Examining the Views on the Inclusion of Teacher Candidates With Peers Diagnosed With Autism Spectrum Disorder in the University Environment in Terms of Teacher Education

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Abstract

This research focused on the development of inclusion in teacher education based on the inclusion of teacher candidates with their peers with autism spectrum disorder (ASD) in the university environment. Opinions on inclusion in the university environment were examined in terms of the professional development of teacher candidates, taking into account their responsibilities for the education of their future students with ASD. At the same time, these views were considered important in terms of developing inclusion in the university environment. This research, which was designed using a mixed method, was conducted in a faculty of education

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where a teacher candidate with ASD was present, which is a situation that is not frequently encountered in Turkey. In line with the purpose of the research, data were collected through questionnaires completed by 979 preservice teachers and through semistructured interviews with 10 academics from the field of teacher education. As a result of the research, needs were determined and suggestions were presented, in line with the aims of the research. In this context, besides the knowledge and experience of teacher candidates with regard to inclusion, the roles of cultural elements in inclusion came to the fore.

Introduction

Autism spectrum disorder (ASD) is a lifelong complex developmental condition (American Psychiatric Association [APA], 2018). The core symptoms of ASD in individuals are limited and repetitive behavior and interests, as well as social and communication problems (APA, 2013). In addition to these core symptoms, some other signs are commonly observed in individuals with ASD. According to the Centers for Disease Control and Prevention (CDC; 2019), common features in individuals diagnosed with ASD include poor eye contact, delayed language and speech skills, echolalia, and discomfort when exposed to even minor changes. In addition to these statements for individuals with ASD, it is known that each individual diagnosed with ASD is different (Pratt et al., 2017). For example, although it is common for individuals diagnosed with ASD to have difficulty establishing eye contact (CDC, 2019), according to clinicians, some individuals diagnosed with ASD can establish appropriate eye contact (Yazıcı, 2018). In addition, it should be noted that ASD is not a visible disorder, because the physical appearance of individuals with ASD is no different from that of neurotypical people (Seeley, 2016). Therefore many people may have difficulties understanding the characteristics of individuals with ASD. For example, aggression is one of the conditions that may be seen in individuals with ASD (CDC, 2019). Individuals with a diagnosis of ASD may be described as rude if others are unaware of their condition (Mowat et al., 2011). Therefore, to consciously present their point of view to individuals diagnosed with ASD, it is important to develop autism awareness, which is defined as a basic element of understanding, accepting, and appreciating individuals with ASD (Hamilton, 2012).

In addition to the need to boost autism awareness throughout society, it is vital to improve teachers' awareness of this issue. This is because, unlike the rest of society, teachers are responsible for their education, and they come together in inclusive education environments. In other words, teachers should understand, accept, and appreciate their students with ASD for a qualified inclusion process with the students with ASD (Lindsay et al., 2014; Russell et al., 2022). This is because inclusive education is an educational setting where all students come together in the same classroom and learn together, regardless of who they are (Graham, 2020). In a word, there can be students with ASD in these classes. Therefore it is important that teachers have autism awareness. This becomes more important from year to

year. This is because inclusive education, which is education in which students with special needs and students with typical development attend in the same settings, is practiced in many developed and developing countries (Fakolade et al., 2017), and the number of students with special needs who participate in such education is increasing annually (e.g., National Center for Education Statistics, 2020). Similarly, the number of students involved in inclusive education at all levels is increasing in Turkey (e.g., Ministry of National Education [MNE], 2011, 2020). At this point, considering that there has been a worldwide increase in the number of people diagnosed with ASD (CDC, 2020b), including in Turkey (Kılıç Ekici, 2015), it is likely that teachers will at some point work with individuals diagnosed with ASD within the scope of inclusive education. The Turkish Ministry of National Education has already determined the duties and responsibilities of teachers for inclusive education within the scope of the Special Education Services Regulation (MNE, 2018). To fulfill these duties and responsibilities, it is necessary for all teachers working with students diagnosed with ASD to be adequately trained in autism. At this point, teacher candidates should be included in discussions concerning teachers' vital roles and responsibilities associated with the education of individuals with ASD within the scope of inclusive education. Training in the field of special education in the preservice period is known to benefit teachers' professional careers (Sadioglu et al., 2013). At this point, besides developing their views on individuals with ASD, teacher candidates should receive qualified education about inclusive education. As teachers will be responsible for students with different needs throughout their professional lives, they should have a comprehensive understanding of the concept of inclusion, so they have the knowledge and skills required to deliver inclusive education: "The task of initial teacher education is to prepare people to enter a profession which accepts individual and collective responsibility for improving the learning and participation of all children" (Florian & Rouse, 2009, p. 596).

A curriculum has been carried out by UNESCO for training teacher candidates (Kaplan & Lewis, 2013). This curriculum covers many elements related to inclusive education (human rights, equality, nondiscrimination, comprehensive training and practice giving importance to inclusive education). Similarly, in Turkey, the Ministry of National Education's general teacher professional competencies cover some specific competencies related to inclusive education for teachers (such as "prepares a flexible teaching plan by taking into account the individual differences and sociocultural characteristics of students," "organizes learning environments taking into account the individual differences and needs of students," "respects individual and cultural differences," and "values every student as a person and an individual" (MNE, 2017). All of these elements show that the attitudes and behaviors of the students in the faculty of education toward individuals with special needs, both as people in society and as teacher candidates, should be developed in a qualified way. Therefore teacher training programs for undergraduates should be prepared and updated to ensure that teacher candidates achieve these competencies (Higher Education Board [HEB], 2018).

An examination of teacher training undergraduate programs shows that Special Education and Inclusion is a compulsory course directly related to ASD and inclusive education in the last year of undergraduate education. Teacher candidates receive theoretical information about the characteristics of different disability and ability groups, such as people with ASD, and inclusive practices within the scope of this course (HEB, 2018). However, the effect of these theoretical courses on the inclusive education of teacher candidates should be discussed. For example, despite the 1-year training of teacher candidates at an Australian university, their attitudes toward disabilities changed minimally (Tait & Purdie, 2000). This situation may be the same in Turkish universities, because the most widely expressed concern among teacher candidates in faculties of education toward a university student diagnosed with ASD is the exclusion of the latter (Yazıcı & Bas, 2022). The level of concern about the exclusion of these individuals in faculties of education indicates that students, as future teachers, have significant inadequacies in terms of the concept of inclusion. In other words, teacher candidates' lack of acceptance of their university peers with a diagnosis of ASD may indicate a future inability to continue the process of inclusion with their own students diagnosed with ASD. This is because teacher candidates' beliefs and attitudes can affect their future practices toward individuals with differences (Massouti, 2019). Therefore, in addition to university life, it is aimed that the research will contribute to teacher training on inclusive education.

