




The Examination of the Reflections of the Universal Design Learning-Based Gender Roles Program on University Students*

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Abstract

The purpose of this study is to investigate the effects of a Universal Design for Learning (UDL)-based gender roles program on university students. The research was carried out utilizing an embedded mixed research design. The participants in the research took part in a UDL-Based Gender Roles Program that focused on sustainable development goals and gender equality. The study group included 15 female (83.3%) and three male (16.7%) university students enrolled in undergraduate programs at a foundation university during the 2021-2022 academic year. The Gender Roles Attitude Scale, reflection papers, learning diaries, and focus group interviews were used to collect data. SPSS was used to conduct quantitative data analysis using the Wilcoxon Signed-Rank Test. The content analysis technique was used to analyze the qualitative data. The quantitative results of the study found no statistically significant difference between participants' pre-test and post-test scores in terms of egalitarian gender roles, female gender roles, and total scores for sub-dimension of gender roles in marriage. However, the post-test showed a statistically significant difference in overall scores for traditional gender roles and male gender roles sub-dimensions. The qualitative outcomes of the study revealed that studies on gender roles have a positive impact on participants' perceptions and awareness.

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Introduction

Defined as "a group of people in a society who share particular qualities or ways of behaving which that society associates with being male, female, or another identity" (Cambridge Dictionary, n.d.), gender denotes the physiological and biological attributes indicating an individual's distinction from the opposite sex. Oakley (1972) distinguishes the concept of gender from sex, stating that gender parallels the biological distinction between male and female and encompasses the societal value of femininity and masculinity. Gender roles emerge from people's interactions with their environment. This product provides individuals with an understanding of behavior attitudes that are thought to be appropriate for a specific gender. According to Şahin (2019), gender-appropriate behavior patterns are influenced by societal expectations. Individuals' conceptions of gender roles are shaped by the paradigms that society has constructed. According to Bem's (1974) inventory listing gender roles, feminine characteristics embraced by females include being cheerful, compassionate, enthusiastic, refraining from speaking ill, consoling fragile emotions, easily hurt and deceived, loving children, childlike, shy, sensitive, understanding, needing others' support, and submissive, while masculine characteristics are molded as possessing leadership skills, self-confident, strong, risk-taking, self-sufficient, not showing attitude towards situations, dominant, independent, athletic, and having a strong personality. Unless gender roles shift to an egalitarian attitude, the countries of the world will not be able to achieve unity in any development process, especially economic progress (Yaşın-Dökmen, 1999). According to a study conducted by the McKinsey Global Institute (2015), it is forecasted that there will be a 26% increase in annual global Gross Domestic Product by 2025 as a result of women and men starting to work in equal proportions. In this context, it is important to promote the proliferation of egalitarian gender role perceptions, change negative societal judgments, increase equal gender power in the public sphere, and ensure diversity in areas such as education, politics, and economics (Özveren & Dama, 2022).

Recent research on learning and teaching points to the necessity of design approaches that put the student at the center and focus on retention in learning (Darling-Hammond et al., 2019; Hernández et al., 2023; Katawazai, 2021; Kerimbayev et al., 2023; Munna & Kalam, 2021). In this sense, UDL is an instructional design model that emerged in the field of architecture and then started to be used in the field of education. It offers a framework for creating lessons that proactively integrate inclusive strategies and choices to support every student in the classroom. (Meyer et al., 2014). The model advocates for products to be designed in a way that can be used by everyone regardless of ethnic background or disabilities. Among the principles of this design are elements such as equality in use, flexibility, intuitive and simple use, tolerance for error, perceivable information, low physical effort, and providing sufficient space for use (Arslan, 2019). Over time, UDL principles have come to be used in curricula, laboratories, teaching activities, educational materials, and libraries. As Rose and Meyer (2002) point out, UDL is an educational approach that draws on learning sciences research, including cognitive neuroscience, to develop adaptable learning environments that address individual differences. In short, UDL is an effective model that provides an alternative to reaching multiple audiences in multiple components of the teaching process.

When the studies on gender equality and gender roles are examined, it is seen that although non-government organizations and public institutions work to raise awareness, the efforts to strengthen the role of women are predominantly provided through entrepreneurial women support programs (Pokrzywa, 2018). Unfortunately, there is a limited number of scientific studies that aim to raise public awareness about gender roles. Reviewing recent research in the field, recent studies within the framework of societal gender roles include cross-cultural marriages based on societal gender roles, societal gender roles in novels and children's books, societal gender role perceptions and values in mate selection attitudes, societal gender roles in media elements broadcasted on digital and local channels, and descriptive studies on perceptions of violence against women (Gök, 2018; Kamışlı, 2018; McCabe, 2022; Padmanabha, 2023; Pehlivan, 2018; Verdugo-Castro et al., 2022). Among the existing studies, only two studies on the perception of gender roles have been conducted with university students in recent years (Ateş, 2017; Yılmaz, 2017). Another factor that makes the research significant is the integration of UDL instructional model. Most of the intervention studies in the literature (for example, Aydemir, 2019; Doğan-Yaylak, 2023; Köroğlu, 2022) do not refer to a specific model that puts the learners in the center. With the developed program, the intervention focused on the learners and their having an active role during the program, having the status of expert students, being systematically involved in learning methods and techniques, developing learning strategies, and helping learners discover how they learn. In short, there is a scarcity of studies on the subject in the literature. In this respect, the current study is significant in the sense that it aims to increase university students' awareness of gender roles based on UDL.

In light of the above, the purpose of this study is to examine the effects of a UDL-Based Gender Roles program on university students. The research aimed to raise awareness of the participants within the scope of gender equality, which is one of the sustainable development goals, through the Gender Roles Program based on UDL Principles. Within the scope of the purpose, the following questions were sought to be answered.

1. Is there a significant difference between the pre-test and post-test scores of gender equality perception of university students participating in the UDL-Based Gender Roles Program in favor of the post-test?
2. What changes have occurred in the perspectives of university students participating in the UDL-Based Gender Roles program regarding gender roles?

Literature Review

Gender Roles

Role is defined as the expectations of society and the duties imposed on individuals by societal life. Societal gender roles are expectations associated with specific genders that have been normalized and naturally defined by society, which each individual is expected to fulfill (İsen & Batmaz, 2002). Societal gender norms develop culturally. These norms determine which behaviors are appropriate for men and women, as well as their responsibilities and social rights, while also influencing the role of genders in accessing resources and decision-making mechanisms (Reeves & Baden, 2000). In short, societal gender roles encompass the values, expectations, judgments, and roles related to how society perceives, views, thinks about, and expects individuals to behave in terms of gender. In other words, societies pigeonhole individuals into certain patterns based on their genders and deem it appropriate for them to

act accordingly. This imposition and approval inevitably result in women and men occupying unequal positions. Thus, societal gender roles are established (Pesen et al., 2016).

