproduced in schools through official discourses and hidden curriculum (Eren Deniz, 2014, Saldıray, 2017, Sayılan & Özkazanç, 2009), Especially in educational environments, teachers' attitudes and behaviors can be good role models in terms of gender or maintain marginalization and stereotypes (Chisholm & McKinney, 2003). Teachers can reinforce gender inequality, whether they are aware of it or not, through formal or implicit curricula. Teachers' expectations can be effective on students' behavior, their academic success, and even their choice of profession. Tstudents' behavior, their academic success, and even their choice of profession, which can deepen the inequality (Adaçay, 2014, Hançerli, 2019). Fine (2017, p. 60) stated that implicit gender stereotypes regarding achievement in science and mathematics further reinforce gender discrimination regarding achievement, especially in numerical fields. This indicates the need to include gender issues in the curriculum in teacher education.

UNESCO (2015, p.3), a global and international organization, emphasized that gender equality should be promoted in teacher training institutions because gender equality is a priority in the international development agenda and plays a key role in the development of teachers' values, knowledge, human potential and skills. In Turkey, on the other hand, it is noted that gender issues are not sufficiently included in the curriculum of faculties of education (CoHe, 2018). In addition, studies have shown that pre-service teachers have bias and stereotypes about gender that support the patriarchal structure (Aslan, 2015; Öngören, 2019; Şeçgin & Tural, 2011). In this case, education policies that will support gender equality and concrete steps to be taken in this direction should be developed to
make education faculties sensitive to gender equality. Because education and gender equality are fundamental and inalienable human rights. Gender equality in education refers to equal access for boys and girls to learning opportunities, fair treatment in the learning process, and equal opportunities in all fields. In order to achieve gender equality in education, the entire education system (laws and policies, educational content, pedagogy, learning environments) should be gender-sensitive, harmonious and transformative (UNESCO, 2015).

Gender in Education: International and National Initiatives

Many documents bearing legal and political obligations have been signed to strengthen gender equality in education, ensure respect and support to human rights, and improve the situation of all groups being exposed to discrimination. Perhaps the most important of these documents was the Universal Declaration of Human Rights declared by the General Assembly of the United Nations (UN) in 1948. In accordance with this Declaration, “Everyone has the right to education (Article 26)”. Also, “Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status (Article 2).” In addition to this declaration, in 1952 UN signed the Convention on the Political Rights of Women, which grants women the exercise of political rights such as the right to vote, to elect, and to be elected. After the UN convened the first world conference on the status of women in Mexico City in 1975, the General Assembly initiated global efforts on gender equality. It promoted the advancement of women by declaring the period between 1976 and 1985 as the United Nations Decade for Women (The European Students’ Union, 2008).

One of the conventions that made a tremendous impact on gender equality in education in the international area was the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) adopted in 1979 by the UN General Assembly. In Article 10 of the Convention, equal access to education, equal rights to education, types of education, revision of textbooks, elimination of stereotyped concepts related to gender roles at all levels of education, and the need to adapt curricula and teaching methods were underlined (United Nations Human Rights, n.d.). Additionally, in the resulting documents of the 1995 Fourth World Conference on Women (the Beijing Declaration and the Platform for Action), education was stated as a human right and also an essential tool for achieving the goals of equality, development and peace (Turkish Grand National Assembly-TGNA, 1995). According to Acar (2018), the Beijing Platform for Action is a comprehensive international policy document that includes an implementation plan and it is also a document with a powerful political impact. Another important covenant to ensure gender equality in education on a global scale was the Education for All and Millennium Development Goals agreed by 164 governments in 2000 within the Dakar Framework for Action. This framework aimed to eliminate gender disparities in primary and secondary schooling by 2005 and achieve gender equality in education by 2015 (UNESCO, 2010).