Methods

Research Design

This study aimed to investigate the inclusion of other teacher candidates with teacher candidates diagnosed with ASD in terms of teacher education. For this, three main research questions were asked: (a) What are the statements of teacher candidates about the characteristics of individuals with ASD? (b) What are the views of teacher candidates on the higher education of individuals with ASD specific to faculties of education? and (c) What are the views on the inclusion of teacher candidates with peers diagnosed with ASD in the university environment?

Three research questions were determined to contribute directly to the main purpose of the research and have a common objective. This study aimed to obtain holistic answers to the research questions by bringing together different components based on a mixed-methods approach with a concurrent mixed research design (Creswell & Plano Clark, 2011).

The quantitative part of the research was conducted with a survey design to reach the opinions of the teacher candidates in the sample group. This is because survey design collects data within a certain period of time to understand large participant groups' views on a subject (Cohen et al., 2007). On the other hand, the qualitative part of the research was carried out with the case study research approach to reach the detailed opinions of the participating academics. The research

approach is suitable for situations in which an answer to a descriptive research question is needed (Yin, 2012).

Participants

The research was conducted in the faculty of education of a state university in Turkey. A teacher candidate with a diagnosis of ASD was attending this faculty for the first time in the academic year 2019–2020. Having students with ASD at university is not a common situation in Turkey. This is not just for faculties of education. There are in total 29 university students with ASD in Turkish universities (HEB, 2020). Although this research does not focus on the teacher candidate diagnosed with ASD in the faculty of education, because it may affect the data of the research and is one of the rare examples, the research was carried out in this faculty. Therefore, for this research, purposeful sampling was used (Creswell, 2009). Teacher candidates (N = 1,043) who were actively continuing their education in all departments of the faculty of education were contacted in the first semester of the academic year. Teacher candidates who voluntarily participated in the study (n = 979) composed the research sample. Of the participating teacher candidates, 330 (33.7%) stated that they had met individuals with ASD (Table 1). Detailed research information was shared with the teacher candidate with a diagnosis of ASD, a first-grade visual arts teacher, and his family. Although the teacher candidate diagnosed

Table 1
Description of the Participating Teacher Candidates

	No. of participants, f (%)	*No. of people who have met an individual with ASD, f (%)*
Department		
Visual Arts Teaching	22 (2.2)	22 (100)
Turkish Language Teaching	171 (17.5)	51 (29.8)
Social Science Teaching	167 (17.1)	52 (31.1)
Mathematics Teaching	175 (17.9)	40 (22.9)
Science Teaching	82 (8.4)	42 (51.2)
Primary School Teaching	175 (17.9)	67 (38.3)
Psychological Counseling and Guidance	187 (19.1)	56 (29.9)
Grade		
1	269 (27.5)	
2	210 (21.5)	
3	242 (24.7)	
4	258 (26.4)	
Gender		
Female	733 (74.9)	
Male	249 (25.1)	

with ASD was invited to take part in this study, he did not participate owing to his condition. This decision was taken jointly with the teacher candidate with ASD and his family.

In addition, the teacher candidates who stated that they had met individuals with an ASD diagnosis were asked in an open-ended question who these individuals were; 154 (15.7%) of the teacher candidates stated that it was a student diagnosed in the faculty where the study was conducted. In addition, 54 (5.5%) of the participating teacher candidates stated the person they knew was "my old school friend," 36 (3.7%) "our neighbor's child," 29 (3%) "my cousin," 26 (2.7%) "children I do not know in the social environment but have observed," 14 (1.4%) "students with ASD I observed during school visits," 10 (1%) "my distant relative," and 4 (0.4%) "my sibling." In addition to these answers, when describing the teacher candidate with a diagnosis of ASD at the university, the participants from the visual arts teaching department used the name of their classmate, while all the other participants used the expression a "student with an ASD diagnosis in the faculty."

The participant group for the qualitative part of the research consisted of 10 academics who were selected by purposeful sampling to achieve maximum diversity (Patton, 2002). They were academics working in the basic field of educational sciences and teacher training at different state universities in Turkey. In line with the objective of the study, attention was paid to the various demographic characteristics of the participating academics to attain different perspectives. The characteristics of the participating academics are shown in Table 2.

Ethical Considerations

Following the approval of the university ethics committee, all the participants were presented with an information form and a consent form and informed that their participation in the study was on a voluntary basis. In addition, although this study did not focus on the teacher candidate with an ASD diagnosis in the faculty of education where the study was conducted, essential information was given to this student and his family, and necessary permissions were obtained from them. Data collection was carried out confidentially, and questions revealing the identities of the participants were not included.

Research Instruments

Questionnaire. In accordance with the purpose of the study, a survey draft with 10 questions was prepared to understand the views of teacher candidates on inclusion of teacher candidates with peers diagnosed with ASD in the university environment. To increase the credibility of the questionnaire, first, peer debriefing was carried out, and then member checking was obtained through a pilot study (Stahl & King, 2020). In the draft phase, the suggestions of two special education experts, three methodologists, and two grammar experts were incorporated. As a

result of expert suggestions, the purpose of the two questions was seen to be similar to the other questions, so they were excluded from the questionnaire. In addition, some question sentences were arranged and the meaning of the questions was presented more clearly. With the exception of the university where the research

Table 2

Demographic Information About the Participating Academics

	Title	*Gender*	*Research area*	*Work experience at the university (years)*	*Administrative position at the university*	*City level/ university ranking*[a]	*Experiences with an individual with ASD*
A1	prof.	male	history education	17	rector	4th level/ 100–110	–
A2	prof.	male	guidance and psycho-logical counseling training	27	dean	3rd level/ 10-20	–
A3	dr.	female	visual arts education	4	head of department	4th level/ 90–100	–
A4	prof.	female	education programs and teaching	30	dean	4th level/ 1-10	–
A5	dr.	male	special education (expert in autism)	2	department chair	5th level/ 120-130	has been working in the field of autism for 9 years
A6	assoc prof.	female	science. education	15	–	5th level/ 70–80	–
A7	dr.	female	primary teaching	4	–	6th level/ 90-100	–
A8	assoc. prof.	male	science education	8	department chair	6th level/ 30–40	–
A9	assoc. prof.	male	social studies education	8 8	vice dean	3rd level/ 50-60[b]	has an under-graduate student diagnosed with ASD
A10	dr.	male	computer education and instructional technology	12	–	4th level/ 90-100	has a child diagnosed with ASD

Note. ASD = autism spectrum disorder.

[a]City level is from the Socioeconomics of Provinces and Regions Development Ranking Survey (Ministry of Industry and Technology, 2019). University ranking is from University Ranking by Academic Performance (2021).

