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Evaluation of Teacher Candidates' Perceptions about Specific Learning Difficulties through Online Photovoice (OPV) Method

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ABSTRACT

In this study, the researchers (i) determined the perception levels of candidate teachers about Specific Learning Difficulties (SLD) using Online Photovoice (OPV) methodology, (ii) shared the research results with relevant researchers and practitioners in order to contribute to increase the knowledge level of candidate teachers about SLD, and finally (iii) discussed the results of the research in order to lay the groundwork for more meaningful and useful research and services. OPV technique was used in the data collection phase, and Online Interpretative Phenomenological Analysis (OIPA) was used in the data analysis phase. A total of 367 teacher candidates studying in different teaching programs participated in the study; the answers of 42 students were removed from the analysis for various reasons, and the remaining 325 students formed the final sample. The participants were asked about the most important factor/concept that defines SLD in order to measure their perceptions about SLD. Thirteen main themes were created regarding the most important factor/concept that defined SLD; the most important main themes and percentages were as follows: It is a situation in which the individual has difficulties in cognitive (reading, writing and mathematics) skills (51%), a situation that needs support (16%), and a situation that causes differences in learning style (12%). At the end of the study, the researchers made suggestions to the relevant researchers and practitioners in order to increase their knowledge level about SLD. With this research, the researchers used the OPV technique for the first time in the field of SLD, and they brought a new breath to future research.

Key words: Special Education, Specific Learning Disability, Perceptions Of Special Learning Difficulties, Teacher Candidates, Online Photovoice (OPV), Photo Voice, Online Interpretative Phenomenological Analysis (OIPA)

INTRODUCTION

The Importance and Perception of Specific Learning Disabilities

Specific Learning Difficulties (SLD) is defined as a biological neurodevelopmental disorder that manifests itself with significant difficulties in the acquisition and use of verbal and nonverbal information processing and/or listening, speaking, reading, writing, reasoning and/or mathematical skills (Raghavan & Patel, 2005). Children with SLD can usually be noticed after starting primary school (Çen & Aytaç, 2017). The reason for this situation is the emergence of the difficulties experienced by children with SLD in academic fields. SLD is a very common type of disability in countries with a developed diagnosis system. For example, in the USA, 42% of all individuals with special needs are diagnosed with SLD (Cortiella & Horowitz, 2014). This rate is only 3% in Turkey (Melekoğlu, 2016). Diagnostic and Statistical Manual of Mental Disorders (DSM-5) estimates that 5-15% of school-age students are affected by SLD (American Psychiatric Association [APA], 2013).

The number of students affected by SLD is too high to ignore. Considering that children with this type of disability are generally noticed at school age, it is of great importance to reveal the perception levels of teacher candidates. They are more likely to become teachers of these students in the future and recognize students with SLD when they reach school age. In this way teacher candidates can provide the required educational environment.

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Online Photovoice (OPV)

Tanhan and Strack (2020) developed Online Photovoice (OPV) method by using the traditional photovoice technique developed by Wang and Burris (1997). OPV offers researchers the opportunity to develop more effective research methods by reaching different and more participants in their studies, and to reach meaningful and strong results by spending less time for researchers and participants. Thus, OPV technique saves time and financial expenses, etc. and makes it more useful in situations where face-to-face meeting is impossible or very difficult due to pandemic, endemic, security problems, conflict or natural disasters (Tanhan, 2020; Tanhan & Strack, 2020).

In the present study, the two terms have been used interchangeably, as researchers in the literature refer to photovoice as both method and technique. In traditional photovoice, participants come together in small groups of 8-13 people face to face and first receive a short training from the researcher (Tanhan, 2020). Later, the participants takes their photographs, meet with the researcher and other participants, and share their photographs and stories in front of the whole group (Tanhan & Strack, 2020). This has some important advantages: getting together as a group and listening to different stories for several hours each day, each participant having enough time to tell their own story, and researchers listening to the participants empathetically and spending time with the participants (Tanhan & Strack, 2020). In addition to these advantages, the traditional photovoice method also includes serious limitations: It requires excessive time for both the researcher and the participants; it is not anonymous; it can be done only with a small number of participants such as 8-13; it requires advanced specialization; and it requires the researcher to physically go to the environment of the participants (Tanhan & Strack, 2020).