The legal framework of the right to education in Turkey is defined in the Constitution of 1982 and the Basic Law of National Education numbered 1739. Article 42 of the Constitution of 1982 states that no one shall be deprived of the right to receive education, primary education is compulsory for all citizens of both sexes, and it is free of charge in state schools (Constitution of the Republic of Turkey). Turkey undertakes to produce policy towards ensuring gender equality in education and minimizing the conditions against girls and women's education by both international agreements and national legislation (TGNA Committee on Equality of Opportunity for Women and Men, 2011). To ensure equal participation of girls and boys in education, one of the important actions taken was that basic education was introduced as the eight-year uninterrupted compulsory schooling in 1997 and the period of education was later increased to twelve years in 2012. With these initiatives in compulsory education, gender equality has been achieved to a large extent at the primary education level in terms of equal participation in education. A significant progress has been made in secondary education and adult literacy. However, qualitatively, quality education and school completion issues still remain (Erçetin & Arifoğlu, 2016).

Another important action taken regarding gender equality in Turkey is the amendments made in Article 10 of the Constitution in 2004 and 2010. In accordance with the mentioned Article, “Men and women have equal rights. The State has the obligation to ensure that this equality exists in practice. Measures taken for this purpose shall not be interpreted as contrary to the principle of equality”. In addition to this, in 2009, the Committee on Equality of Opportunity for Women and Men was established to monitor national and international developments in the protection and development of women's rights and in the implementation of gender equality. The Committee published a report on the place and importance of gender equality in Turkish education system in 2011. The report emphasized that it aims to identify the progress and difficulties in ensuring gender equality in education and to determine the measures to be taken in line with the goals to be achieved (TGNA Committee for Equal Opportunities for Women and Men, 2011).
One of the comprehensive steps taken to promote gender equality in education was the Promoting Gender Equality in Education Project. The project which was funded by the European Union and the Government of Turkey was launched in September 2014 and implemented for 24 months. With this project, it aimed to make schools more gender-sensitive in terms of gender equality in education, review education policies and legislation, curricula and textbooks and develop recommendations, train educators, and raise awareness about gender equality in different segments of society. Upon the reactions from the media and various segments towards the project, the Ministry of National Education (MoNE) stated that the project was completed and there was no ongoing project (MoNE, 2019). On the other hand, in 2015, the Council of Higher Education (CoHE) also put gender equality on its agenda and held a well-attended workshop. In the document on attitudes to gender that was published by the CoHE and also in the final report for the workshop held in the same year, it was stated that gender equality course would be included in higher education programs, with the same or a different name, as a compulsory or elective course. The mentioned attitude document was again drafted in 2019 with an emphasis on the concept of “justice-based women’s studies” (Arkan, 2019, Yılgör, 2019). Göğüş Tan (2020) evaluated the cancellation of gender-related education and projects by the CoHE and MoNE as a regression in respect of ensuring gender equality in education.

Method

Research Model

“A research literature review is a systematic, explicit, and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners.” (Fink, 2014, p.3). The central aim of this literature review was to identify trends in gender research in education in terms of years, study subject, methods and findings. The reason for choosing this method is that it enables to determine trends and priority areas related to the research subject, summarize the general, methodological and content characteristics of the studies, and classify and interpret the studies within a certain systematic framework.

Study Group of the Research

The study group of this research consists of master’s theses and doctoral dissertations completed on gender education and relevant articles published in peer-reviewed journals between 2002 and 2019. Criterion sampling, one of the qualitative sampling methods, was used to determine the research's study group. The criteria determined by the researchers are listed as follows. (1) It is required that the study has been conducted with sample and/or study groups in Turkey. (2) It is required that the study has been permitted for open-access in relevant databases and full-length access to its content. (3) It is required that the study has been conducted in education. (4) It is required that the study provides sufficient data within the scope of research method / that the study is not a review study. (5) It is required that the study is not a book summary, translation study, theoretical study. (6) It is required that only the thesis study is examined in the studies produced as articles from theses.

When the studies were eliminated based on these criteria, it was determined that the first study was dated 2002, and by accepting this date as the beginning, the scientific studies conducted between 2002 and 2019 were determined. Again, as a result of elimination in line with these criteria, 121 studies; 10 doctoral dissertations, 53
There is an increase in studies on gender in education from 2002 to 2019. Especially, the studies published between 2017 and 2019 constitute almost half of the total research.