[b]University where the research was conducted.

was conducted, a pilot study was conducted with 60 teacher candidates from the faculty of education, and the final questionnaire was distributed after making the necessary arrangements. After the pilot study, there was no need for any changes to the content. The changes were related to the questionnaire design, such as giving more space for open-ended questions on the paper, and some words were given in boldface. The demographic portion of the questionnaire included questions about department, class, gender, and contact with peers diagnosed with ASD. The questionnaire included an open-ended question, four classification questions, and five grading questions, in addition to the questions about teacher candidates' knowledge and ways of obtaining information about the characteristics of individuals diagnosed with ASD. This is because it was considered that the data may affect the opinions of teacher candidates about the inclusion of peers diagnosed with ASD in the university environment. Also, in the questionnaire, there were questions about the teacher candidates' views regarding the admission (according to their preference-based score) of individuals diagnosed with ASD into higher education programs. Then, the questionnaire included questions about the admission of individuals with ASD into faculties of education and the ability of teacher candidates diagnosed with ASD to develop professional competence. In the remainder of the questionnaire, there were questions about the views of teacher candidates on their inclusion with their peers diagnosed with ASD in the university environment.

Semistructured Interview. In the study, a semistructured, 10-question interview was prepared for academics who are experts in the field of teacher education. The suggestions of two special education experts, three methodologists, and two grammar experts were obtained with regard to the interview questions, and arrangements were made to apply the results of their evaluations.

First, questions about the demographic characteristics of the participants were included in the interviews. Then, in the quantitative part of the research, regardless of the data received from the teacher candidates, interview questions were asked of the academics. One of the questions aimed to learn the opinions of individuals with ASD toward their higher education, specific to faculties of education. Also, data on inclusion of teacher candidates with individuals with ASD in their university settings and evaluation of this in terms of teacher education were obtained. In addition to these questions were suggestions of the academics to improve inclusion of teacher candidates with individuals with ASD in the university environment.

Data Collection and Analysis

During the data collection process, in the first semester of the academic year 2019–2020, the questionnaires were delivered to the participants in their faculties in a face-to-face environment, and the questionnaire took approximately 10 minutes to answer. The percentages (%) and frequency (*f*) were calculated using the Statistical Package for the Social Sciences (SPSS; Nie et al., 1975) for the analysis of the

closed-ended questions in the questionnaire. A thematic analysis was also used to analyze the open-ended questions (Braun et al., 2012). The quantitative frequencies of the themes were calculated, and these were presented with their frequencies and percentages.

However, owing to the quarantine measures enforced during the COVID-19 pandemic, video interviews lasting about 30 minutes were held with the academics. All the interviews were recorded with the approval of the participant and then transcribed. In these texts, themes were determined on the basis of questions. In this regard, thematic analysis of the interview data (Braun et al., 2012) was carried out separately by two researchers, then brought together and evaluated to reach a consensus. In the analysis of qualitative data, a code (A1, A2, A3, etc.) was used for each participant. When reporting on the analyses, the findings obtained from both participant groups were arranged under separate headings for presentation in the findings section and discussion in the final part of the study.

Results

Data From Teacher Candidates

Teacher Candidates' Knowledge and Ways of Obtaining Information About the Characteristics of Individuals Diagnosed With ASD. The answers given by the teacher candidates to the open-ended question to determine their knowledge about the characteristics of individuals with ASD are presented in Table 3.

A question with multiple answers concerned the ways in which teacher candidates access the information expressed in Table 3. There was no significant difference in the answers they gave about the ways of accessing information on the basis of gender and departments. On the other hand, a difference was observed between teacher candidates' grade levels in terms of ways of accessing information. The analysis of these data is presented in Table 4.

In addition to the ways of obtaining information specified in Table 4, some teacher candidates made additional statements. For 51 people (5.2%), this was "by observing the individual diagnosed with ASD from their social environment"; for 13 people (1.3%), it was "by obtaining information about individuals diagnosed with ASD from their social environment"; for 7 people (0.7%), it was "by observing the student diagnosed with ASD"; and 4 people (0.4%) stated that they obtained information about ASD from "preuniversity school lessons."

Teacher Candidates' Views on the Higher Education of Individuals With ASD Specific to Faculties of Education. Within the scope of research into teacher candidates' opinions about the higher education of individuals diagnosed with ASD, the opinions of individuals diagnosed with ASD regarding their ability to settle at university were first surveyed. For the participants who answered this question (n = 977), there was not significant difference in terms of gender and grade level re-

Table 3

Distribution of Teacher Candidates' Information About Individuals Diagnosed With ASD

Participant answer	*f (%)*
They have communication disorders.	139 (14.2)
They have poor eye contact.	107 (10.9)
They are individuals who are different from society.	99 (10.1)
They do not like physical contact.	92 (9.4)
Their autism levels are different from each other.	69 (7.0)
They have superior abilities.	61 (6.2)
They are individuals with intellectual disabilities.	54 (5.5)
They have routines.	51 (5.2)
They have repetitive behavior.	48 (4.9)
They have sensory sensitivity.	40 (4.1)
They have speaking problems.	36 (3.7)
They prefer to be alone.	34 (3.5)
They can be trained.	33 (3.4)
They are aggressive.	32 (3.3)
Their autism symptoms are congenital.	24 (2.5)
They have problems with psychomotor skills.	21 (2.1)
There is no cure.	19 (1.9)
They are good at understanding concrete concepts and visuals.	17 (1.7)
They are no different from society.	16 (1.6)
They show high skill in spotting details.	15 (1.5)
They can overreact to situations.	14 (1.4)
They have emotional disturbances.	11 (1.1)
They are very organized.	9 (0.9)
They have trouble listening.	8 (0.8)
They have problems with daily living skills.	7 (0.7)
They have fears.	5 (0.5)
They are very social.	4 (0.4)
Their autism symptoms are not contagious.	4 (0.4)
They have physical problems.	2 (0.2)
Their problems occur after birth.	2 (0.2)
They have savant syndrome.	2 (0.2)
They have memory problems.	1 (0.1)
They have epilepsy.	1 (0.1)
They understand abstract concepts very well.	1 (0.1)
Their eating behavior is different.	1 (0.1)
They have social problems.	123 (12.6)
They have neurodevelopmental disorders.	107 (10.9)
They are individuals with special needs.	96 (9.8)
They are gifted individuals.	72 (7.4)
They have obsessive behavior.	61 (6.2)
They are naive people.	58 (5.9)
They have behavioral problems.	53 (5.4)
They have attention problems.	50 (5.1)
They are too emotional.	45 (4.6)
They have learning difficulties.	37 (3.8)
Their perception is weak.	36 (3.7)
They are sick individuals.	34 (3.5)