In addition, the necessity of the participants to allocate time for each session and the lack of work and the impossibility of applying the traditional photovoice in processes such as COVID-19, which is difficult to face, is an important limitation (Tanhan, 2020). Therefore, Tanhan and Strack (2020) developed OPV, which includes the advantages of traditional photovoice and removes its limitations, and makes it an innovative technique that is much more suitable for many contexts.

Gaps in the Literature and Original Value of the Research

Since the first definition of SLD and its conceptual emergence, there have been many studies on SLD (Baydık et al., 2012; Çen & Aytaç, 2017; Decker & Buggey, 2014; Gortmaker et al., 2007; Görgün & Melekoğlu, 2019; Heiman & Berger, 2008; İlker & Melekoğlu, 2017; Kirk, 1977; O'Connor, 2018; Öğülmüş & Melekoğlu, 2021; Özçivit Asfuraoğlu & Fidan, 2016; Vaughn & Wanzek, 2014). However, there has been no study examining the perceptions of teacher candidates who continue their education in the faculty of education regarding SLD.

Contextual factors affect all people at different levels (Arslan, Allen et al., 2020; Arslan & Tanhan, 2019; Tanhan, 2019) and therefore the global pandemic, COVID-19, has affected almost all areas of life including education (Erol & Aydin, 2021; Tanhan, 2020; Tanhan et al., 2021), mental health (Arslan et al., 2020; Tanhan et al., 2021; Tanhan et al., 2020). Based on the pandemic, many researchers searched for effective online research methods, and some researchers carried out OPV in different subjects such as pandemic and distance education (Doyumğaç et al., 2021; Subasi et al., & Allen, 2021; Tanhan, 2020; Tümkaya et al., 2021), close relationships during the pandemic (Genç et al., 2021), and mental health (Tanhan, 2020; Tanhan et al., 2021; Tanhan & Strack, 2020). However, there are not any OPV studies in the field of special education yet. Therefore, the present study is important because it is the first study that examines the perceptions about SLD using the OPV method. In addition, it is thought that it will be a resource for future studies to be carried out with the OPV method in the field of special education.

Theoretical Framework: OPV with CBPR and OIPA to Understand Candidate Teachers' Perception of SLD

Based on all provided above, it was necessary to capture how the candidate teachers perceive SLD. However, considering the pandemic context as suggested by other researchers (Çiçek et al., 2020; Tanhan, 2020; Tanhan et al., 2021), as the researchers we needed to conduct the study online. Therefore, we used OPV to collect data. OPV has been quite new, and it was even more necessary to collaborate with students to increase meaningful participation; therefore, we used a Community-based Participatory Research (CBPR) from the beginning of the study to the end and disseminating the result to key people and institutions for advocacy. In line with OPV and CBPR, we used OIPA for analyzing our data. Collaborating with college students from a CBPR perspective to conduct research and involve them in meaningful activities seems to contribute to more effective research and the college students' overall wellbeing as well (Demir et al., 2021; Tanhan, 2020; Tanhan & Francisco, 2020; Tanhan, Karaman et al., 2020). In sum, our theoretical framework consisted of conducting a thorough literature review and using OPV with CBPR and OIPA to understand candidate teachers' perception of SLD.

METHOD

In order to conduct this research, as the researchers we first conducted a comprehensive literature review, especially on OPV and its use in education. We did not come across any researchers who used OPV in Special or Specific Learning Difficulties (SLD).

Procedure

We first conducted a comprehensive literature review on OPV and education and specifically focused on OPV in SLD. We found recent studies using OPV in mental health (Tanhan, 2020; Tanhan et al., 2021; Tanhan & Strack, 2020) and education (Doyumğaç et al., 2021; Subasi et al., 2021;

Tanhan, 2020; Tümkaya et al., 2021). However, we did not come across any OPV on SLD. Tanhan (2020) called for use of OPV in more specific areas of education including SLD. Based on all these, we gained our IRB approval and constructed our online form for the study through Google Forms Software.

Participants

A total of 367 teacher candidates studying in different teaching programs in the faculty of education participated in the study. The answers of 42 participants were removed from the analysis for various reasons, and the remaining 325 participated in the study. No additional credits were given to the candidate teachers for participating in this study. The candidate teachers participated in this research on a voluntary basis.

