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Self-Efficacy of Deaf/Hard-of-Hearing Teachers and Teachers with a Physical Disability

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Abstract

Teachers' self-efficacy is an important component of their professional and personal success. However, only a few studies have examined the self-efficacy of teachers with disabilities. In recent years the number of teachers with disabilities in the teaching force has increased. In this study we conducted 20 semi-structured interviews with teachers who are Deaf[1]/hard-of-hearing or with physical disabilities. The purpose of the study was to reveal the commonalities among and differences between these two groups and to explore the components of self-efficacy among these teachers. The research findings indicate that a teacher's self-efficacy is determined by various elements concerning conduct in the classroom and the teacher's relationships with the students. These findings offer both a theoretical understanding of the components of the self-efficacy of teachers with disabilities and a practical contribution to increasing the inclusion of these teachers, thus diversifying the teaching workforce and acknowledging the unique contributions of such teachers.

Keywords: *Self-efficacy; Disability; Deaf culture; Education, Teachers.*

Introduction

Sense of self-efficacy derives from Bandura's social-cognitive theory of behavioral change [1]. Self-efficacy is the extent to which people perceive their ability to cope successfully with new or challenging tasks in the achievement of goals [2]. Therefore, self-efficacy is one of the main conditions needed to attain success. Bandura conceptualized self-efficacy as a trait that can explain how people think, feel, behave, or are motivated [3]. Thus, a certain behavior is more likely to occur when individuals believe in their ability to perform the required task successfully. In turn, this belief affects people's ability to cope with challenges as they arise while performing that behavior.

The development of self-efficacy is a significant component in a person's motivation to reach goals ([4]. A high sense of self-efficacy leads to taking on more roles, persisting and investing in what one does, coping with challenges, and succeeding more than someone with a low sense of self-efficacy [5,6]. Low self-efficacy, on the other hand, results in people avoiding tasks they perceive as beyond their abilities, but attempting tasks they believe to be achievable. It is important for individuals with a high sense of self-efficacy to set challenges for themselves and to cope despite repeated failures. They will also approach intimidating tasks with a relaxed attitude. Furthermore, people who believe they can develop abilities choose to cope actively with challenges [7,8]. Self-efficacy alone is not sufficient to achieve desirable results if the requisite skills and abilities are not present.

Teachers' Self-Efficacy

Teachers' self-efficacy has gained increasing importance as a result of its implications for teaching effectiveness, instructional techniques, and student performance [9,10], as well as job satisfaction and levels of job-related stress arising from coping with students' misbehaviors. Teachers' self-efficacy refers to teachers' belief in their ability to cope successfully with tasks, obligations, and challenges related to their professional role (e.g., pedagogical tasks, classroom management, resource usage, support for parents' efforts to help their children learn, etc.). Teachers' self-efficacy is an important component of their success [11]. When it comes to thinking about their own professional and personal capabilities, teachers' self-efficacy plays a crucial role.

Friedman and Kass (2002) [12] distinguished classroom efficacy from organizational efficacy: "Teacher self-efficacy are the teacher's perception of his or her ability to (a) perform tasks and to regulate relations involved in the process of teaching and educating students (efficacy in the classroom sphere), and (b) perform organizational tasks and become part of the organization and its political and social processes (efficacy in the organizational sphere)" (p. 21). Both spheres require teachers to perform professional duties and maintain interpersonal relationships.

In the classroom sphere, having a high sense of self-efficacy is vital for teachers to facilitate learning; teach values; foster social and emotional, personal, and group processes; and deal with student relationships both formal and informal [13]. According to Friedman and Kass (2002) [12], classroom efficacy means setting high academic standards, displaying confidence, creating an accepting environment, responding to special needs, and interacting with students. Moreover, these teachers provide different kinds of feedback to their students as circumstances dictate; they set clearer, higher, and more challenging goals for themselves and their students. Teachers with a high sense of classroom efficacy believe in their students' ability to learn, and thus strengthen and support students' confidence in their ability to perform tasks, and in turn, are more likely to bring their students to higher achievements effectively in class.

In the organizational sphere, Friedman and Kass (2002) [12] argue that teachers with a high sense of professional efficacy may seek influence and active participation in accomplishing organizational tasks, establishing positive relations with colleagues and the school's administration, and coping with school demands.

Teachers with Disabilities

Diversity in the teaching workforce exists mainly in the spheres of ethnicity and culture, and not in teachers' disabilities [14]. While teachers with disabilities are underrepresented in the teaching profession [15], they can help diversify the teaching workforce, solve challenging school issues, and serve as role models for students with and without disabilities [16-18].

Challenges of Teachers with Disabilities

Considering the social model of disability [19], social barriers often hinder schools' efforts to establish a working environment that is inclusive for all teachers [20,21].