(continued on next page)

Table 3

Distribution of Teacher Candidates' Information About Individuals Diagnosed With ASD (continued)

Participant answer	*f (%)*
Their genetics are different.	33 (3.4)
Their diagnosis is made in the first years after birth.	26 (2.7)
They are not sick individuals.	20 (2.0)
Their memories are strong.	21 (2.1)
They have hyperactivity.	18 (1.8)
Their condition has nothing to do with intelligence.	17 (1.7)
Their problems are lifelong.	15 (1.5)
They have a problem with empathy.	14 (1.4)
They have difficulty expressing themselves.	12 (1.2)
They are not disabled.	9 (0.9)
They do not react when their name is called.	9 (0.9)
Physical appearance is indistinguishable.	7 (0.7)
They have echolalia.	6 (0.6)
They make clapping hand movements.	5 (0.5)
They are insensitive to pain.	4 (0.4)
They do not behave to hurt anyone.	4 (0.4)
Their academic skills are weak.	2 (0.2)
They learn very fast.	2 (0.2)
They have panic attacks.	1 (0.1)
They like physical contact.	1 (0.1)
They are short-lived individuals.	1 (0.1)
They are poor in navigating.	1 (0.1)
They have restricted interests.	1 (0.1)

Table 4

Sources of Information That Teacher Candidates Obtained About Individuals With ASD

	Social media, f (%)	*Internet, f (%)*	*Television, f (%)*	*Printed publication, f (%)*	*Undergraduate course, f (%)*	*Educational events, f (%)*
Grade						
1	176 (65.4)	181 (67.3)	167 (62.1)	48 (17.8)	6 (2.2)	32 (11.9)
2	123 (58.6)	125 (59.5)	121 (57.6)	34 (16.2)	74 (35.2)	50 (23.8)
3	160 (66.1)	155 (64.0)	149 (61.6)	41 (16.9)	62 (25.6)	58 (24.0)
4	139 (53.9)	150 (58.1)	110 (42.6)	52 (20.2)	167 (64.7)	76 (29.5)
Total	598 (61.1)	611 (62.4)	547 (55.9)	175 (17.9)	309 (31.6)	216 (22.1)

garding views about individuals diagnosed with ASD regarding their undergraduate education. In addition, the differences between the sections in the data are presented in Table 5.

In addition to these opinions, the views of the individuals diagnosed with ASD toward the undergraduate education of teacher candidates were examined. At this point, the opinions of the teacher candidates regarding which branch/branches of

science individuals with ASD can be placed in during their undergraduate education were surveyed by means of a question with multiple answers. Their answers are presented in Table 6.

In addition to these general opinions, one of the multiple-answer questions concerned the most suitable teaching programs for individuals with ASD in the faculty of education. The majority of the teacher candidates who answered this question, with the exception those who said students with ASD can be placed in all teaching programs (n = 343; 35%), focused on three sections. A total of 530

Table 5
Teacher Candidates' Opinions About the Placement of Individuals Diagnosed With ASD to University Education

Department	*(1) Absolutely cannot enter university, f (%)*	*(2) Cannot enter university, f (%)*	*(3) Unstable, f (%)*	*(4) Can enter university, f (%)*	*(5) Absolutely can enter university, f (%)*
Visual Arts Teaching	0	0	9 (40.9)	6 (27.3)	7 (31.8)
Turkish Language Teaching	0	0	23 (13.5)	82 (48.0)	66 (38.6)
Social Science Teaching	0	1 (0.6)	17 (10.2)	86 (51.5)	62 (37.1)
Mathematics Teaching	1 (0.6)	1 (0.6)	26 (14.9)	84 (48.0)	62 (35.4)
Science Teaching	0	0	13 (15.9)	51 (62.2)	18 (22.0)
Primary School Teaching	0	2 (1.1)	20 (11.4)	105 (60.0)	48 (27.4)
Psychological Counseling and Guidance	0	1 (0.5)	21 (11.2)	102 (54.5)	63 (33.7)
Total	1 (0.1)	5 (0.5)	129 (13.2)	516 (52.7)	326 (33.3)

Table 6
Distribution of Branches of Disciplines in Which Individuals Diagnosed With ASD Can Be Placed, According to Teacher Candidates

Discipline	*f (%)*
Fine arts	538 (55.0)
Can settle in all disciplines	371 (37.9)
Sports sciences	334 (34.1)
Architecture, planning, and design	248 (25.3)
Agriculture, forestry, and aquaculture	174 (17.8)
Science and mathematics	156 (15.9)
Educational sciences	145 (14.8)
Engineering	110 (11.2)
Social, human, and administrative sciences	102 (10.4)
Health sciences	97 (9.9)
Theology	83 (8.5)
Philology	61 (6.2)
Law	33 (3.4)

people (54.1%) said art teaching would be suitable, 396 people (40.4%) said music teaching, and 274 people (28%) said physical education teaching.

In addition to these findings, the opinions of the teacher candidates about the professional competence of teacher candidates diagnosed with ASD in the faculty of education were examined. The responses to this question (n = 967) showed no significant difference between the gender and grade levels of the participants. Therefore the opinions of the teacher candidates on this subject are presented on the basis of departments in Table 7.

Teacher Candidates' Views on the Inclusion of Teacher Candidates With Peers Diagnosed With ASD in the University Environment. Within the scope of the research, the opinions of teacher candidates regarding the inclusion of peers diagnosed with ASD in the higher education process were surveyed. First, the opinions of teacher candidates in relation to whether they regarded themselves as having sufficient social interaction with individuals diagnosed with ASD were examined. There was no significant difference in terms of gender and grade level in the answers given by the participants. Differences were observed among the respondents (n = 993) in terms of departments, and these data are presented in Table 8.

In addition, the opinions of teacher candidates about discrimination faced by peers with ASD in faculties of education were examined. In the data obtained in this context, no significant variation was observed in terms of gender, department, or class level. For this reason, the data are presented for all the participants. At this point, 689 (70.4%) people stated that teacher candidates diagnosed with ASD would be exposed to discrimination in faculties of education, whereas 281 (28.7%) people answered that there is no discrimination. Nine people (0.9%) did not give an answer.