Data Collection Tools: Online Survey

The online form included IRB approval, consent form, demographic, and OPV specific questions. The first two researchers were more engaged with the participants. The two researchers explained OPV participation, steps, and the study purpose through multiple ways many times including yet not limited to online platforms (e.g., phone, email, Zoom, Skype, Google Hangout, online). As the researchers, we also provided detailed videos, audios, and written documents on OPV (e.g., its main purpose, how to participate, its philosophy, how it has emerged). Tanhan (2020) prepared the OPV documents in Turkish and English, and he made them available to all interested as participants, researchers, and/or activity organizers. We provided the documents that explain the same things in different versions so that the participants can choose based on their context as Tanhan (2020) highly suggested. We used the Turkish OPV documents.

Online Photovoice (OPV) Procedures

We followed Tanhan (2020) to shape our OPV procedure for a more meaningful and understandable participation process. The details of the procedure are provided in the study conducted by Tanhan (2020). The participants engaged in the following five steps to share their understanding and/or perception of SLD through OPV.

Before starting step one, the participants read the research question: How do you identify Specific Learning Difficulties (SLD) or what does it mean to you, please follow the next five steps to share your understanding/perception through OPV?

In the 1st step, *first words/concepts come to our mind*, the participants listed at least one at most 10 words or concepts that came to their mind as soon as they read or heard SLD or read anything related to SLD. The participants wrote their words in the related box in the online form. Then, they took some time to reflect on which one of these word or concepts was the most important to them.

In the 2nd step, *taking and uploading the representative photo*, the participants took some time to take one or more photos that represented the most important word/concept they decided in the first step. The participants were allowed to upload only one photo to the form. More detailed information on taking, choosing, and uploading the representative photo is available in Tanhan (2020) or Tanhan and Strack (2020).

In the 3rd step, *sharing our story/voice*, the participants followed "SHOWED" acronym (Tanhan, 2020; Tanhan & Strack, 2020) to write their story/voice that explains the most important word as written in the first step and its representative photo as uploaded in the second step. In order to make use of OPV more effectively in Turkish, Tanhan (2020) adapted OPV and SHOWED acronym to Turkish. He adapted SHOWED as GÖZSAN from a very contextual perspective. For more detail, the reader may refer to Tanhan (2020). We used GÖZSAN meaning SHOWED to facilitate the participants' writing their story/voice in this step. We asked the participants to follow GÖZSAN meaning SHOWED acronym to write a whole and comprehensive story rather than responding to each question separately. The acronym is as the following:

S: What do you ***S*ee** in the picture representing the most important word/concept related to Specific Learning Difficulties (SLD) for you or your community population?

H: What is ***H*appening** in your photograph/picture? (Briefly describe).

O: How does it relate to **(y)Our** life or your community?

W: **What** is it that creates or contributes and/or to this most important concept or process?

E: What do you ***E*xperience** (feelings, thoughts, behaviors) while taking the picture, writing your message, and submitting them?

D: What can we (as educators, researchers, peers, mental health professionals, etc.) ***D*o** about this?

In the 4th step, *summary, theme(s) or metaphor(s),* the participants reflected on their responses from first step to third step and then wrote at least one and at most 10 words to summarize their photo and story. The participants were also able to use themes or metaphors rather than regular words/concepts to summarize and give the heart of their photo and story.

In the 5th step, *attribution of the facilitators and barriers to Ecological System Theory (EST)*, the participants responded to a multiple choice question to indicate to which systems of EST they attribute the most important word/concept, photo, story, and summary meaning their perception of SLD. For more detailed information on EST and all these steps, see Tanhan (2020).

Analyses: Online Interpretative Phenomenological Analysis (OIPA)

In order to analyze the data, we preferred to use Online Interpretative Phenomenological Analysis (OIPA) to capture and convey the participants' voices, experiences, feelings, thoughts, and words. Therefore, we followed five clear steps of OIPA. Tanhan (2020) and Tanhan and Strack (2020) provided an explanation of OIPA in more detail.

RESULTS

Following the data analysis steps mentioned above and after deleting the data that should not be included in the analysis, the necessary analyses were made and the main themes provided in Table 1 were constructed.

Photographs 1, 2, 3, and 4 below present the stories and themes of the most important concepts/factors related to SLD of four students, who represented their perceptions about SLD comprehensively. The students took the photos and submitted the photos when they participated in the research. The students were suggested to take their own photos. Considering the context of the pandemic, it seems some had some photos from online platforms, and OPV allows that, while asking the participants to make sure for copyright issues as suggested by Tanhan (2020) and Tanhan and Strack (2020) as the developers of OPV.