Data Collection

Data in the research were collected by using document analysis technique. In the first stage, the researchers conducted a literature review in the CoHE National Thesis Center Database, Turkish National Academic Network and Information Center (ULAKBIM) Social Sciences Database, and Google Scholar’s database to access the studies on gender education. The reason for preferring the mentioned databases is that they mostly include the relevant studies at the national level and can meet the accessibility criterion. Due to the conceptual structure of gender, differences in terminology, and frequency rate of the studies produced by gathering different variables or methods, the searches were carried out on various keywords. These keywords are gender education, sexism in education, gender equality in education, and gender in education. The number of 101 postgraduate theses accessed through document analysis decreased to 65 when ‘education and training’ filter was used. Since there was no access to the content of two theses, 63 theses were included in the research. In addition, since five of the 65 articles accessed at the beginning were produced from a postgraduate thesis and also two articles were a review study, therefore seven articles were excluded and 58 articles were included in the analysis.

Data Analysis

The content analysis method was used to analyze data obtained in the research. In content analysis, excerpts from written texts, speeches or interviews are selected and converted into standard codes. After the codes created for the research problem are classified systematically, the relationships among data are explored to create meaning (Marvasti, 2004). In this study, a scoring matrix was created in the first phase of data analysis to prepare the research data for analysis, and each document was coded (e.g., T1, M1, etc.) and ordered. In the scope of analysis, the studies were systematically classified under the titles of publication type, subject area, method, sample/study group characteristics and findings. The data regarding the subject area and findings of the studies were collected under subthemes in terms of meaning similarities and the main themes were created after the relationships among the subthemes were determined. Data related to the publication type, method, and sample/study group characteristics of the studies were interpreted using frequency values by considering the frequency of use of word groups. The subject areas and results of the studies were analyzed using an inductive approach.

Validity and Reliability

Validity in qualitative research is related to the proper collection and interpretation of data and also related to the fact that the phenomenon studied and research results reflect and represent the real world properly. Reliability is that the findings obtained after repeating the same research are consistent, and the research results are objective and unbiased (Merriam, 2009; Yin, 2011).

To ensure the internal validity of the research, the identity of documents analyzed in the scope of the research was recorded to be checked by other researchers. In addition, the data were reviewed a few times during the content analysis, and agreement was reached among the researchers when creating the themes. For the external validity of the research, the information about how the research was conducted was conveyed in detail. To increase the internal validity of the research, intercoder reliability was carried out. To ensure the reliability of coding, the coding of the studies to be included in the analysis must be conducted by at least two coders (Wilson, 2009). For this reason, the coding during the study was made by two experts in the field who have doctoral degree, and then the coding procedures were compared. The reliability of the coding was calculated by using the formula “Reliability = Agreement / (Agreement + Disagreement) x 100” (Miles & Huberman, 1994) and it was found 93%. In this context, it can be said that the coding carried out is reliable (Yıldırım & Şimşek, 2011, p. 233). To ensure the external reliability of the research, the research method and procedures were explained clearly and in detail.

Limitations of the Study
The scope of this study is limited to 63 postgraduate theses and 58 articles published in gender education between 2002 and 2019. Book summary, translation and review studies were excluded from the scope of research. The generalizability of the results obtained from the study is limited to the theses and articles analyzed in the study. The results of this study were obtained through content analysis of theses and articles in specific databases.

Results

This section presents results related to the studies on gender education examined by content analysis in the order and title specified in the sub-objectives.

Distribution of the Studies on Gender in Education According to Subject Areas

The 121 studies included in the study were analyzed in terms of subject areas and the findings obtained were presented in Table 1.