Table 7
Opinions of the Teacher Candidates Diagnosed With ASD on the Achievement of Teaching Professional Competence If They Are Placed on Education Faculties

Department	*(1) Definitely cannot reach, f (%)*	*(2) Cannot reach, f (%)*	*(3) Unstable, f (%)*	*(4) Can reach, f (%)*	*(5) Definately can reach, f (%)*
Visual Arts Teaching	0	1 (4.5)	12 (54.5)	4 (18.2)	5 (22.7)
Turkish Language Teaching	1 (0.6)	4 (2.3)	50 (29.2)	94 (55.0)	18 (10.5)
Social Science Teaching	1 (0.6)	4 (2.4)	48 (28.7)	88 (52.7)	23 (13.8)
Mathematics Teaching	0	6 (3.4)	47 (26.9)	95 (54.3)	25 (14.3)
Science Teaching	0	5 (6.1)	23 (28.0)	52 (63.4)	2 (2.4)
Primary School Teaching	0	4 (2.3)	47 (26.9)	105 (60.0)	17 (9.7)
Psychological Counseling and Guidance	1 (0.5)	6 (3.2)	50 (26.7)	110 (58.8)	19 (10.2)
Total	3 (0.3)	30 (3.1)	277 (28.3)	548 (56.0)	109 (11.1)

The teacher candidates ($n = 689$) who stated that teacher candidates diagnosed with ASD would be treated differently in the faculty of education were asked whether this discrimination would be positive or negative. A total of 651 (94.5%) people said such discrimination would be positive, whereas 511 (74.2%) people said it would be negative. These answers are presented in Table 9.

Data Obtained From Academics

Academics' Views on the Inclusion of Teacher Candidates With Peers Diagnosed With ASD in the University Environment. The academics first emphasized the difference between faculties of education and other faculties. All of

Table 8
Teacher Candidates' Views on Their Perception of Self-Efficacy About Social Interaction With Individuals Diagnosed With ASD

	(1) Absolutely not enough, f (%) (2)	*(2) Not enough, f (%)*	*(3) Unstable, f (%)*	*(4) Enough, f (%)*	*(5) Absolutely enough, f (%)*
Department					
Visual Arts Teaching	2 (9.1)	5 (22.7)	4 (18.2)	9 (40.9)	2 (9.1)
Turkish Language Teaching	41 (24.0)	74 (43.3)	36 (21.1)	18 (10.5)	2 (1.2)
Social Science Teaching	44 (26.3)	63 (37.7)	36 (21.6)	21 (12.6)	3 (1.8)
Mathematics Teaching	46 (26.3)	71 (40.6)	34 (19.4)	19 (10.9)	4 (2.3)
Science Teaching	11 (13.4)	32 (39.0)	22 (26.8)	16 (19.5)	0
Primary School Teaching	35 (20.0)	87 (49.7)	30 (17.1)	22 (12.6)	0
Psychological Counseling and Guidance	28 (15.0)	103 (55.1)	37 (19.8)	18 (9.6)	0
Total	207 (21.1)	435 (44.4)	199 (20.3)	123 (12.6)	11 (1.1)

Table 9
Situation of Teacher Candidates Diagnosed With ASD Being Discriminated Against on Education Faculties, According to Teacher Candidates

	(1) Exactly does not occur, f (%)	(2) Does not occur, f (%)	(3) Unstable, f (%)	(4) Occurs, f (%)	(5) Exactly occurs, f (%)
Positive discrimination	26 (2.7)	82 (8.4)	159 (16.2)	324 (33.1)	60 (6.1)
Negative discrimination	74 (7.6)	78 (8.0)	150 (15.3)	159 (16.2)	50 (5.1)

the academics (N = 10) emphasized that having individuals diagnosed with ASD at university is important in terms of enriching university life and education. All the academics also stated that faculties of education have better awareness of the higher education needs of individuals diagnosed with ASD than other faculties do. Academics emphasized that individuals with an ASD diagnosis can be included in the faculty of education and that, in comparison to other faculties, more qualified results could be obtained in terms of inclusion. For example, A8 believed that individuals diagnosed with ASD can be more easily integrated into faculties of education and stated,

> Since the object of the faculty of education is human, I think that when we take even the least qualified teacher candidate or an academic with the lowest competence, he will definitely say something about people. I think there is a higher level of understanding in terms of inclusion in the faculty of education. For example, faculties such as engineering are different in terms of the subjects they focus on.

Although all the participating academics had similar ideas, some gave more detailed reasons for inclusion. At this point, three academics (A1, A5, A10) emphasized that the autism levels of teacher candidates diagnosed with ASD are important, while three academics (A1, A3, A9) stated that individuals with ASD should be placed in departments according to their characteristics. For example, A3 stated,

> In our department [visual arts teaching] there is more of a workshop environment. In the workshop environment, students and academics unavoidably mingle. Art is an area that makes people relax. The workshop environment will relax the child and make it more productive. . . . The crowded classrooms will not be the same as the workshops.

Similarly, A9 stated,

> It is a program suitable for inclusion in terms of the program [visual arts teaching] in which the student [teacher candidate with ASD] in our faculty is located. For example, in a mathematics program, it is not possible for it to fuse that much because it is more mechanical.

Despite the positive statements about the faculties of education, all academics (N = 10) stated that teacher candidates do not have sufficient awareness of individuals with ASD in higher education. In fact, all of the academics stated that teacher candidates' lack of awareness went further. At this point, they stated that, as presented in Table 10, teacher candidates were not at first able to integrate with teacher candidates diagnosed with ASD.

As shown in Table 10, most academics stated that individuals diagnosed with ASD will face positive discrimination in the faculties of education. All academics who observed positive discrimination explained this by mentioning helping, conscience, pity, or mercy. For example, A4 stated, "There will be positive discrimina-

tion. The first feeling is always positive discrimination with pity. This is perhaps in our culture." Similarly, A7 stated, "There are elements of conscientiousness. . . . I think that our students, at least in the faculty of education, will help her in a religious context, maybe in a social context."

A9, a teacher candidate diagnosed with ASD in his faculty, believe that positive discrimination prevents the exclusion of those teacher candidates diagnosed with ASD but that there will not be full inclusion. A9 noted the following:

> For example, I remember the student with ASD at the faculty running down the corridors. He was jumping and screaming every now and then. I do not think there will be any problems in the context of students [other teacher candidates].

A2 stated,

> Some of the teachers we graduate here [faculty of education] do not want to teach these students at school. This can be cowardly behavior. In other words, I use the word cowardice in the following sense: since a value system has not been established and does not know what to do, avoidance behavior emerges.

Although opinions were also expressed about teacher candidates' lack of awareness of inclusion skills, all the academics emphasized that having individuals diagnosed with ASD in the university environment will improve teacher candidates' awareness and skills and bolster inclusion in education over time. For example, A7 believed that it is important in terms of awareness to gain experience with students with ASD during university and stated, "Theoretically there are lessons, but living with them is a different thing."