I find him having difficulty in reading and understanding the articles. Since the child has difficulty in reading the articles in the book in front of me, this process is very complicated for him and this situation causes him a lot of boredom. To be a part of my future profession. I think that specific learning difficulties are noticed in the school environment and generally when starting to read and write. I am hoping to be able to help those children when I start my career. We should cooperate and help the child to feel more comfortable and develop

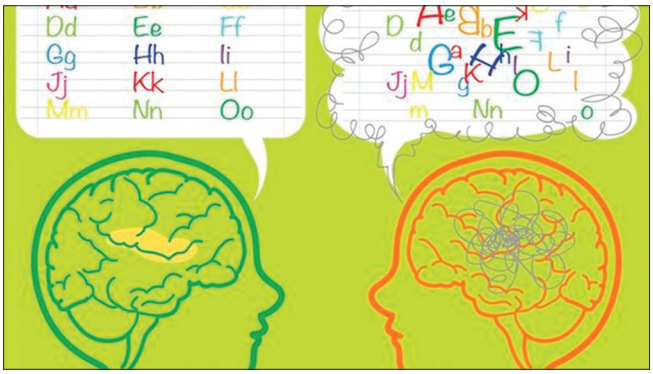
Table 1. Main themes regarding the most important concept / factors defining SLD

Main Themes	Participants ID	%	Total Participants
1. It is a situation where the individual has difficulties in cognitive (reading, writing and mathematics) skills.	3, 4, 7, 8, 9, 10, 14, 19, 20, 22, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 42, 43, 44, 45, 46, 51. 58, 61, 67, 68, 69, 70, 73, 75, 76, 77, 81, 84, 85, 87, 90, 91, 93, 95, 100, 101 106, 109, 110, 112, 113, 115, 116, 117, 122,124, 125, 127, 129, 131, 132, 133, 135, 136, 137, 139, 141, 144, 147, 148, 150, 153, 154, 155, 158, 159, 160, 163, 164, 165, 167, 169, 171, 175, 176, 177, 181, 182, 183, 184, 186, 188, 192, 193, 195, 197, 198, 201, 203, 204, 205, 206, 208, 217, 219, 229, 232, 233, 234, 237, 238, 239, 241, 242, 243, 247, 249, 251, 252, 254, 255, 270, 273, 277, 281, 283, 284, 290, 291, 292, 293, 294, 296, 298, 300, 302, 303, 308, 309, 314, 317, 318, 319, 322, 323, 324, 326, 327, 329, 330, 331, 333, 337, 339, 340, 347, 349, 351, 353, 355, 357, 359, 364	51	167
2. It is a situation that requires support	3, 8, 11, 17, 18, 24, 27, 36, 39, 40, 41, 44, 51, 52, 66, 78, 86, 101, 103, 115, 116, 136, 139, 143, 145, 153, 154, 162, 166, 168, 176, 180, 182, 192, 195, 196, 198, 206, 214, 235, 244, 255, 258, 263, 273, 276, 294, 295, 298, 303, 320, 337	16	52
3. It is a situation that causes differences in learning style	2, 12, 13, 17, 51, 57, 59, 64, 66, 83, 89, 97, 100, 105, 111, 116, 119, 128, 130, 149, 156, 161, 164, 172, 173, 196, 214, 224, 259, 261, 262, 282, 287, 295, 307, 338, 341, 342, 345, 358	12	40
4. It is a situation that affects social acceptance negatively	9, 14, 21, 27, 29, 34, 35, 37, 44, 45, 50, 51, 69, 78, 86, 104,119, 124, 150, 158, 179, 185, 204, 232, 271 239, 249, 258, 264, 265, 315, 316, 334, 344, 346, 347, 348, 357, 365	12	39
5. It is a situation where difficulty levels can be reduced / overcome with appropriate training and approaches	26, 51, 60, 71, 72, 80, 84, 92, 98, 99, 132, 139, 152, 197, 198, 206, 210, 211, 212, 220, 223, 241, 248, 253, 259, 276, 281, 286, 289, 292, 297, 302, 306, 308, 312, 350, 361	11	37
6. It is a situation that awareness level should be increased	3, 4, 6, 12, 16, 21, 22, 24, 41, 44, 48, 56, 58, 62, 86, 94, 97, 115, 127, 177, 178, 189, 214, 218, 240, 262, 264, 274, 285, 294, 335, 336, 339, 347, 367	10	35
7. It is a situation that causes attention deficit	5, 47, 107, 108, 112, 114, 121, 123, 190, 210, 250, 255, 263, 269, 279, 288, 332, 368	5	18
8. It is a situation that causes problems in the social life of the individual	23, 28, 35, 36, 51, 78, 189, 213, 223, 234, 247, 256, 305, 306, 334, 338, 343, 355	5	18
9. It is a situation with an intelligence level above normal	25, 42, 44, 51, 60, 66, 74, 85, 88, 90, 153, 170, 171, 184, 238, 287, 357	5	17
10. It is a that is hard to detect	2, 11, 29, 30, 35, 82, 126, 174, 221, 223, 246, 266, 272, 275, 329	4	15
11. It is a situation that needs intervention at an early age.	181, 253, 228, 245, 260, 263, 265, 272, 278, 312, 320, 321, 328, 352	4	14
12. It is an inherited condition	15, 37, 90, 102, 120, 146, 152, 154, 157, 267, 299, 322, 363	4	13
13. It is a situation that causes difficulties in motor skills	46, 51, 118, 151, 170, 176, 229, 249, 304, 319, 323, 356	3	12