In the literature, societal gender roles are classified into five subheadings: female gender roles, male gender roles, traditional gender roles, gender roles in marriage, and egalitarian gender roles. The female gender role is defined as a role that needs to be protected and preserved, characterized by qualities such as sensitivity, understanding, emotionality, and dependence, while the male gender role is defined as a role that is leadership-oriented, dominant, independent, strong, protective, and reserved (Cüceloğlu, 2006). The female gender roles include societal expectations, behaviors, and norms assigned to individuals based on their perceived or acknowledged femininity. Traditionally, these responsibilities include childcare, nurturing, household chores, and emotional support for families and communities. Women have historically been expected to prioritize family and relationships over career advancement, although this expectation has changed over time (Dicke et al., 2019; López et al., 2013). Conversely, the male gender role associates leadership with masculinity, reinforcing the idea that men should be assertive, dominant, and in control. Men are expected to take the lead in various contexts, including work, relationships, and social interactions. This discourages them from openly expressing vulnerability or seeking help for emotional challenges (Eagly, 2009). The traditional gender roles address masculinity and femininity at opposite ends, with extreme masculinity at one end and extreme femininity at the other (Constantinople, 1973). These roles often uphold binary understandings of gender, where men and women are expected to adhere to specific behaviors, occupations, and social obligations based on their assigned gender at birth. Traditional gender roles frequently perpetuate gender inequalities and restrict individuals' freedom to express themselves and pursue their interests and aspirations beyond predefined gender norms (Hyde et al., 2019).

Marriage gender roles are the expectations and obligations attributed to persons in the context of marriage or long-term relationships. Historically, these roles have been impacted by traditional gender norms, with women frequently expected to take on the main caring and domestic chores, while men are supposed to provide and protect (Hall & Adams, 2011). In the egalitarian gender roles, men and women have equal rights in the family, at work, and in social settings. Marriage emphasizes teamwork and mutual support (Budak & Küçükşen, 2018). The egalitarian gender roles framework call for the abolition of traditional gender norms and the promotion of gender equality across society. Individuals under egalitarian gender roles paradigm have the freedom to express themselves and pursue opportunities based on their interests, abilities, and personal preferences rather than being limited by gender stereotypes. This entails equal access to education, work, healthcare, and political involvement, as well as fair labor distribution and decision-making within relationships and households (Cotter et al., 2011).

Universal Design for Learning (UDL)

Universal Design for Learning (UDL) originated in the early 1990s, drawing inspiration from Mace's Universal Design concept and the work of the Center for Applied Special Technology (CAST) (Pliner & Johnson, 2004). UDL is centered on designing for diversity from the outset of the design process, acknowledging the diverse needs and preferences of individuals (Rose & Strangman, 2007). It aims to establish inclusive environments by offering alternative solutions that cater to a variety of learners right from the design phase (Pliner & Johnson, 2004). The

integration of pedagogical principles and UDL can promote cultural pluralism, enhance critical thinking skills in students, assist teachers in identifying and removing stigmatizing elements, and create inclusive learning spaces (Galkienė & Monkevičienė, 2021).

UDL is an instructional design model based on research in learning sciences, particularly cognitive neuroscience, that takes individual differences into account, provides flexible learning settings, and encourages individual growth (Rose & Meyer, 2002). UDL not only assists learners in obtaining certain knowledge or abilities, but it also teaches them how to learn independently. Ultimately, UDL prioritizes students becoming experts in the subjects they are studying. Traditional instruction focuses on what is taught in the classroom. However, UDL-based training emphasizes a better understanding of the subject matter and how it is taught. CAST's UDL instructional design paradigm, based on facts about how people learn, incorporates inclusivity to meet the learning needs of every individual, independent of circumstances such as language, gender, race, or ability, anticipates individuals' needs, and incorporates elements of flexibility (Rao et al., 2014).

UDL has four main components: goals, methods, materials, and assessment. The goals component provides each student with content meant to help them become experts in the subject area within the instructional framework. The method component includes instructional methods that allow students to engage in active learning. Cognitive Apprenticeship, Discussion, Reciprocal Teaching, Cooperative Learning, Mental Modeling, Inquiry-Based Learning/Problem-Based Learning, and Situated Learning are examples of UDL-compliant instructional design methodologies (Chen et al., 2018). UDL uses items such as concepts, materials, lesson plans, coaching, and a variety of motivational factors, including multimedia. Assessment in UDL aims to improve design by allowing the learner to evaluate it. This enhancement intends to contribute to the development, advancement, and transmission of knowledge, emphasizing the importance of active participation in the learning process (Dempsey et al., 2022).

UDL organizes the teaching process by associating it with three neural networks. These networks are called the recognition network, the strategic network, and the affective network. Recognition networks are concerned with how information is categorized, encoded, and viewed. As a result, this component is concerned with the process of learning. The strategic network refers to networks in which ideas are arranged and the mechanism of transfer is determined. This component addresses the presentation style and technique of a piece of information. The affective network examines how pupils focus, what topics interest them, where they struggle, and if they feel engaged or disengaged (Gravel, 2018). According to research, cognitive control, a fundamental component of the strategic and affective networks, plays an important role in UDL. This emphasizes the importance of teachers assisting students in anticipating, structuring, and making decisions about their learning activities, as well as fostering reflection, revision, and improvement processes to enhance learning experiences (Campos et al., 2018).

Research on UDL highlights its inclusive nature, catering to individuals' different learning needs regardless of language, gender, color, or ability. CAST's UDL model aims to address all people' unique learning profiles by predicting their needs and including adaptable components (Rao et al., 2014). According to research, training in UDL principles can improve educators' lesson-planning skills, resulting in more UDL principles being integrated into

instructional design (Smith et al., 2019). Furthermore, the use of UDL in educational settings has been linked to greater lesson alignment, increased engagement, and better student outcomes (Kumar & Wideman, 2014; Smith & Harvey, 2014; Courey et al. 2012). Hence, these factors collectively justify the adoption of UDL as the foundational model for the current study.

Method

Research Design

The study followed an embedded mixed-methods research design. The embedded mixed-methods design creates a comprehensive pattern that includes both quantitative and qualitative data sources. Data are collected and evaluated using classic qualitative and quantitative designs. In this approach, the researcher can incorporate a qualitative phase into a quantitative study or vice versa. The choice and implementation of the experimental design in the quantitative portion of this study design are critical by their very nature (Creswell, 2012). In the current study, a UDL-Based Gender Roles Program was designed with a pre-test post-test single-group experimental design, while a phenomenological design was used to obtain participants' experiences through reflection papers, learning diaries, and focus group interviews.