All the academics emphasized the contribution of teacher candidates to developing empathy skills. Moreover, six academics (A1, A2, A4, A5, A6, A8) stated that the presence of teacher candidates diagnosed with ASD in the faculty will help improve the attitudes of their peers toward any students they encounter in future with an ASD diagnosis, as they will be working within the scope of inclusive education

Table 10

Academics' Views on the Integration of Teacher Candidates Diagnosed With ASD and Other Teacher Candidates into Education Faculties

Academic answer	*Code(s)*
There is positive discrimination against teacher candidates diagnosed with ASD, thus their integration over time is supported.	A1, A2, A4, A6, A7, A8, A10
There is no exclusion due to positive discrimination but no integration either.	A5, A9
Teacher candidates diagnosed with ASD are accepted by others, and integration occurs over time.	A3

in their professional lives. For example, in the special education department, A5, an expert in autism, believed that the experience would have a positive effect on their professional life and stated, "The sooner our teacher candidates here [faculty of education] meet this student [teacher candidate with ASD] when they are at university, the sooner they will have seen some of the behaviors of their students in their classmates."

Academics' Suggestions to Improve Inclusion Within the Scope of Teacher Education. The academics made a number of suggestions to increase the quality of inclusion in faculties of education. In addition to some of the suggestions that are directly about inclusive education within the framework of teacher education, all of the suggestions contribute to the inclusion of teacher candidates with peers diagnosed with ASD in the university environment according to academics. These recommendations are presented in Table 11.

Table 11

Suggestions of Academics to Increase the Quality of Inclusive Education in Teacher Education

Academic answer	*Code(s)*
All academics should be educated about inclusive education.	A1, A2, A3, A4, A5, A7, A8, A9, A10
In addition to theoretical courses, practices related to inclusive education should be included in university education.	A1, A2, A3, A4, A5, A6, A7, A8, A10
Universities should have an inclusive program.	A2, A4, A5, A6, A7, A9, A10
The need for expert academics in the field of inclusive education should be met.	A2, A3, A4, A5, A7, A8, A10
University events based on inclusive education should be organized.	A2, A4, A7, A8
The number and duration of courses for inclusive education should increase.	A3, A6, A10
A corporate culture for inclusive education should be created.	A2, A4, A7, A9
Courses on inclusive education should cover 4 years.	A7, A8
More sociological research should be done on inclusion in education faculties, and university life should be supported with the results of these studies.	A4

Considering these suggestions, seven academics stated that faculties of education should employ more academics who are experts in inclusive education, and nine academics stated that all academics, especially in the faculty of education, should receive training on inclusion practices. On this topic, A4 believed that academics in the faculty of education have inadequacies regarding inclusive education and that they should be supported to remedy these and stated,

> The experiences of our teacher candidates are very limited, their life experiences are very limited, their perspectives can be very narrow. For four years, we have not been able to open perspectives sufficiently. As our teacher candidates are like this, I unfortunately say with great sadness, but there are very important points that our teacher educators need to strengthen. There are some aspects they are lacking. He knows his field and thinks he is sufficient. It is not enough to know his/her field.

Similarly, A5 stated,

> Our academics have no experience with inclusion. Especially those who are in the academy now completed their license at least 10 years ago. None of these people have learned a special education lesson, and they sometimes cannot quite differentiate between things. We have teachers asking me what special education is.

In addition, the academics made suggestions for regulations regarding courses. Throughout the interviews, nine academics emphasized that practices for inclusive education should also be included in training programs. At this point, A2 emphasized that theoretical education did not lead to teacher candidates having sufficient awareness and stated, "It is a disappointment for us not to see the same attitudes in practice when we follow the graduates from here [faculty of education], and receive feedback from them in the graduate tracking system." Similarly, A5 stated,

> The lessons taught remain theoretical because our application areas are very limited. When we try to show it by applying it in the classroom, we do not have enough time or we cannot modify the curriculum. . . . We must have an application lesson for special education. For example, when we send our primary school teacher candidates to practice with students [special needs students], they say it was an experience we have never experienced before. . . . Many say it was a very different experience.

At this point, although A9 considers the lack of implementation of inclusive education to be a deficiency in teacher education, he stated, "I wish our teacher candidates could practice, but we cannot reach many inclusive students while we have problems with schools sending only neurotypical students."

Despite this view, A10 emphasized that implementation is urgently needed for teacher candidates and stated,

> My student [graduate teacher candidate] said that I have never received any training on these children [children with special needs] and I do not know how to behave. My student [graduating teacher candidate] experienced trauma on the first day of her teaching.

According to A7 and A8, it is necessary to distribute lessons and practice for inclusive education to cover the 4 years of teacher education. In addition, four academics stated that the faculty should hold events, in addition to academic activities such as conferences and seminars, to enable teacher candidates to gain experience with students with special needs. However, with regard to these events, A2 emphasized that the activities should be carried out in a planned manner by autism experts and stated, "If these events are carried out without hurting children and turning them into an advertisement and object of pity, they will be beneficial."

Furthermore, four academics stated that the most important factor for inclusive education in faculties of education is the development of a corporate culture for the concept of inclusion. At this point, A9 pointed out that awareness of inclusive education is needed by all stakeholders in the faculty and stated,

> Corporate culture is necessary. . . . Actually, we are all oriental, so we are romantic. Unfortunately, we have difficulties in looking at matters professionally. . . . Only when awareness increases, this [professional point of view] can happen. It is not possible to achieve this [professional point of view] all at once.

Similarly, A7 stated, "There should be an institutional culture about inclusion, not just teacher candidates, but also from the cleaner to the dean and to the rector."

At this point, seven academics expressed support for the preparation of an applicable, auditable, and sustainable comprehensive inclusion program. This should be professionally prepared by interdisciplinary experts, cover all stakeholders in the faculty of education, and adhere to university regulations.

Unlike other academics, A10 emphasized that this program should be limited not only to social inclusion but should also include awareness of all the factors that affect academic process in the faculty of education and stated,

> If you subject him to the same exams together with other students [teacher candidates] in the same class in the same lessons, he will face serious problems after all. . . . When different measurements and evaluations are made, the student may be exposed to negative discrimination from other students. These points should be given particular consideration in the program.

Discussion and Conclusion

Every teacher needs to have a good understanding of inclusive education (Lewis & Bagree, 2013). Therefore developing the effectiveness of inclusive education in the faculties of education is a need. At this point, it is important to examine the inclusion of teacher candidates with students with special needs, such as students with ASD. This study aimed to investigate the inclusion of other teacher candidates with peers diagnosed with ASD in terms of teacher education.