Photograph 1. The most important example defining SLD is the concept factor 1 belonging to the participant [Participant ID: 8; we closed the face with the flowers as Tanhan, 2020 suggested, to protect the child and their parents and provide anonymous participation]

the child's backward skills by providing the necessary educational support. [Excerpt from Participant ID: 8]

Themes: *"A situation in which the individual has difficulties in cognitive (reading, writing and mathematics) skills and a situation where support should be provided"* [Participant ID: 8]



Photograph 2. The most important example concept / factor 2 defining the SLD belonging to the participant [Participant ID: 115]

In my opinion, the most important concept in specific learning disability is the concept of "difficulty". This situation, which is also present but has not been identified, is of great importance in order to help people who are experiencing this difficulty to be identified and overcome by getting the necessary help. The concept that defines specific learning disability in the photo I chose is "difficulty in reading and perception". Some situations that are very simple for individuals who learn at a normal level can be very complex and incomprehensible for individuals with special learning difficulties. This situation isolates them from life and keeps them away. With a little empathy, it's clear that their situation alone is a difficult thing to get out of and they need support. It is of great importance that people working in this field support and guide individuals with special learning difficulties. If necessary, even the people living around them should be informed about this situation and their participation in the environments in which they isolate themselves should be increased. [Excerpt from Participant ID: 115]

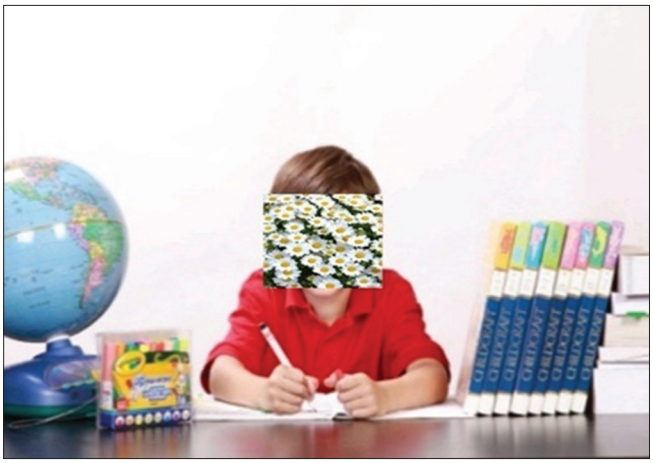
Themes: *"A situation where the individual has difficulties in cognitive (reading, writing and mathematics) skills, A situation where support should be provided and a situation where the level of awareness should be increased"* [Participant ID: 115]

Photograph 3. The most important example concept / factor 3 that defines the SLD belongs to the participant [Participant ID: 132]

In the photograph, I see a child who is unhappy and anxious because of the difficulty he is experiencing. The difficulty experienced by the child who has a specific learning disability that forces himself to reach the level of education that is perceived as normal as imposed by the society is increasing. The difficulty experienced by the child with special learning difficulties is not caused by mental or any other problems. Each child is unique and individual, and there are individual differences. Individuals who cannot adapt to the normal education level imposed by the society and who have difficulties in learning need special education. Thanks to social cooperation, these children can be reintegrated into society by seeing and supporting not only what they cannot do but also what they can do, by providing peer communication and by getting rid of negative social perceptions and by giving up stigmatizing children as "mentally disabled". We can ensure that the child has fun, not by forcing it, and by providing education appropriate to his / her level, to achieve peer development. [Excerpt from Participant ID: 132]