Table 1. Subject areas of the studies on gender in education

<table>
<thead>
<tr>
<th>Themes</th>
<th>Subthemes</th>
<th>Codes</th>
<th>(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender representations</td>
<td>Primary school textbooks</td>
<td>Turkish Language</td>
<td>T58, A24, A39, A42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Studies</td>
<td>T17, A24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Life Studies</td>
<td>T58, A24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics</td>
<td>A33</td>
</tr>
<tr>
<td></td>
<td>Secondary school textbooks</td>
<td>Turkish Language</td>
<td>T24, T26, T41, T44, T48, A42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Studies</td>
<td>T17, T60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>English Language</td>
<td>T30, T64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics</td>
<td>A14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Citizenship and Democracy</td>
<td>A35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Religious Culture and Moral</td>
<td>A63</td>
</tr>
<tr>
<td></td>
<td>High school textbooks</td>
<td>Sociology</td>
<td>T32, T33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>History</td>
<td>T46</td>
</tr>
<tr>
<td></td>
<td>Undergraduate textbooks</td>
<td>English Language</td>
<td>T7</td>
</tr>
<tr>
<td></td>
<td>Adult textbook</td>
<td>Family Education</td>
<td>T38</td>
</tr>
<tr>
<td></td>
<td>Children's book</td>
<td>(Pre-school)</td>
<td>T4, T5, T12, T31, T37, T42, T63</td>
</tr>
<tr>
<td></td>
<td>Cartoon movies</td>
<td>(Pre-school)</td>
<td>T15, T34, A30, A34, A36</td>
</tr>
<tr>
<td></td>
<td>Curriculum</td>
<td>Primary-Secondary</td>
<td>A37</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Woman education)</td>
<td>A13</td>
</tr>
<tr>
<td>Gender perception</td>
<td>Teacher/Administrator</td>
<td>Pre-school</td>
<td>T23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary school</td>
<td>T14, T40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary school</td>
<td>T6, T14, T20, T40, M41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T8, T61</td>
</tr>
<tr>
<td>Student</td>
<td>Pre-school</td>
<td></td>
<td>T7, T9, T10, T39</td>
</tr>
<tr>
<td></td>
<td>Secondary school</td>
<td></td>
<td>T45, T52, A41</td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td></td>
<td>T61, A29</td>
</tr>
<tr>
<td></td>
<td>Pre-service teacher</td>
<td></td>
<td>T13, T19, T55, A3, A5, A17, A45</td>
</tr>
<tr>
<td></td>
<td>Undergraduate/Associate degree</td>
<td></td>
<td>A23, A48, A56</td>
</tr>
<tr>
<td></td>
<td>Parents</td>
<td></td>
<td>A4</td>
</tr>
<tr>
<td>Gender roles</td>
<td>Teacher/Administrator</td>
<td>High school</td>
<td>A46</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>High school</td>
<td>T62, A11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-service teacher</td>
<td>T18, T25, A18, A40, A50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Undergraduate</td>
<td>A9, A15, A19, A20, A38, A44, A54, A58, A59, A61, A64</td>
</tr>
</tbody>
</table>
Table 1 demonstrates that twelve themes were determined as a result of the content analysis for the subject areas of the studies examined. These themes were listed in terms of the frequency of being studied, respectively, as gender representations \((N = 36)\), gender perception \((N = 27)\), gender roles \((N = 19)\), curriculum development/activity designing \((N = 16)\), vocational education/choice of profession \((N = 8)\), gender discrimination \((N = 7)\), gender awareness \((N = 2)\), hidden curriculum \((N = 2)\), achievement \((N = 2)\), gender constancy \((N = 1)\), problem solving skill \((N = 1)\), and gender policies \((N = 1)\).

It was determined that primary and secondary school textbooks, which are mostly verbal (Turkish, life studies, social studies, etc.) under the theme of gender representations, were examined. On the other hand, it was seen that researches on pre-service teachers under the theme of gender perception and research on undergraduate students under the theme of gender roles were predominant. In addition, it had been determined that program development studies for pre-service teachers were mostly included under the theme of curriculum development and activity design, and educational activities were integrated into the social studies course in studies within the scope of basic education.

**Distribution of the Studies on Gender in Education According to Methods**

Findings regarding the research method of the studies on gender in education were presented below (Figure 2):

![Distribution of the studies on gender in education according to the research methods](image)

Figure 2 illustrates that the qualitative research method (54%) was predominantly used in the studies on gender education. In addition, quantitative methods (35%) were preferred in most of the studies, while mixed-method research were preferred least (11%). The research design was not specified in most studies conducted by qualitative research method \((N = 43)\). It was observed that descriptive research \((N = 8)\), case study \((N = 6)\), phenomenology \((N = 5)\), feminist methodology \((N = 2)\) and action research \((N = 1)\) were used in the studies in which the research
design was specified. Regarding the studies in which quantitative research method was preferred, survey research design \((N = 16)\) was used at most. Other quantitative research models used in the studies were experimental design \((N = 5)\), correlational design \((N = 3)\) and causal-comparative design \((N = 1)\), respectively. It was also found that quantitative research design was not specified in many studies \((N = 18)\). The research designs preferred in the mixed methods studies were sequential explanatory \((N = 3)\), convergent parallel \((N = 1)\), triangulation \((N = 1)\), and concurrent transformative \((N = 1)\). The design of seven out of thirteen mixed methods studies was also not specified.