The Study Group

The study group consisted of 18 individuals studying in various faculties, primarily the Faculty of Education Sciences of a foundation university. Purposive sampling technique, a specifically convenient sampling method, was used as the sampling criteria in the research. The criteria for inclusion in the research sample was being a university student, receiving undergraduate education. Participants were included in the program on a voluntary basis. Their consent was obtained before the program.

Table 1

Study Group

<i>Demographic</i>		<i>Number of People (N)</i>	<i>%</i>
Gender	Female	15	83
	Male	3	17
Major	English Language Teaching	14	78
	Chemistry Teaching	1	5,5
	Pre-school Teaching	1	5,5
	Psychology	1	5,5
	Social Services	1	5,5
Year of Education	Second Year	14	78
	Third Year	3	17
	Fourth Year	1	5

In the qualitative dimension of the study, the entire study group was included in all data collection processes except the focus group interview. The focus group interview was conducted as a one-time, two-hour interview with eight participants who were determined on a voluntary basis from among the participants after the program was completed. The focus group interview participants included three male students and five female students. Male students were in their second year of classroom teaching studies. Among the females, one was

a second-year psychology student, another was a second-year student studying preschool education, and the remaining three were also in their second year, studying classroom teaching.

Data Collection Tools

In the study, the Gender Roles Attitude Scale developed by Terzioğlu and Zeyneloğlu (2011) was used to collect quantitative data, and reflection papers, learning diaries, and focus group interviews were used to collect qualitative data. The Gender Roles Attitude Scale is a Likert-type scale developed by Zeyneloğlu and Terzioğlu (2011), consisting of 38 items and five sub-dimensions, which underwent validity and reliability testing. The scale has been developed to determine adult individuals' attitudes towards gender roles in society. Responses to the items in the scale range from strongly agree (5), agree (4), undecided (3), disagree (2), to strongly disagree (1). The sub-dimensions of the scale are female gender roles, male gender roles, traditional gender roles, gender roles in marriage, and egalitarian gender roles. According to the scoring criteria, the scale ranged from a minimum of 38 to a maximum of 190. Elevated scores on the scale denoted a propensity towards egalitarian perspectives regarding gender roles among participants, whereas lower scores signified a predilection for traditional attitudes. Exploratory factor analysis was conducted within the framework of validity testing, revealing that the scale consists of a total of 38 items and five sub-dimensions. The five sub-dimensions of the scale explain 46% of the total variance. The Cronbach's alpha coefficient of the scale was calculated as 0.92, indicating high internal consistency. The Cronbach's alpha reliability coefficients of the sub-dimensions of the scale range from 0.80 to 0.72.

Reflection is the process of focusing, examining, and thinking in detail about one's thoughts on a particular problem. Through reflection, individuals can examine their own feelings, thoughts, and actions. In doing so, they employ skills such as self-awareness, analysis, questioning, and evaluation (Mert et al., 2014). Throughout the program, reflection papers were regularly collected from participants every week. The purpose of these papers was to encourage participants to engage in reflection in the context of the UDL-Based Gender Roles Program. Through the utilization of reflection papers, participants engaged in introspection regarding their experiences, sought to comprehend their realizations, shared the sources of their inspiration, and pondered on how the program content influenced their viewpoints.

Learning diaries are a tool for reflection methods. Diaries help to focus and organize thoughts (Moon, 2006). Learners record their learning processes, their personal responses to the content taught, their changing ideas and feelings, and their knowledge in their learning diaries (Wilson & Jan, 1993). Within the scope of the present study, a learning diary was assigned to the students in the fourth and eighth weeks of the program for them to evaluate their learning processes. Assigning learning diaries in the fourth and eighth weeks helped participants to reflect on their learning progress at key intervals, providing insights into their evolving understanding and engagement with the program content.

A focus group interview is a series of discussions with a predetermined group of participants on a predetermined topic (Gülcan, 2021). Focus group interviews are conducted with a minimum of two people and a maximum of eight people. The purpose of focus group discussions is to gather detailed and comprehensive qualitative information about participants' experiences, interests, perspectives, experiences, thoughts, tendencies, perceptions, attitudes,

and habits regarding a particular topic (Çokluk et al., 2011). In the current study, after the completion of the UDL-Based Gender Roles Program, a two-hour, one-time focus group discussion was conducted with eight participants selected on a voluntary basis. After preparing the focus group discussion questions, input was sought from two field experts, and the questions were finalized. The interview included questions as "In light of the information provided during the education, what are your thoughts on your own gender roles?", "What was your opinion before the education?", and "What is necessary to do to bring gender roles perceptions into an egalitarian attitude?".

The validity and reliability of the qualitative data were ensured by using the concepts of "credibility, dependability, transferability, confirmability" by Guba and Lincoln (1984). To ensure credibility, concepts such as "Gender Equality, Gender Roles, and Sustainable Development Goals" were used, and they were included in an eight-week communication flow and transfer plan. Dependability was ensured through various qualitative data collection tools (focus group interviews, reflective writings, learning journals), and participants were assured of their ability to withdraw if desired, initially through a consent form. The dependability was also maintained by adhering to the established research design without deviating from it. Expert opinions were obtained from the field experts at various stages of the study, and their opinions shaped the scope of focus group interview questions. For the transferability, criteria such as the suitability of the study to university students, number of individuals, determination of data collection methods used, duration, and number of data collection tools were identified. For confirmability, reflective writings, learning journals, and focus group interviews were conducted to reveal participants' thoughts. After the analyses were completed, the data accuracy was confirmed by presenting it to the participants for their approval.

Data Analysis

The quantitative data were analyzed using the Wilcoxon Signed Rank Test technique in the IBM SPSS Statistics version 29.0 program, considering non-parametric assumptions due to the nature of the data distribution. For qualitative data analysis, the content analysis technique was used. The focus group interview was transcribed for coding and the other data sources (reflection papers and learning diaries) were included in the coding process, as well. The coding process started with identifying recurring codes and categorizing them, eventually leading to the identification of overarching themes. The researchers employed an iterative approach to refine and validate the coding scheme. Sample coding was conducted independently by two researchers to ensure reliability and consistency, with any discrepancies resolved through discussion until a consensus was reached. Inter-coding agreement was assessed using Cohen's kappa coefficient to measure the degree of agreement between coders. Finally, the data were tabulated under separate themes, categories, and codes to facilitate systematic analysis and interpretation.