In developing countries, Danso-Afriyie and colleagues (2019) [22] suggest that teachers with physical disabilities depend on others for physical support when required to perform various tasks, and also require frequent breaks from physically demanding tasks. Rougoor (2014) [23] found that teachers with physical disabilities endured physical pain while teaching. Some teachers with mobility disabilities choose to delegate responsibilities to students, thus increasing students' independence [23].

Advantages and Strengths of Teachers with Disabilities

those who have difficulty speaking or walking will be unable to hide their disability.

A recent review of the international literature on teachers with disabilities found that these teachers have the potential to be fully capable of both teaching effectiveness and in better understanding the special needs of students with disabilities in their classrooms. Still, this review underlines the complexity of planning and navigating their teaching careers, which are still affected by ableist and discriminatory practices [20].

Organizational factors can support the recruitment and retention of teachers with disabilities. These include limiting the number of students in the class, co-teaching, and providing an accessible location in the school (that is, noise-free, without physical barriers within the school, and with limited distance across its various sites). Other supportive factors are using devices and compensatory tools (such as memory aids) and adopting measures that increase accessibility to various types of school meetings, such as the writing of minutes during the meeting. Increasing accessibility (communicative, physical, visual, etc.), universal design of schools, and disability awareness training for administrative staff, teachers, students, and parents are additional factors that can reduce barriers to teachers with disabilities and accommodate students with disabilities as well [15]. According to Neca and colleagues, "The presence of teachers with disabilities in schools and higher education institutions is viewed as contributing to raise awareness about disability and develop more positive attitudes and representations of disability and of persons with disabilities, which also facilitates interaction between persons with and without disabilities."

Self-Efficacy of Teachers with Disabilities

According to a recent review of the literature on teachers with disabilities [15], "Teachers and student-teachers with disabilities further expressed feelings of confidence in relation to their professional skills as key factors for success. ... Generally, these teachers regarded themselves as successful professionals, with the required competence to exercise their professional practice" (p. 6). In other words, teachers with various types of disabilities had a high sense of professional efficacy. It is evident that teachers who have experienced exclusion because of a disability have empathy, sensitivity, and an inclination to accept the needs of children with disabilities. These teachers feel that they can include them academically, socially, and emotionally. Dvir's study of three narratives of teachers with physical or sensory disabilities suggested that becoming a teacher represented a shift from exclusion and failure in early stages in life to "professional efficacy and empowerment" [16]. A unique study by Povinelli (2022) [24] of seven teachers with dwarfism reported that these teachers employ various strategies in their classroom in unique ways, some stemming from their personal experiences and strategies, and others from their perspective on the meaning of being a good teacher.

Self-Efficacy of Deaf and Hard-of-Hearing Teachers

Interestingly, in searching several bibliographic databases and search engines, such as ERIC, EBSCO, Proquest, and Google Scholar, we found a few studies on the self-efficacy of teachers of Deaf and hard-of-hearing students, but no studies on the self-efficacy of teachers who are Deaf or hard-of-hearing. Still, some information on the self-efficacy of Deaf and hard-of-hearing teachers can be gleaned from studies of Deaf and hard-of-hearing teachers that focus on various aspects of their teaching.

In a multisite, multicultural study, Sutton-Spence and Ramsey (2010) [25] interviewed Deaf teachers from Britain, the USA, and Mexico about their beliefs regarding teaching Deaf pupils. They found similarities among teachers in all three countries in their assumptions about deaf ways that can enhance learning. Moreover, these teachers developed beliefs and perceptions about what Deaf students need in order to succeed in school, and how to help them.

Hankebo (2018) [26] conducted a phenomenological study with seven Deaf teachers in Ethiopia. He found that, while these teachers perceived their careers positively, they felt that their pedagogical skills needed further development. In addition, the findings suggested that Deaf teachers faced communication barriers and poor interaction. They also complained about the lack of sign language interpreters.

In a study of Filipino Deaf teachers, Vicente (2020) [27] interviewed three teachers. The findings of the study suggest that these teachers reported on their ability to understand their students' situations and empathized with them based on their personal experiences growing up as Deaf individuals. According to Vicente, "Although participants often reflected on their students' challenges, participants identified that teaching deaf students took passion and love. This became one of their resilience reasons" (p. 26). In addition, the participants reported that their relationships with their students helped them become better teachers.