**Distribution of the Studies on Gender in Education According to Sample / Study Groups**

Findings regarding the sample/study groups obtained as a result of the analysis of the studies on gender in education were presented in Figure 3.

![Figure 3](image_url)

Figure 3. Distribution of the studies on gender in education according to the sample/study group

Notes. *In some studies, more than one sample or study group was used.  
**Other undergraduate students except pre-service teachers.  
***Reports, guidelines, statistics, studies, publications, transcripts, and etc.

Figure 3 illustrates that the sample/study group mostly selected in the studies on gender education were textbooks \((N = 22)\), pre-service teachers \((N = 20)\), teachers \((N = 18)\) and undergraduate students \((N = 17)\), respectively. These were followed by secondary school \((N = 10)\) and high school \((N = 10)\) students, preschoolers \((N = 9)\), children’s books \((N = 7)\), other documents \((N = 7)\), parents \((N = 5)\), school principals \((N = 5)\), primary school students \((N = 4)\), cartoons \((N = 4)\), and adults \((N = 2)\), respectively.

**Distribution of the Findings of the Studies on Gender in Education According to Themes**

The findings of the studies on gender in education were thematically analyzed and classified. Findings revealed as a result of analysis are presented in Table 2.
Table 2. Distribution of the findings of the studies on gender in education according to themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-themes</th>
<th>Concepts</th>
<th>*Codes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender representations</td>
<td>Educational materials</td>
<td>Inequality in representation rates, Inequality in professional representation, Private-public field distinction, Inequality in gender roles</td>
<td>T4, T12, T15, T17, T24, T26, T30, T31, T32, T33, T34, T37, T38, T41, T44, T46, T48, T58, T60, T63, T64, A14, A24, A30, A33, A34, A35, A36, A37, A39, A42, A63</td>
<td>32</td>
</tr>
<tr>
<td>Gender perception/attitudes towards gender roles</td>
<td>Teacher/administrator</td>
<td>Traditional gender roles, Stereotyping and bias, Patriarchal understanding</td>
<td>T6, T8, T14, T20, T59, T61, A27, A41, A46, A51</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Student/K12</td>
<td>Stereotyping and bias, Traditional gender roles</td>
<td>T7, T8, T9, T39, T45, T47, T52, T55, T61, T62, A2, A41, A51, T7, T9, T45, T57, T62, A32, A43</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Parents influence</td>
<td></td>
<td>T47</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Curriculum, teacher, and administrator influence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student/Higher education</td>
<td>Egalitarian perception/attitude, Stereotyping and bias</td>
<td>T13, T18, T19, T25, A17, A19, A20, A38, A44, A54, A56, A61</td>
<td>12</td>
</tr>
<tr>
<td>Teacher behaviors and attitudes</td>
<td></td>
<td>Gendered discourse, Discrimination, Patriarchal understanding</td>
<td>T6, T8, T20, T27, T36, T47, T59, T61, A25, A27, A41, A43</td>
<td>12</td>
</tr>
</tbody>
</table>

Notes. *The most frequently repeated findings in the studies were included. The criterion of frequency is that frequency is 10 or more.