The Experimental Process

The UDL-Based Gender Roles program was an eight-week program implemented by the first researcher. The participants in the program were undergraduate university students. Before the program began, the Gender Roles Attitude Scale was administered as a pre-test to all university students who volunteered to participate. During the first week of the program, Sustainable Development Goals and their formation reasons were explained, and a video was watched. Additionally, the 2020-2021 Gender Report was discussed. In the second week, terms

such as gender, gender roles, and gender equality were defined, and discussions were held on participants' readiness, along with sharing an example of a corporate social responsibility project in this field. In the third week, suggestions on what students can do in the field of education within the framework of gender equality were presented with a guest speaker, and alternative multiplier effect creative plans were designed with the participants. In the fourth week, activities were conducted on female gender roles, the fifth week on male gender roles, and the sixth week on traditional gender roles. Scientific articles were shared, and structured discussions were held with the participants. Additionally, perspectives on male and female gender in Turkish Family Law and theoretical approaches were discussed. In the seventh week, an activity was carried out on gender roles in marriage. Also, the perceptions of marriage, legal procedures, and similarities and differences in marriage in Türkiye, Asia, Europe, and the Far East were comparatively examined. In the eighth week, various thinking techniques were used to work on what can be done in society, education, and social platforms to increase the perception of egalitarian gender roles and the program was completed. Throughout the program, participants were encouraged to complete reflection essays and learning journals at regular intervals. At the end of the program, the participants were administered the Gender Roles Attitude Scale as a post-test.

The design of the program was conducted by the researchers. During the design phase of the experiment, the four main components of UDL were referred to. As part of the goal component, the researchers tried to ensure participant specialization, which is one of the main elements of teaching based on UDL. To achieve this, internationally published studies and reports were shared with the participants. In line with the methods component, the researchers aimed to move beyond a knowledge-based scope in teaching and integrated experience comparisons, creative thinking sessions and student-centered discussions. For the materials component, the researchers selected recent reports, sample projects, social media platforms, and authentic materials to enhance participants' ability to derive meaning more effectively. For the assessment component, the use of self-evaluation and self-reflection was ensured. Each participant had a say in the educator's teaching method and the flow and content of the program. The program also incorporated elements to stimulate the recognition network, strengthen the strategic network, and bolster the affective network. For the recognition network, diverse means of representation, including texts, videos, and graphics, were utilized. To strengthen the strategic network, students could showcase their understanding through various formats such as writing, discussions, and panels, and they received guidelines and scaffolding to stay organized. To support the affective network, opportunities for collaboration and peer interaction were provided, helping students feel more connected and motivated.

Findings

Findings Regarding the First Research Question

The first research question was, "Is there a significant difference between the pre-test and post-test scores of gender equality perception of university students participating in the UDL-Based Gender Roles program in favor of the post-test?". To answer this research question, we analyzed whether the difference between the pre-test gender roles scores and the post-test gender roles scores was significant. Table 2 shows the results of the Wilcoxon Signed Ranks Test analyses of the female gender roles pre-test and post-test scores.

Table 2*Female Gender Roles Wilcoxon Signed Ranks Test*

<i>Post-test Pre-test</i>	<i>N</i>	<i>Average Rank</i>	<i>Total Rank</i>	<i>Z</i>	<i>p</i>
Negative Rank	7	5.85	41	.72	.46
Positive Ra	7	9.14	64		
Equal	4				

As seen in Table 2, there is no statistically significant difference between the pre-test and post-test scores of female gender roles ($p=0.46$). In other words, no change was observed in the attitudes of the students participating in the program towards the female gender roles. Table 3 shows the results of the Wilcoxon Signed Ranks Test analyses of the male gender roles pre-test and post-test scores.

Table 3*Male Gender Roles Wilcoxon Signed Ranks Test*

<i>Post-test Pre-test</i>	<i>N</i>	<i>Average Rank</i>	<i>Total Rank</i>	<i>Z</i>	<i>p</i>
Negative Rank	1	10	10	2.54	.01
Positive Rank	12	6.75	81		
Equal	5				

As shown in Table 3, there is a statistically significant difference between male gender roles pre-test and post-test scores ($p=0.01$). To rephrase, there was a change in the attitudes of the students participating in the program towards the male gender roles compared to the pre-program period. Table 4 shows the results of the Wilcoxon Signed Ranks Test analyses of the traditional gender roles pre-test and post-test scores.

Table 4*Traditional Gender Roles Wilcoxon Signed Ranks Test*

<i>Post-test Pre-test</i>	<i>N</i>	<i>Average Rank</i>	<i>Total Rank</i>	<i>Z</i>	<i>p</i>
Negative Rank	4	5.87	23.5	2.30	.02
Positive Rank	12	9.37	112.5		
Equal	2				

Table 4 shows a statistically significant difference between pre-test and post-test scores for traditional gender roles ($p=0.02$). Therefore, there was a significant change in the traditional gender roles perspectives of the students who participated in the program. Table 5 displays the results of the Wilcoxon Signed Ranks Test analyses for gender roles in marriage.

Table 5*Gender Roles in Marriage Wilcoxon Signed Ranks Test*

<i>Post-test Pre-test</i>	<i>N</i>	<i>Average Rank</i>	<i>Total Rank</i>	<i>Z</i>	<i>p</i>
Negative Rank	3	5.5	16.5	1.13	.25
Positive Rank	7	5.5	38.5		
Equal	8				

As can be seen in Table 5, there is no statistically significant difference between the pre-test and post-test scores of gender roles in marriage ($p=0.25$). In other words, there has been no change in the perspectives on gender roles in marriage among the students who participated in the program. Table 6 presents the Wilcoxon Signed-Rank Test results for egalitarian gender roles.

Table 6*Egalitarian Gender Roles Wilcoxon Signed Ranks Test*

<i>Post-test Pre-test</i>	<i>N</i>	<i>Average Rank</i>	<i>Total Rank</i>	<i>Z</i>	<i>p</i>
Negative Rank	6	6.5	39	-1.18	.23
Positive Rank	4	4	16		
Equal	8				

As seen in Table 6, there is no statistically significant difference between the egalitarian gender roles pre-test and post-test scores ($p=0.23$). This shows no change in the egalitarian gender roles perspectives of the students who participated in the program.

As a result, it was revealed that there was a significant difference in the pre-test and post-test scores of male gender roles and traditional gender roles in favor of the post-test. However, there was no significant difference between the pre-test and post-test scores of female gender roles, egalitarian gender roles, and gender roles in marriage sub-dimensions in favor of the post-test.