For this aim, it will be useful first to examine teacher candidates' statements about the characteristics of individuals diagnosed with ASD. This is because a lack of knowledge affects not only autism awareness but also the attitudes of teacher

candidates toward inclusion (Al Zyoudi et al., 2011). The responses of the participant teacher candidates to individuals diagnosed with ASD showed that, apart from discourse unrelated to ASD, which was mentioned by very few respondents (e.g., it is a disease, their physical appearance is different, they are short-lived), the participants described the characteristics and core symptoms of ASD, such as social, communication, and behavioral problems (APA, 2013), and elements of these, such as poor eye contact and obsessive behavior (CDC, 2019). The majority of the participants had information about ASD.

Nevertheless, despite this positive situation, three elements related to the responses of the participants should be specifically addressed. The first of these is that although many characteristics related to ASD were listed when describing individuals with ASD, these did not directly describe the core symptoms of ASD (e.g., social, communication, and behavioral challenges) or key information of relevance to ASD (e.g., that it is a neurodevelopmental disorder). In other words, although various descriptions of autism were given, the expected response density was not obtained, especially regarding the most important information about autism. This shows there is a need to raise awareness about ASD. Another factor is that many of the characteristics described in relation to ASD were expressed in general terms. For example, teacher candidates described individuals diagnosed with ASD using generalizing definitions and expressions, such as gifted and mentally disabled. A few participants stated that individuals with ASD are different from each other. It is concerning that few people expressed this. Individuals diagnosed with ASD may have special skills (Happé, 2018), a higher than average IQ score (Wright, 2015), or intellectual disabilities (CDC, 2020a). However, this is not the case for all individuals with ASD (APA, 2013), because their characteristics are unique (Rajalakshmi, 2014). The third element that should be emphasized in relation to the answers is that participants responded to the question about the definition of individuals with ASD by associating them with society. Some of the participants stated that individuals diagnosed with ASD are different from others in society, whereas others said that they are no different. When defining individuals diagnosed with ASD, it is necessary to consider the need to use these community-related expressions, which may occur as a result of a cultural influence. Turkish culture is known to be interdependent (Göregenli, 1997; Imamoglu et al., 1993), and this connectedness is effective in societies in this culture (Markus & Kitayama, 1991). This can lead to a tendency to compare individuals with each other (Baldwin & Mussweiler, 2018). This tendency toward comparison may pose a problem for the inclusion of individuals diagnosed with ASD. Efforts to increase teacher candidates' knowledge of these three elements, and thus support autism awareness, need to be strengthened within the scope of inclusive education in teacher education. Participating academics similarly emphasized that this support for teacher candidates is a necessity.

Following the aforementioned factors, to investigate the views of peers diagnosed with ASD toward their higher education, including the faculties of education, the

opinions of the participant teacher candidates about the admission of individuals diagnosed with ASD in the university should also be examined. This is because accepting the existence of individuals with ASD in university life, similar to themselves, is related to mingling with them (Kart & Kart, 2021). At this point, it should be stated that almost all of the participating teacher candidates were of the opinion that individuals diagnosed with ASD should attend university. However, only 29 students with an ASD diagnosis are enrolled in higher education in Turkey (HEB, 2020), which represents a very low proportion. In fact, this situation is similar to the number of students with disabilities. Of the 51,647 disabled students enrolled in higher education in Turkey, only 29 have been diagnosed with ASD (HEB, 2020). Although this number is low, the opinions of teacher candidates can be interpreted as an indicator that individuals with ASD, like themselves, can be at university. However, this may not have been related to inclusion and be affected by cultural perspectives. According to Joshi and Carter (2013), unrealistic optimism can occur in interdependent cultures like Turkey. In other words, these responses from participants may not be about effective inclusion because they may have been given under cultural influence. This cultural effect can be understood more clearly if it is examined separately for the visual arts teacher education program, where a teacher candidate has been diagnosed with ASD. In contrast with general participants, the teacher candidates in the visual arts teacher education program were undecided about individuals' with ASD university placement and achievement of professional competence in faculties of education. This situation can be explained by the experience of expressed unrealistic optimism. Considering that experience has an effect on optimism (Campbell et al., 2007; Shepperd et al., 2003), the experience of teacher candidates in the visual arts teacher education program may have affected their views and led them to be more realistic.

To better understand the participant teacher candidates' views regarding the inclusion of peers with ASD at university, it is necessary to get their opinions on which disciplines individuals with ASD can settle in higher education. This is because while their opinions show that they accept individuals with ASD in some disciplines, this acceptance is at a lower level in some other disciplines. With the exception of those who stated that they could be placed in all disciplines, the participants stated that students diagnosed with ASD would mostly settle into the fine arts and sports sciences. This situation is similar with regard to the programs considered suitable within the faculty of education. Individuals diagnosed with ASD can be successful in sports (e.g., Applied Behavior Analysis, 2021b) and fine arts (e.g., Applied Behavior Analysis, 2021a). However, like everyone else, individuals diagnosed with ASD can succeed in different fields in line with their interests and competencies. For example, some individuals with ASD may have superior mathematics skills (Anthes, 2013). In other words, individuals diagnosed with ASD have different characteristics and should be approached from this point of view. However, the fact that more than half of the participant teacher candidates did

not state that individuals with ASD students could be placed in all disciplines of the university might indicate a lack of inclusion in the university environment, especially in some disciplines. For example, few teacher candidates stated that individuals with ASD can settle in educational sciences. In other words, for many teacher candidates, it may not be possible for individuals with ASD to be on education faculty. This perspective may be a barrier for quality of inclusion in the faculty of education. At this point, training for participants should raise awareness that individuals diagnosed with ASD can have skills in any discipline and settle into university accordingly. Informing teacher candidates about this could also contribute to their educational expectations of their students with ASD, who will be able to take part in their future classrooms, thus increasing the quality of inclusion settings.

In the formation of the aforementioned discourses of the teacher candidates, the sources from which the participant teacher candidates obtained information about individuals with ASD are also important. This information can affect their views on individuals diagnosed with ASD and thus form the basis of their inclusion. The responses of the participant teacher candidates showed that information about individuals diagnosed with ASD was to some extent obtained from printed publications, undergraduate courses, and educational activities, but mostly through social media, the internet, and television, namely, informally. This situation may have disadvantages with regard to teacher candidates obtaining information about ASD individuals, as both false and correct information can be disseminated via the internet and social media (Kumar & Shah, 2018). Similarly, participants' use of these ways of obtaining information may be the reason for the controversial aspects of their descriptions of individuals with ASD. For example, some people think that individuals diagnosed with ASD have special talents because of the film Rain Man. This idea has become widespread (Williams, 2014). This may also be the case for the TV series Miracle Doctor (an adaptation from the South Korean show The Good Doctor), which has been a success in Turkey. In this series, a doctor with savant syndrome has extraordinary medical success (Dönmez & Göze, 2020). However, not all individuals diagnosed with ASD are gifted (Happé, 2018). The reason participant teacher candidates use the expressions they do when making generalizations about individuals with ASD may be because they have learned about ASD in informal ways. Such information may cause problems when it comes to creating successful inclusion settings for students diagnosed with ASD in the classrooms for which teacher candidates will be responsible in years to come.