Table 2 demonstrates that four themes were determined due to analyzing the findings of the studies on gender education. These themes were gender representations, gender perception/roles, curriculum development/activity designing, teacher behavior and attitudes. As seen in the table, four themes were determined as a result of examining the findings of gender education research. These themes are gender representations, gender perception/role attitudes, curriculum development/activity design, and teacher behaviors. Under the theme of gender representations related to the findings of the studies, inequality in representation rates, inequality in professional representations, distinction between private and public spheres and inequality in gender roles came to the fore. Under the theme of gender perceptions/roles; in research on teachers and school administrators, gendered discourse, stereotyping and bias, patriarchal understanding, and traditional gender roles (N = 10); in research on elementary students, family influence (N = 7); Stereotyping/bias and traditional gender roles (N = 13); In studies conducted at the university level, the terms egalitarian attitude/perception (N = 12) and stereotype/bias (N = 5) were found to be repeated more frequently. While the concepts of positive perception/role attitude (N = 14) and training need (N = 2) stand out under the theme of curriculum development/activity design; Under the theme of teacher behaviors and attitudes (N = 12), gendered discourse, discrimination and patriarchal understanding were frequently repeated findings.
Conclusion and Discussion

In this study, the distributions of the subject areas, methodological trends and findings of the studies on gender in education were analyzed and the following results were obtained.

When analyzing gender education studies in terms of distribution by year of publication, a steady increase in the number of studies was found from 2002 to 2016. Based on this result, it can be concluded that the interest in gender in education research has increased. It can be assumed that the topic of gender equality put on the agenda by the CoHE between 2015 and 2019 and the final report of the workshop published in 2015, as well as the Promoting Gender Equality in Education project carried out between 2014 and 2016, have contributed significantly to the increase in interest. This finding is supported by the results of other research (Çelik & Altunbaş, 2019; Koyuncu Şahin & Çoban, 2019).

Twelve themes were determined as a result of content analysis for the subject areas of the studies on gender education. These themes were gender representations, gender perception, gender roles, curriculum development or activity designing, vocational education or choice of profession, gender discrimination, gender awareness, hidden curriculum, achievement, gender constancy, problem-solving skill, and gender policies. The most frequently studied topics in gender education in recent years (2017-2019) were gender representations (N = 21), gender perceptions (N = 16), curriculum development/activity design (N = 9), and gender roles (N = 6).

Under the theme of gender representations, 23 of the 36 studies were about textbooks. A significant amount of the studies examining textbooks were related to Turkish (N = 10) textbooks (Kirbaşoğlu Kılıç & Eyüp, 2011; Kitiş Çınar, 2013; Kozallık-Çebi & Kargı, 2019; Saydam, 2019). In addition, it was determined that among the textbooks related to positive sciences (science, physics, chemistry, biology, mathematics, etc.), only primary and secondary school mathematics textbooks were examined. In contrast, only sociology and history textbooks were examined at the high school level. It has been observed that there was a lack of research on textbooks on positive sciences in the field of gender in education, especially at the high school level. Studies in which story/fairy tales books (Peker, 2019; Salman Erden, 2019), cartoon movies (Kalem, 2019; Kalaycı, 2015) and columns (Çelik & Uysal, 2012) for preschoolers were analyzed in terms of gender were also encountered. Another theme emerging from the content analysis of the studies on gender was determined as gender perception. It was observed that the number of studies on gender perception increased in 2017 and afterward and teachers (N = 8) and pre-service teachers (N = 7) were included in a considerable part of the research. No research was found examining the gender perception of primary school students. Another prominent theme was gender roles, and a significant part of the research (N = 19) on this subject was aimed at undergraduate (N = 10) students (Çelikkaleli & Avcı, 2016; Elgün & Yeniceri Alemdar, 2017). Under the theme of gender roles, there was a lack of studies for preschool, primary and secondary school students. Primary and secondary school education are considered the educational levels at which students discover their interests and abilities and the foundations for profession choices were laid. Therefore, the analysis of gender perception of students at this educational levels will provide valuable data for determining their education needs. In addition, there is a need for research that examines both gender perception and gender roles of academics for more holistic assessments. Except these, it can be said that curriculum development, activity designing, and so on, are among the research subjects studied increasingly as related to gender education. The gender equality attitude document published by the CoHE in 2015 is considered to influence research subject trends of gender education studies (CoHE, 2015). This situation revealed the need for gender equality curriculum in higher education and accelerated the curriculum development studies conducted especially for teacher education at undergraduate level. Some studies scientifically supported that topics related to gender can be integrated into the courses such as social studies and history at the primary and secondary school levels (Dilek, 2012; Seçgin, 2012). On the other hand, there had been a tendency towards vocational education and choice of profession in studies on gender education after 2014. In addition to these, research on hidden curriculum was limited to two studies at primary school level. Hidden curriculum research at preschool, secondary school, high school and undergraduate level will provide important data on how gender is constructed in educational environments.