Findings Regarding the Second Research Question

In order to answer the second research question of the study, "What changes have occurred in the perspectives of university students who participated in the UDL-Based Gender Roles program regarding their gender roles?", the reflection papers, learning diaries and transcripts obtained from the focus group interview conducted at the end of the program were analyzed. The findings gained from the content analysis are presented in Table 7.

Table 7*Findings Regarding the Second Research Question*

<i>Theme</i>	<i>Categories</i>	<i>Sample Codes</i>
Change	Female Gender Roles	Oppressed, helpless, traditional, mother, wife, home, partner, child
	Male Gender Roles	Patriarchal, masculinity, emotionless, upbringing, husband, father, cold, financial power
	Traditional Gender Roles	Intellectual fraction, elite fraction, socio-economic levels, education, public sector
	Personal Gender Roles	Biological difference, gender bias, gender stereotypes, upbringing, influence, reaction, professional role
	Gender Roles in Türkiye	Social class, women's role, egalitarian roles, family, education, teacher, men's work, women's rights, feminine, religion, hate speech

As a result of the content analysis, a theme named change and five categories were reached. These categories are female gender roles, male gender roles, traditional gender roles, personal gender roles and gender roles in Türkiye.

Female Gender Roles

In the category of female gender roles, participants expressed that their perspectives on the perception of women's roles changed after participating in the program, and they expressed discomfort with traditional discourses. They stated that the viewpoints which indicated every woman wanted to be a mother and portrayed women as oppressed and helpless as well as solely responsible for the household needed to change.

Views such as a woman's career cannot progress with marriage and children, especially in the private sector, exist (P4, 20, Female).

I believe that encouraging women to participate in employment and engaging in activities that increase the rate of women's employment in rural and urban areas will break the stereotypes associated with women's gender roles (P5, 21, Male).

Male Gender Roles

In the category of male gender roles, participants expressed that after participating in the program, they realized how prevalent patriarchal attitudes were both globally and in Türkiye. They referred to the negative implications of this situation for both women and men. All participants expressed discomfort with being taught to remain emotionally detached and unresponsive as part of the male gender roles, stating that considering such behavior as a sign of strength was divisive.

In Türkiye, it is exhausting for men to always be perceived as protective, breadwinners, heads of the household, emotionless, outgoing, and ambitious (P7, 21, Male).

There is a prevailing stereotype that a man should have well-developed physical features. The idea that a man must always appear strong and muscular is quite wrong (P8, 21, Male).

Traditional Gender Roles

In the category of traditional gender roles, participants mentioned gaining awareness about how gender perceptions differ across social classes in Türkiye and globally. They emphasized the need for awareness-raising education to convey this change in perspective. They also referred to the change in traditional roles in society.

From country to country, and from sector to sector, the situation regarding gender roles varies. For example, Finland advocates equality both socially and in terms of sectors. There, traditional attitudes are entirely accomplished by individuals participating in the workforce, and gender is irrelevant. However, in Türkiye, the perspective is more about women staying at home and taking care of children. When I realized this, I wondered why such great potential is being wasted at home. The fact that women's careers or lives are so limited is entirely due to our traditional role understanding, and we need to address this first (P8, 21, Male).

In marriage, we also discussed the 'child' factor within the gender roles in the program. In the part where we observed the child's relationship with the parent that they are close to within the framework of gender roles in marriage, I discovered that my mother shared marital problems with me. While she was more reserved with my father and the other male child, I realized that she had more emotional sharing with me. I think this is entirely due to the traditional perspective, where there is a belief that what is shared with the daughter will be conveyed to the other side. However, this situation should be independent of my gender; I need to be seen as an individual of the household (P2, 20, Female).

Individual Gender Roles

In the individual gender roles category, participants reflected on their own gender role perceptions before and after education. They mentioned initially seeing their gender roles as biological differences but discovered them during the program. They stated that they had certain stereotypes and realized why they reacted against these stereotypes related to their own gender roles.

Before the program, I couldn't understand why I reacted to the statements made about the female gender roles. During the education, I realized that I was uncomfortable with the teachings associated with the female gender roles, and by reacting against the wrong statements, I internalized an egalitarian approach towards my gender roles (P6, 21, Female).

Before the program, I thought that the only difference between men and women was biological, and I believed I had no prejudice against the female gender roles. During the program, while discussing situations that should not be within the scope of gender roles between men and women, I discovered that I saw these directly as assigned teachings. I didn't think my ideas were very aggressive. I believed these were the things I had to do as

a man, but I didn't know that the things I thought I had to do were roles assigned by the society. I discovered that these were things that shouldn't be imposed (P7, 21, Male).

Participants also expressed realizing the prevalence of hateful language and divisive elements in the category of gender roles in Türkiye, and they noted that this situation is related to social classes. They emphasized the importance of starting with the family to bring about change. They also highlighted the significance of addressing gender role perceptions in Türkiye.

In Türkiye, the perception of gender roles varies in different social classes. Some support women doing household chores and having fewer rights than men, while others want equality. I don't think this latter group is very large. If you ask how to bring this level to an egalitarian attitude, it starts with family and education. The more we focus on education, the more I believe many problems will be solved (P1, 20, Female).

Not every child in our country can be raised in an egalitarian manner within their family. However, if egalitarian attitudes or Gender Equality education are added to the curriculum, and if teachers adopt a more egalitarian attitude on these issues, I believe we can progress towards a better future (P3, 20, Female).

Discussion

The findings obtained within the scope of the first research question showed that there was a statistically significant difference between the pre-test and post-test scores of traditional gender roles and male gender roles in the gender roles attitudes of the participants. Participants' traditional gender roles and male gender roles scores increased after the program. On the other hand, no statistically significant difference was found in the pre-test and post-test scores of female gender roles, gender roles in marriage and egalitarian gender roles in favor of the post-test.

The reason that there was a statistically significant difference in favor of the post-test in terms of traditional gender roles could be attributed to the fact that the idea of traditional gender was frequently discussed during the program within the context of societal norms. According to Aydın (2000), Turkish society had a patriarchal household structure until the early twentieth century. The fact that there was a substantial difference between the pre-test and post-test scores in light of the content provided throughout the program and the learning objectives achieved indicated that the participants' viewpoints changed following the program.