The disadvantages of informal education described herein make it a necessity for all teacher candidates to undergo adequate and qualified formal education related to ASD. The new regulations for teacher training undergraduate programs in Turkey include a compulsory Special Education and Inclusion theoretical course in the final year (HEB, 2018). This shows that until the last year of their 4-year course, teacher candidates (except for special education teacher candidates) can progress through the faculty without undergoing mandatory formal education directly related to ASD

and inclusive education. Because there is content of relevance to many different disability groups in this course (HEB, 2018), there may also be limitations regarding the development of inclusive skills for individuals diagnosed with ASD. Although fourth-year teacher candidates mostly stated that undergraduate courses were a source of information for individuals with an ASD diagnosis, their responses in terms of social interaction with individuals diagnosed with ASD did not differ from the answers given by first-, second-, and third-year teacher candidates. This shows that the information obtained on this course has a limited effect on their attitudes. The reason may be because knowledge is mostly at the theoretical level. In teacher education, experience is, alongside theoretical knowledge, a very important element (Lunenberg & Korthagen, 2009). Participating academics also stated that experience in general is an important deficiency in teacher education. In fact, the majority of the participating academics stated that eliminating lack of experience with students with special needs, such as students with ASD, will have a positive effect on the inclusive education process, which includes students diagnosed with ASD, in their professional lives. Therefore it is necessary to examine the experience element of teacher training undergraduate programs in future studies and to plan them in terms of applicability.

In addition to the lack of experience in formal education, it was observed that most teacher candidates in the faculty had no informal experience of individuals diagnosed with ASD. As most of the participant teacher candidates had not met anyone with an ASD diagnosis, the majority of those who had met someone with a diagnosis stated that this was a teacher candidate in their faculty. Despite this limited experience, the time they spent with this teacher candidate with ASD was important. Most of the other teacher candidates outside the visual arts teaching program feel that they lack social exposure to individuals diagnosed with ASD. This can be explained by the fact that teacher candidates in the visual arts teacher education program have spent a longer period of time with the teacher candidate diagnosed with ASD and have had closer contact and interaction with him within the scope of the workshops. This may be related to the contribution of the teacher candidates in the visual arts teacher education program to the development of empathy skills, as stated by the participating academics.

The lack of social interaction between the participating teacher candidates and individuals diagnosed with ASD was reflected in the answers given to the question about discrimination against the teacher candidate diagnosed with ASD in the faculty of education. The majority of the participating teacher candidates stated that individuals diagnosed with ASD would face discrimination at the university. As discrimination is a barrier to inclusion (United Nations, 2018), holding this view should be a cause for concern in faculties of education where future teachers are being trained. It is likely that teacher candidates will work with students diagnosed with ASD in future. The fact that this discrimination is perceived by teacher candidates is a risk that may have a negative effect on future students' inclusive education. However, when this discrimination is considered in more detail, it is

apparent that positive discrimination is cited much more than negative discrimination. The participating academics also stated that other teacher candidates would positively discriminate against teacher candidates diagnosed with ASD, including displaying a desire to help and acting out of conscience, pity, or mercy. As positive discrimination is defined as an act of gaining advantage for disadvantaged individuals in society, it can be considered a positive attitude. Positive discrimination is used around the world as a policy tool to eliminate inequality between individuals (Gille, 2013). However, positive discrimination does not have a completely positive effect on the individuals who are exposed to it. In the process of positive discrimination, defining the characteristics of individuals, such as their disability, may also cause disadvantages and lead to labeling (Noon, 2010). This negative possibility was also observed in the discourse of the teacher candidates in this study. When describing the teacher candidate diagnosed with ASD in the faculty, all the participants, except his classmates, used the expression "student with ASD diagnosis in the faculty." The fact that this individual is described in terms of having ASD, rather than by his name or other individual characteristics, shows that the label defines him. To overcome this problem arising from positive discrimination, increasing the interaction of individuals diagnosed with ASD with others in the faculty may help. Unlike the other participants, the teacher candidate with ASD's classmates in the visual arts teaching program used his name or described him as "my classmate." This shows the importance of teacher candidates gaining experience through contact with individuals diagnosed with ASD in their educational training.

Future Research Directions

Although the participating academics stated that the faculty of education would be more able to integrate individuals diagnosed with ASD into the higher education process than other faculties, the data obtained throughout the study showed that many shortcomings, such as autism awareness, were present. Therefore universities may be challenging for university students with ASD. Future research should focus on the inclusion of individuals who have been diagnosed with ASD into university life. In addition, it is thought that, thanks to the experience of teacher candidates with individuals diagnosed with ASD, there has been an improvement in the level of awareness of such individuals. For this reason, there is a need for teacher candidates to work on developing applicable and beneficial strategies to increase their interaction with individuals diagnosed with ASD during their time in the faculty of education and to share the knowledge and insights obtained after long-term interaction.

Implications for Practice

Although there have been positive developments in inclusive education in teacher education in Turkey for years, there are still inadequacies in teacher competencies

(Gürgür & Yazçayır, 2019). Based on the data obtained from the research, some basic recommendations have been made. At this point, the course content should be planned in a way that enables teacher candidates to obtain sufficient information about ASD and understand, accept, and appreciate individuals with ASD. In addition, teacher candidates should be given the opportunity for teaching practice with students diagnosed with ASD in schools. Improving inclusive education for students diagnosed with ASD should not be confined to the "special education and inclusion" theoretical course in the fourth and final year. Training related to inclusive education, which is given to teacher candidates in a way to include students with ASD, should be given in a theoretical and practical way to cover 4 years of in-class and extracurricular education processes at the university. Also, cultural elements should be discussed in the education process of teacher candidates for inclusive education, noting that positive discrimination toward individuals diagnosed with ASD and compassion may be the reasons for this discrimination. Therefore necessary support should be given to professionalize the perspectives of teacher candidates. At this point, creating a culture of inclusion in higher education is a necessity (Blessinger, 2018). Thus it is necessary to carry out awareness studies on ASD and inclusive education for everyone in the faculty, including academics. To support this culture, a comprehensive inclusive program supporting academic and social life should be prepared for individuals with ASD by university experts. This inclusive program should not only support individuals diagnosed with ASD but also be capable of developing all teacher candidates. The qualified regulation and implementation of all these suggestions is important to enable teacher candidates to integrate future students with ASD, as well as to improve their awareness of their higher education.

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