The distribution of studies on gender education in terms of research methods was analyzed and it was found that the qualitative research paradigm was predominant in most of the studies. The least preferred method in the studies was mixed-methods research. Qualitative methods were usually used to analyze printed and visual materials such as textbooks, children’s books, and cartoons which constitute a significant part of the research. These results are also consistent with the results of other studies on this subject in the literature (Koyuncu & Şahin, 2019; Yıldırım et al., 2019). However, in the study conducted by Çelik and Altunbaş (2019), it was determined that quantitative research models were preferred more. While it was seen that descriptive research, case study, phenomenology, feminist methodology, action research were used in the studies in which the research design was specified, the
research design of a significant number of studies was not specified. While survey research design preferred mostly in quantitative research studies it was found that the quantitative research design was not specified in many studies. Considering the research methods of the studies on gender education, it is possible to say that mixed-methods, experimental, and action research are in limited number.

Based on the analysis of the findings of studies on gender in education, main problem areas related to gender in education can be collected under four titles. These are (i) gender representations reflecting inequality in educational materials, (ii) traditional gender perception and attitude in educational environments, (iii) the need for gender education and (iv) teacher attitude and behaviors reflecting gender inequality. The continuance of these problem areas as of the years when discussions on gender in education have started indicates that the relevant steps taken so far are not enough. In addition, although international conventions and legal regulations have created a positive perception in terms of gender equality, it was supported by scientific data in consideration of the findings of the studies that progress could not be achieved at the targeted level in implementation.

When the findings of studies examining educational materials such as textbooks, curricula, cartoons and children's books in terms of gender, were evaluated, it was seen that four concepts stand out in general. These were inequality in representation rates, inequality in professional representations, distinction between private and public spheres and inequality in gender roles. According to these findings, girls or women characters were less included than men in educational materials. While more occupations were recommended for men, the recommended number of occupations for women had remained limited. In addition, occupations were represented in accordance with the traditional gender roles of women and men. On the other hand, women mostly do housekeeping, child care, etc. men were depicted as a figure working outside the home while jobs and duties jobs represented them and duties represented them and duties represented them. In conclusion, the findings of the studies showed that gender stereotypes and bias were included in educational materials. In some studies examining textbooks and children's books, it had been emphasized that although there were some improvements in the representation of genders, this was not enough and that messages reinforcing gender inequality were still present in images or texts (Başaran, 2019; Karakuş, Mutlu, & Çoşkun, 2018; Özmeriç Taştekin, 2019). These results revealed that educational materials, especially textbooks, should be freed from gendered stereotypes and bias. Because educational materials convey the dominant gender culture through written and visual texts. This situation lays the foundation for the realization of implicit learning about gender roles and the reproduction of inequality (Adaçaç, 2014). Cleansing educational materials of gendered elements may not be sufficient by itself to ensure gender equality, but it is believed to be effective for mental change. In the Article 10 of the Convention CEDAW, which is for education, the necessity of revising textbooks and eliminating gender stereotypes from almost all levels of education was emphasized (United Nations Human Rights, n.d.). In the Article 6 of the MoNE Regulation on Textbooks and Educational Materials, the statement that “It introduces an approach to support fundamental human right and freedoms and to refuse all kinds of discrimination.” was included among the qualities of textbooks (Official Gazette, 2012). However, in the light of the findings of the studies on gender in education, it was revealed that the contents of textbooks, children’s books, cartoons and curricula examined did not reflect gender equality, were in a gendered structure and promoted traditional gender roles. Similar findings were also obtained in a study carried out on the issue (Koyuncu Şahin & Coban, 2019). In fact, all these findings showed that this problem might continue to exist for long years in future unless necessary precautions about sexism in textbooks were taken and implemented. (Aratemur-Çimen and Bayhan, 2018, 2019; Esen, 2007; Kancı, 2008).