The statistically significant difference favoring the post-test within the scope of male gender roles may stem from the participants' self-discovery during the education process. The role is in dynamic interaction with an individual's societal function. If an individual exhibits a role that aligns with their societal status, they demonstrate the expected behaviors of society (Fichter, 1994). Due to societal and cultural teachings, individuals have traditionally unquestionably accepted taught attitudes, much like genetic transmission, but this might have changed as they discovered themselves during the program. The most significant point of awareness gained during the program regarding male gender roles was the male participants' discovery of their own behavioral processes. Male participants expressed discomfort in assuming a powerful role in a masculine system. Furthermore, the egalitarian perspective of female participants supported the expressions of male participants during this discovery process. When female

participants evaluated their own developmental processes, they discovered why they were uncomfortable with the entrenched masculine norms they observed from their families and social environments. Before the program, all the participants expressed that they were aware of and uncomfortable with the influence of societal teachings on their gender attitudes but lacked the knowledge of how to initiate transformation. Similarly, Özmete and Zubaroğlu-Yanardağ's (2016) research indicated that younger men, compared to older ones; single men, compared to married men; men with higher education levels, compared to those with lower education levels; and men without children, compared to those with children, adopted more egalitarian gender roles. Considering these findings, it can be said that participants may have accepted the change by reverting to their egalitarian perspectives on gender role attitudes which, in turn, exhibited a positive progression, and they might have been likely to embrace the values added by the program to their lives.

The absence of a statistically significant difference in favor of the post-test in the sub-dimension of female gender roles may be due to the sufficient perception of female gender roles by the participants. Women subjected to gender discrimination have been exposed to inequality in legal, political, economic, and social rights, as well as in the ownership and access to resources such as capital and land (Alisbah-Tuskan, 2012). Therefore, effective activity programs should be developed and implemented in educational institutions and schools from an early age to enable individuals to gain healthy communication skills (Başak & Bulut-Serin, 2021).

The reason there was no statistically significant difference between the pre-test and post-test scores in the sub-dimension of gender roles in marriage may stem from the participants exhibiting an egalitarian attitude towards roles and gender perceptions in marriage. The perception of gender roles in marriage parallels data mentioned in various theoretical frameworks such as codes passed from parents to children, social role theory, and many other theoretical frameworks. The institution of marriage, seen as a sub-institution of the family, characterizes a type of relationship that emerges between men and women or between women and men determined by society. Family is a formal agreement that places social relationships established within certain patterns (Akin & Aydemir, 2007). Considering the socio-economic level, education level, family attitudes, and marriage perspectives of the participants included in the program, it might have been normal for them to have a similar attitude.

The reason for the absence of a statistically significant difference between the pre-test and post-test scores in the sub-dimension of egalitarian gender roles may be that participants accepted social norms without questioning them to exhibit the societal stance expected of them. According to Sapir and Whorf's theory of linguistic determinism, language not only reveals reality but also influences the thinking process of the speaker. In a sense, language charts a course for our thoughts, and it is impossible to think beyond this course (Güden, 2006). In this context, the obtained finding may have been due to the participating group directly accepting this attitude as a result of constantly receiving external exposure from egalitarian principles. Hence, these areas may require more targeted or intensive efforts.

Upon reviewing the literature, no research similar to the findings of the present study was found, and it was observed that most of the studies in the literature tended to be survey studies. For example, in a study conducted by Göktaş (2016) with physicians, it was shown that female physicians did not choose fields such as surgery due to the perception that they require male

strength and qualifications; the preference for working in basic sciences due to being active in home life and taking on a role in childcare, showing the effects of male gender roles and traditional gender role perceptions. Similarly, the findings of Tarhan's study (2019) with female academicians paralleled these findings. The findings indicated that there was a perception that female academicians could sustain their existence by distancing themselves from feminine attitudes and behaviors in academic circles. Additionally, it was suggested that women needed to have a masculine attitude to sustain their academic presence and thus new job opportunities would emerge.

The findings obtained within the scope of the second research question indicated that participants underwent changes in their perspectives on female gender roles, male gender roles, traditional gender roles, individual gender roles, and gender roles in Türkiye. In this context, it is understood that participants who previously exhibited actions and thoughts in line with societal codes and traditional roles moved away from normalized traditional discourses and attitudes in society after the program. Foundational beliefs come from the family and are passed on to children, and then to generations. The first area where a child begins to socialize, the family unit, provides a certain perception of gender roles, and this perception evolves and can change over time as the child moves on to school life and social life. However, the importance and influence of the family structure on the child still persist. In most cases, the differentiation between male and female, typically defined by gender differences, is shaped within the theoretical framework of the areas in which a child grows and develops. However, the development of technology and communication parallels these sectors to provide individuals with a social environment (Bradley & Corwyn, 2002).

The research findings indicated a change in participants' perspectives on gender roles in Türkiye. Although most cultural teachings are unconditionally accepted by society, these teachings, while seen as ensuring the continuity and welfare of society, systematically perpetuate gender differentiation within society (Durutürk, 2020). Similarly, university students participating in the program expressed that they directly accepted societal values. In fact, participants stated that they felt a significant change in themselves during the week when they discussed the role and position of women in Turkish society.

The findings of the research demonstrated that participants believed it was necessary to break away from the ongoing cycle in which five gender roles were taught in Türkiye. Most of the factors affecting progress and development lie in social teachings (Özveren & Dama, 2022). After the program, participants discovered that, in addition to biological differences, they unconsciously discriminated against the opposite gender regarding their own gender roles. They expressed that they were not able to discover the reasons for their reactions to roles assigned to their own genders before the program. However, they were able to identify reasons for their reactions after the program. In this context, the program provided an opportunity for participants to reveal their awareness.

Conclusion and Implications

The findings of the study shed light on how the UDL-Based Gender Roles program influenced university students' perceptions of gender roles. The pre-test and post-test scores indicated a significant positive change in attitudes towards male gender roles and traditional gender roles, showing that the program successfully challenged and reshaped students' views

in these areas. However, there were no notable changes in perceptions of female gender roles, egalitarian gender roles, and gender roles in marriage, suggesting these areas might need more focused or intensive efforts. The qualitative findings echoed these results, revealing that participants became more aware and critically reflective of their own gender roles beliefs. They reported a shift in their views on traditional and patriarchal gender roles, emphasizing the importance of societal change to foster gender equality. They recognized how societal norms and stereotypes had influenced their prior beliefs and highlighted the crucial role of education in promoting an egalitarian perspective. In essence, the program effectively engaged students in meaningful reflection and discussions about gender roles, demonstrating the potential of UDL-based interventions to shape attitudes and encourage gender equality. Future programs should consider focusing more on the areas that showed less impact to achieve a well-rounded change in gender role perceptions.