Themes: *"A situation in which the individual has difficulties in cognitive (reading, writing and mathematics) skills, A situation where the level of difficulty can be reduced / overcome with appropriate training and approaches".* [Participant ID: 132]

When I look at this photo, I see a brilliant and gifted boy. Individuals with special learning difficulties are like diamonds waiting to be processed. You just need to know how to process them and reveal existing intelligence



Photograph 4. The most important example concept / factor 4 that defines the SLD belongs to the participant [Participant ID: 171; we closed the face with flowers to ensure anonymity]

> *potentials. As a pre-service teacher, I would like to develop myself in the field of special learning difficulties in my future career, apply special interventions to these children and try to reveal their special potential. I feel very good and happy while writing these lines. Because many teachers are not aware of children with special learning difficulties and do not know what to do. I am already aware of this and I plan to do my best.*

Themes: "*It is a situation with an intelligence level above normal."* [Participant ID: 171]

In the next section, we discuss main themes emerged in light of other SLD studies and when possible of other OPV studies.

DISCUSSION

In this study, the researchers aimed to (i) determine pre-service teachers 'perception levels of SLD with the Online Photovoice (OPV) method, (ii) share the research findings with relevant researchers and practitioners in order to contribute to increase the pre-service teachers' level of knowledge about SLD, and (iii) set the ground for future research. They aimed to discuss the findings in order to lay the groundwork for more meaningful and useful research and services.

At the end of the research, the perceptions of pre-service teachers about SLD were divided into themes by using OIPA, and a total of 13 themes emerged. When these themes are examined, it is seen that the most important theme is *a situation in which the individual has difficulties in cognitive (reading, writing and mathematics) skills*. Looking at the definitions of SLD in the relevant literature, many researchers made definitions (APA, 2013; Goldstein, 2011; Heiman & Berger, 2008; Kirk, 1977; Melekoğlu, 2016; Özçivit Asfuraoğlu & Fidan, 2016; Raghavan & Patel, 2005; Soysal et al., 2001) parallel to the strongest theme. It can be said that the reason why children with SLD are usually noticed after starting primary school is related to the mentioned difficulties being basic academic skills (reading, writing and mathematics).

The second most important theme seems to be, *it is a situation that needs support*. In the relevant literature, there are many studies (Stagliano & Boon, 2009; Terrill et al., 2004; Therrien et al., 2012; Troia & Graham, 2002) that indicate that SLD is a situation that needs support especially in academic (reading, writing and mathematics) areas, and that different strategies or methods are applied to children with SLD. In this respect, the literature supports the second most important theme.

The theme, *a situation that causes differences in learning style,* was ranked as the third most important theme. This finding is in parallel with the principle of "there are individual differences in learning" which is also an educational principle (Topkaya & Çelik, 2009).

The fourth most important theme is *a situation that negatively affects social acceptance*. Children with SLD seem to be inadequate in academic lessons at school due to their academic difficulties. Individuals who make up the child's immediate environment such as parents and teachers often do not know how to deal with these deficiencies observed in the child. For this reason, the individual with SLD is exposed to labels such as "learning hard, irresponsible, lazy, unwilling to study" by his close environment (Melekoğlu & Kayışdağ, 2018). Therefore, the individual who is exposed to these labels loses his self-esteem, and this case negatively affects the social and emotional competence of the individual. As having social and emotional competence is necessary for a child with normal development, it is equally necessary for children with SLD. Children with SLD experience social and emotional problems from time to time, just like their peers with normal development. However, Çakıroğlu (2016) stated that children with SLD experience more social and emotional problems compared to their peers with normal development. The more often social emotional problems are experienced, the more adversely affected the level of social acceptance will be. Walker (2000) stated that children with SLD are less accepted than their peers with normal development. From all these angles, it can be said that the literature supports the fourth most important theme.

It is seen that the fifth most important theme is *a situation in which difficulty levels can be reduced/overcome with appropriate training and approaches*. In students with SLD, the teaching methods used in the general education process are not effective due to the difficulties they have. For this reason, in order for children with SLD to learn, it is necessary to use special methods and strategies whose effectiveness has been proven by scientific research. Pierangelo and Giuliani (2006) emphasized that these children can be successful with effective teaching and correct interventions. In the relevant literature, there are many studies that prove that interventions specially developed for children with SLD are applied and that these interventions are effective in developing skills such as reading, writing and mathematics in children with SLD.