In the analysis regarding the findings of the studies on gender in education, attitudes towards gender perception and gender roles were analyzed under a single title. The results of the studies showed that teachers and school administrators adopt a gendered discourse and a patriarchal understanding. Teachers, school administrators, and students at the basic education level have gender stereotypes and bias and internalize traditional gender roles ($N = 10$). On the other hand, the results of the studies mentioned above revealed that the family is effective in the perception of gender and attitudes towards gender roles of students at the basic education level ($N = 7$). In addition, in most of the gender studies conducted at the higher education level, it was concluded that university students have egalitarian perceptions and attitudes towards gender roles ($N = 12$). In fact, the findings showed that female students adopted gender equality more than male students. However, in some studies, it was found that university students had gender stereotypes and bias ($N = 5$). It was thought that these different research results on gender in higher education were due to the measurement tools used in the research and the difference in research methods. In fact, studies that concluded that students have egalitarian perceptions or attitudes tended to favour quantitative research methods and techniques and used the Gender Perception Scale (Altunova and Duyan, 2013) and the Gender Roles Attitude Scale (Zeyneloğlu and Terzioglu, 2011) as measurement instruments.

Gender perceptions or attitudes of teachers affect their behavior towards male and female students (Tsouroulli, 2002). Therefore, teachers have a key role in learning and reproducing gender roles in education systems.
However, the findings of gender education research revealed that teachers adopted a patriarchal understanding. Teachers made gender discrimination with practices and behaviors that were not based on equality and gendered discourses (Durmaız, 2019; Esen, 2013; Hançerli, 2019). It can be said that these gendered attitudes and behaviors of teachers are a reflection of the culture they grew up in (Fine, 2010; Lindsey, 2016).

The results of gender studies in the field of education had shown that the steps taken to improve gender equality in education in Turkey were insufficient. For this reason, the dominant gendered stereotypes and values of the society are reproduced and maintained in education processes (Sayılan, 2012). In this context, gender education is needed at almost every level of education. However, no education initiative will support gender equality neither at the basic education level nor in the faculties of education. In fact, studies had revealed that especially undergraduate education is insufficient in developing perceptions and attitudes towards gender equality (Acar-Erdol, Özen & Toraman, 2019, Baba, 2007, Direk & İrmak, 2017, Kızılaslan & Diktaş, 2011). This situation supported that the studies on curriculum development and educational activities in the field of gender were carried out due to the gaps and needs in this field. In researches on preschool students, it had been determined that gender education activities helped students break stereotypes about tasks such as indoor and outdoor tasks, jobs, professions and toy preferences, and change students’ attitudes positively (N = 2). In the studies conducted for primary and secondary school levels (N = 4), the activities were integrated into the social studies course. The students gained gender awareness and sensitivity at the end of the training. Studies with pre-service teachers and other undergraduate students (N = 6) show that training or activities had positive effects on students' perceptions and attitudes towards gender. All these results showed that systematic and regularly planned gender education will be an important step in improving gender equality.

**Recommendations**

In consideration of the obtained results of this study, the following recommendations can be made. (i) Studies on gender education may be analyzed at regular intervals and by using content analysis in order to obtain various studies with richer content. (ii) It is considered that action research will provide unique data regarding current situation analyses for gender equality in educational environments, problems encountered in the process, and solutions to these problems. For this reason, action research which will enable teachers to gain experience should be included in studies on gender education. (iii) It was determined that studies including pre-schoolers and primary school students as sample and study groups in the studies on gender education were limited, and studies for school administrators and academicians were not in sufficient in number. For this reason, it is recommended that research be conducted to fill this gap in this area. (iv) Considering the results of the gender education studies analyzed in this study, it was found that the problem areas were grouped under four titles. It is recommended that policy makers and practitioners develop strategies and take action on these problem areas.

**Acknowledgements or Notes**

This research was presented as an oral presentation at the International Pegem Conference on Education held between 16-19 September 2020, and only the abstract was included in the abstract book.

**Author(s) Contribution Rate**

The authors contributed equally to the study.

**Conflicts of Interest**

No potential conflict of interest was reported by the authors.

**Ethical Approval**

Ethics committee approval is not required as it does not involve clinical researches on humans as well as it does not contain Retrospective studies in accordance with the Law on Protection of Personal Data.

**References**


Aydemir, Öz & Erdamar