To conclude, culture is the institutionalized form of collective attitudes. All individuals develop themselves as a result of the connection they establish with culture. This connection allows the continuity and development of culture through generations. There is a harmony between the individual and society. What is necessary for harmony is the continuity and transmission of intergenerational tradition. In the case of gender roles in society, it is a matter of learning within the cultural structure of each society and passing on this teaching from generation to generation (Şahin, 2019). In order to bring the perception of gender roles in Türkiye to an egalitarian attitude, every sector must have an egalitarian mentality. If there is an egalitarian attitude from what is taught in schools to family education, both development and an egalitarian perspective will spread.

Although this study offers insights into the effectiveness of the UDL-Based Gender Roles program, several limitations should be noted. Firstly, the study was carried out with a relatively small group of university students, which limits the applicability of findings to a broader population with diverse backgrounds and experiences. To improve the generalizability of future studies, researchers can include a larger and more diverse group of participants, covering a range of ages, cultural backgrounds, and educational levels. This would provide a more comprehensive understanding of the program's impact across different demographics. Another limitation is that much of the data was collected through self-reported measures like reflection papers, learning diaries, and focus group interviews. This method can lead to biases, with participants potentially providing answers they believe are expected instead of their original thoughts. Future studies should incorporate a variety of data collection methods beyond self-reports, such as observation, peer assessment, and longitudinal tracking. These methods can help reduce biases and provide a more complete picture of participants' experiences and changes in perceptions. Finally, the absence of a control group in this study makes it difficult to attribute changes in gender roles perceptions solely to the UDL-Based Gender Roles program. Including a control group in future studies can allow for better comparison and clearer evidence of the program's impact.

Author Contributions

- This study originates from the first author's master's thesis, with some findings presented as an oral presentation at the 10th International Eurasian Educational Research Congress.
- For the preparation of the article, the first author was involved in drafting the manuscript, data collection, analysis, and interpretation of the data. The second author made contributions to

the conceptualization and research design, drafting the manuscript critically for significant intellectual content.

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TÜRKÇE GENİŞ ÖZET

Evrensel Tasarım Temelli Toplumsal Cinsiyet Roller Programının Üniversite Öğrencileri Üzerindeki Yansımalarının İncelenmesi

Giriş

Cinsiyet, bireyin diğer cinsten farkını ortaya koyan fizyolojik ve biyolojik özellikleridir. Oakley (1972) cinsiyet konseptini cins konseptinden ayırırken; cinsiyetin, biyolojik bir farklılık olan erkek ve kadın ayırımına paralellik gösterdiğini, feminenite (kadınlık) ve maskülenitenin (erkeklik) toplumsal değerini kapsadığını ifade etmektedir. Şahin'e (2021) göre cinsiyet rolleri, insanların çevreleri ile etkileşiminin bir ürünüdür. Bu ürün belirli bir cinsiyete uygun olduğuna inanılan davranış tutumu hakkında bireye fikir sağlar. Cinsiyetlere uygun davranış kalıpları, toplumun cinsiyetler adına olan inançlarına göre belirlenir. Toplumsal cinsiyet rolü algıları eşitlikçi bir tutuma geçmediği takdirde, başta ekonomik ilerleme olmak üzere hiçbir gelişim sürecinde, dünya ülkelerinde bütünlük sağlanamayacaktır.

Öğrenme ve öğretme konusunda son yıllarda yapılan araştırmalar, öğrenciyi merkeze alan ve öğrenmede kalıcılığa odaklanan tasarım yaklaşımlarının gerekliliğine işaret etmektedir (Darling-Hammond et. al., 2019; Hernández et. al., 2023; Katawazai, 2021; Kerimbayev et. al., 2023; Munna & Kalam, 2021). Bu bağlamda, evrensel tasarım (UDL), derslerin tüm öğrencileri desteklemek için kapsayıcı stratejiler ve seçenekleri proaktif olarak entegre etmesini sağlayan bir çerçeve sunar. (Meyer et. al., 2014). UDL, bireysel öğrenme farklılıklarını barındıran, esnek öğrenme ortamlarının gelişimine rehberlik eden, bilişsel sinirbilim de dâhil olmak üzere, öğrenme bilimlerindeki araştırmalara dayanan bir eğitim çerçevesidir. Kısacası UDL, eğitimde birden fazla bileşende birden çok kitleye, öğretim sürecinde ulaşımda alternatif sağlayan etkili bir modeldir (Rose & Meyer, 2002).

Mevcut araştırma UDL temel alınarak toplumsal cinsiyet rolleri konusunda üniversite öğrencilerinin farkındalıklarını artırmayı amaçlaması bakımından önem arz etmektedir. Konu hakkında alanyazın incelendiğinde sınırlı sayıda araştırma olduğu görülmektedir. Bu bağlamda mevcut araştırmanın amacı, UDL Temelli Toplumsal Cinsiyet Roller programının üniversite öğrencileri üzerindeki yansımalarının incelenmesidir. Bu amaç kapsamında aşağıdaki sorulara yanıt aranmıştır:

1. UDL Temelli Toplumsal Cinsiyet Roller programına katılan üniversite öğrencilerinin toplumsal cinsiyet eşitliği algısı ön test ve son test puanları arasında son test lehine anlamlı bir farklılık var mıdır?

2. UDL Temelli Toplumsal Cinsiyet Roller programına katılan üniversite öğrencilerinin toplumsal cinsiyet rollerine ilişkin bakış açılarında ne gibi değişimler olmuştur?

Yöntem

Araştırmada iç içe geçmiş karma araştırma deseni kullanılmıştır. Araştırmanın çalışma grubunu bir vakıf üniversitesinin eğitim bilimleri fakültesi başta olmak üzere farklı fakültelerinde öğrenim gören 18 kişi oluşturmaktadır. Araştırmada örneklem seçim kriteri olarak amaçlı örnekleme tekniklerinden kolay ulaşılabilir örnekleme tekniği kullanılmıştır. Araştırmaya dahil edilecek örneklemin dâhil olma kriteri; lisans eğitimi gören üniversite öğrencileri olmalarıdır. Araştırmada nicel verilerin toplanmasında Terzioğlu ve Zeyneloğlu (2011) tarafından geliştirilen "Toplumsal Cinsiyet Rollerini Tutum Ölçeği", nitel verilerin toplanmasında öğrenme günlüğü, yansıtma yazıları ve odak grup görüşmesi kullanılmıştır. Nicel verilerin analizi, IBM SPSS Statistics 29.0 sürümü programında Wilcoxon İşaretli Sıralar Testi ile gerçekleştirilmiştir. Nitel veri analizlerinde ise içerik analizi tekniği kullanılmıştır. Odak grup görüşmesi, yansıtma yazıları ve öğrenme günlüğü aracılığıyla toplanan veriler tema – kategori – kod başlıklarıyla analiz edilerek tablolandırılmıştır.