In their study, Öğülmüş and Melekoğlu (2021) applied the strategy of POW and C-CPACE, which is a strategy developed to improve story writing skills, on children with writing difficulty and reached the conclusion that the

strategy improved the story writing skills of the participant children. Ellis (2009) used fluent reading strategies such as paired reading, choral reading, echo reading, and repetitive reading, and as a result of the study, it was stated that using these strategies together improved both the fluent reading levels and the reading comprehension levels of children with SLD. Hunt and Vasquez (2014) used the concrete-semi-concrete-abstract strategy to improve the mathematical problem-solving skills of students with SLD in their study and made positive progress in students' mathematical problem-solving skills. Considering all these points, it is seen that the fifth most important theme aligns with the literature.

Considering the most striking theme among the findings, it is seen that the ninth theme is *a situation with an intelligence level above normal*. This finding does not exactly match the intelligence characteristics of individuals with SLD. While students with SLD have normal or above normal intelligence, they have difficulties in academic fields. However, it is not possible for all individuals with SLD to have higher than normal intelligence. This finding shows that the perception levels of teacher candidates about SLD can be wrong sometimes. Due to limited space in this paper, we found discussing these first few themes to be enough and we did not discuss the rest of the themes.

All the findings obtained within the scope of the research show that the perceptions of the teacher candidates about SLD are at a partially good level though sometimes the candidate teachers held somewhat not totally correct information. Considering the high prevalence of students with SLD in education, it is of great importance that pre-service teachers have accurate perceptions of SLD. Considering all these points, it can be said that it is a necessity for pre-service teachers' perceptions of SLD to reach a more adequate level. In addition to all these, it seemed the participants in this study found OPV interesting and meaningful, which aligns with other similar OPV studies (Genç et al., 2021; Doyumğaç et al., 2021; Tanhan, 2020; Tanhan et al., 2021; Tanhan & Strack, 2020; Tümkaya et al., 2021; Subasi et al., 2021). All these results and specific implications provided below can be a strong sign of use of OPV to serve people with SLD and their relatives and conduct future research based on OPV to move forward.

CONCLUSION

This final section presents the limitations of the study and some recommendations for researchers and practitioners. The most important limitation of this research is that only people with appropriate electronic devices were able to participate in the research, as the study was conducted online and in the context of COVID-19. People who did not have the appropriate electronic device and internet infrastructure probably could not participate in the research. Researchers think that since some participants did not have access to a good camera, due to the COVID-19 epidemic and curfew restrictions, these participants turned to online stock photos instead of taking photographs from the outside. Similar results were observed in the previous studies in the context of the pandemic (Tanhan, 2020; Tanhan et al., 2021). Another limitation is that the participants only selected from an education faculty of a university in Turkey.

In the light of the findings discussed in the study, some suggestions were made to the researchers, educators and education policy-makers.

For Educators

- Teachers who have trainee teachers in their classes can provide training for trainee teachers about SLD.
- Schools with trainee teachers in their schools can organize training on SLD for trainee teachers.
- Schools with trainee teachers in their schools can assign more experience to the interns in classes with students with SLD.

For Researchers

- Classroom teachers' perceptions about SLD can be examined with OPV method.
- With the OPV method, the perceptions of teachers working with students with SLD in mainstreaming classes can be examined.
- The perceptions of teachers who have students with SLD and perceptions of teachers who have other students with other issues (e.g., autism, attention deficit and hyperactivity) or no issues students in their classes can be compared with OPV to shed light on unexplored areas.
- By using OPV method, pre-service teachers' perceptions of children with SLD and other types of disabilities (autism, attention deficit and hyperactivity disorder, etc.) can be compared.
- Considering pre-service teachers' critical role in education, it can be very effective to screen their mental health through OPV.
- Future researchers can design mixed methods, meaning using OPV and a quantitative measure and compare the results.

For Policy-makers

- Elective courses related to SLD for all teaching at education faculties can be made compulsory.
- The variety of lessons and lesson hours related to SLD for all teaching at education faculties can be increased.
- The hours of teaching practice which is mandatory in education faculties can be increased.

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