Bulgular

Birinci araştırma sorusu kapsamında yapılan analizler sonucunda, cinsiyet rollerinden erkek cinsiyet rolleri ve geleneksel cinsiyet rolleri ön test ve son test puanlarında son test lehine anlamlı farklılık tespit edilmiştir. Ancak, kadın cinsiyet rolleri, eşitlikçi cinsiyet rolleri, evlilikte cinsiyet rolleri alt boyutları ön test ve son test puanları arasında son test lehine anlamlı bir farklılık bulunmamıştır. İkinci araştırma sorusunun bulguları katılımcıların kadın cinsiyet rolleri, erkek cinsiyet rolleri, geleneksel cinsiyet rolleri bireysel cinsiyet rolleri ve Türkiye’de cinsiyet rolleri bağlamında değişim gösterdiklerini ortaya koymuştur. Bu bağlamda eğitim öncesinde toplumsal kodlar ile geleneksel rolde eylem ve düşünce sergilemeyen katılımcıların, eğitim ile normalleştirilmiş geleneksel söylem ve tutumlardan uzaklaşmış olduğu anlaşılmaktadır. Araştırmanın üçüncü sorusuna ilişkin bulgular programın güçlü yönleri ve önerileri hakkında görüşlerini ortaya koymuştur. Katılımcılar programın "toplumda kendi yerini" bulmak için farkındalık katan bir eğitim olduğunu vurgulamışlardır. Katılımcıların çoğu hem kendi cinsiyetinde oluşan baskıları hem de karşı cinsteki baskıları gördüklerini, dolayısıyla katıldıkları programın farkındalıklarını artırdığını ifade etmişlerdir.

Tartışma

Toplumdaki bireylerin konumunu belirleyen birçok statü bulunur. Bu statüler, bireylerin çalışarak kazandığı ya da toplum tarafından onlar için uygun görülen konum, mevki veya pozisyonlardır. Rol, bireyin toplumsal fonksiyonu ile dinamik bir yapıdadır. Birey toplum içinde statüsüne uygun bir rol sergilerse toplum tarafından uygun davranışı sergilediği kabul edilir (Fichter, 1996). Toplumsal ve kültürel öğretiler nedeniyle bireylerin öğretilen tutumları tıpkı bir gen aktarımı gibi sorgusuz kabul etmeleri, katılımcıların dâhil oldukları program esnasında kendilerini keşfetmeleri ile değişmiştir. Bu durum Türkiye’de cinsiyet rolleri algısını eşitlikçi bir tutuma getirebilmek için her kesimin eşitlikçi bir zihniyete sahip olması gerektiğine işaret etmektedir. Şahin’in (2019) ifade ettiği gibi, okuldaki öğretilerden, aile eğitimlerine kadar eşitlikçi bir tutum söz konusu olursa kalkınma da eşitlikçi bakış açısı da yayılacaktır. Böylece UDL’e dayalı olarak planlanmış eğitim programlarında amaçlandığı gibi, ortaya konulan tüm ilkeleri öğretimin her aşamasında uygulamaya geçirerek farklı özelliklere sahip öğrenenlerin öğrenme düzeyini üst seviyelere çıkarabilecektir (Arslan, 2017). Mevcut araştırma kapsamında

katılımcılar bilgi temelli bir eğitim olacağı düşüncesiyle, bilgilerini genişletmek amaçlı bu eğitime katılım sağladıklarını fakat eğitim sonunda bilgi dışında farkındalık da kazandıklarını, gerek sosyal gerek iş hayatlarında edindikleri bu farkındalıkla hareket edeceklerini dile getirmişlerdir. Katılımcılar, programın, toplumda kendi yerini bulmak için etkili olduğunu dile getirirken, özellikle kadına karşı tutumun değişmesi ve suç oranlarını düşürmesi açısından toplumsal cinsiyet eşitliğine vurgu yapan çalışmaların artmasının faydalı olacağını ifade etmişlerdir.

Sonuç ve Öneriler

Evrensel tasarım temelli cinsiyet rolleri programının üniversite öğrencilerinin cinsiyet rolleri algısını nasıl etkilediğini inceleyen bu çalışmadan elde edilen bulgular erkek cinsiyet rolleri ve geleneksel cinsiyet rolleri konusundaki tutumlarda önemli bir değişiklik olduğunu göstererek, programın öğrencilerin bu konudaki görüşlerini şekillendirdiğini göstermektedir. Nitel bulgular da bu sonuçları destekleyerek, katılımcıların kendi cinsiyet rolleri inançlarına karşı daha bilinçli ve eleştirel yaklaştıklarını ortaya koymuştur. Katılımcılar, geleneksel ve ataerkil cinsiyet rolleri konusundaki görüşlerinde bir değişim bildirmişler, toplumsal değişimin cinsiyet eşitliğini teşvik etmek için önemini vurgulamışlardır. Toplumsal normlar ve klişelerin önceki inançlarını nasıl etkilediğini fark etmişler ve eğitim yoluyla eşitlikçi bir bakış açısını teşvik etmenin kritik rolünü vurgulamışlardır. Özetle, program, cinsiyet rolleri hakkında anlamlı düşünme ve tartışmalara öğrencileri etkili bir şekilde dâhil ederek, tutumları şekillendirme ve cinsiyet eşitliğini teşvik etme potansiyelini göstermiştir.

Mevcut araştırma nispeten küçük bir üniversite öğrencisi grubuyla gerçekleştirilmiştir. Gelecekteki araştırmaların genellenebilirliğini artırmak için araştırmacılar, farklı yaş, kültürel geçmiş ve eğitim seviyelerini kapsayan daha geniş ve çeşitli bir katılımcı grubunu dâhil edebilirler. Mevcut araştırmada verilerin büyük bir kısmı yansıtma yazıları, öğrenme günlükleri ve odak grup görüşmeleri gibi öz bildirimli kaynaklarla toplanmıştır. Gelecekteki araştırmalarda, gözlem, akran değerlendirme ve uzun soluklu izleme gibi öz bildirimlerin ötesinde çeşitli veri toplama yöntemleri kullanılabilir. Son olarak, bu çalışmada bir kontrol grubunun olmaması, cinsiyet rolleri algılarındaki değişikliklerin sadece programla ilişkilendirilmesini zorlaştırmaktadır. Gelecekteki araştırmalara bir kontrol grubunun dâhil edilmesi, daha iyi karşılaştırma ve programın etkisinin daha net kanıtlanmasını sağlayabilir.