Increasing Accessibility for Teachers with Disabilities

The emphasis on inclusion in educational settings is usually on the needs of students with disabilities. However, schools must be accessible to all the people who attend—administration, students, educational teams, and parents. Learning

environments that are based on universal design principles can benefit all students, as well as teachers with disabilities. However, the needs of these teachers may be different from those of students, as they have different roles and responsibilities at school, and the teachers' needs must be accommodated so that they are able to participate in all school activities. These accommodations must be provided by the school and not depend on the teachers with disabilities' willingness or ability to advocate for their needs [28]. Teachers with physical or visual disabilities may have difficulty operating learning management systems [29]. According to Tal-Alon and Shapira-Lishchinsky (2021) [30], the law requires school principals to provide reasonable accommodations that are required for teachers with disabilities so they can perform their jobs and recommends that "school principals should be provided with regulated information sources on accessibility adjustments" (p. 954).

Co-teaching of Deaf/Hard-of-Hearing and Hearing Teachers

Co-teaching of Deaf/hard-of-hearing and hearing teachers can be both beneficial and challenging. According to Yiu and Tang (2014) [31], co-teaching practices that involve both hearing and Deaf teachers have benefits for both Deaf/Hard-of-hearing and hearing students. In these circumstances, sign language becomes part of a common communication resource for learning as well as social interactions among all participants, Deaf or hearing. Co-teaching helps hearing teachers learn about Deaf culture, sign language, and the perspectives of people who know from personal experience what it means to be a Deaf or hard-of-hearing student. Still, co-teaching is not an easy task for either Deaf/hard-of-hearing or hearing teachers. Co-teaching requires a lot of planning and collaboration that is time consuming. It requires both teachers to work in collaboration as equal partners and worthy colleagues. Another challenge that must be accepted for true collaboration is that both teachers have the responsibility for all students—Deaf, hard-of-hearing or hearing. Successful co-teaching is also more likely to succeed in the presence of a strong Deaf community that lives in geographical proximity and can provide Deaf teachers, adult sign language models, and other support staff (Powell, 2020) [32]. Since many of the studies reviewed were based on very small samples or did not focus specifically on the sense of self-efficacy among teachers with disabilities, the purpose of this study was to examine the experiences and professional self-efficacy of Deaf teachers, hard-of-hearing teachers, and teachers with physical disabilities from their perspectives. Our research question was this: What are the differences and similarities between the self-efficacy of teachers with physical disabilities and Deaf or hard-of-hearing teachers?

Methods

A qualitative, transcendental, phenomenological approach was used in this study. Phenomenology is an approach to qualitative research that explores and describes the personal, subjective meaning of a lived experience shared by a group of people who have some commonalities (such as a profession, cultural context, etc.). The process of transcendental phenomenology, adapted by Husserl (2012) [33] from Guerini and Moustakas (1994) [34], draws from the participants' descriptions to create an essence of the lived experience. We wanted to explore the perceptions of teachers with disabilities based on their own perspectives and thus better represent their authentic voices. We

aimed to understand the personal and collective interpretations of these teachers.

Participants

All participants were teachers with a childhood disability. Ten had a motor disability due to cerebral palsy, injury, or a medical condition; and ten were Deaf or hard-of-hearing (two hard-of-hearing).

Though this was a purposeful sample of unique professionals, it was also fairly small due to the characteristics of these professionals. The participants taught various age levels: Four taught in elementary schools, and sixteen taught in secondary schools. Some of the teachers (n=10) taught in inclusive classes, while others taught in special education classes or special education schools. Teachers were selected through personal and professional contacts, snowball sampling [35], and articles about them in newspapers.

Instruments

We used an in-depth, semi-structured interview with each of the participants (see Appendix A), which lasted 45–60 minutes. Some of the questions referred to the participants' perception of themselves as teachers and of successful teaching, while other questions referred to different aspects of professional efficacy in teaching. The interview protocol was developed based on the review of the literature on professional efficacy of teachers and feedback from an expert in teachers' self-efficacy via email [4]. The protocol included open-ended question about the participants' perspectives of themselves as teachers ("Tell me about yourself as a teachers", followed up (when necessary) by their self-perspective of being a teacher with a disability; about their motivations to become teachers, and various questions about their sense of self-efficacy as teachers (e.g., "how confident are you in your abilities as a teacher?"). Using a semi-structured interview allowed the researchers to add follow-up questions when further clarification was required or omit questions that were answered earlier in the interview. In addition, we used a brief demographic questionnaire for each participant, which included questions about age, teaching tenure, teaching qualifications/certification, disability, education, educational setting where they work and what grade level they teach (see Appendix B).

Procedure

After collecting names and contact information of relevant participants, we contacted them by telephone (teachers with a physical disability) or by WhatsApp, Messenger or email (Deaf and hard-of-hearing teachers). This initial contact included general information about the study and its purpose and inquired about the possibility of their participation in the study. After a teacher expressed interest in or consented to participate in the study, we scheduled an interview time that was convenient for them. At the beginning of the interview, each teacher was asked to sign an informed consent form (sent to them via email or WhatsApp) and then the demographic questionnaire (see Appendix C). All interviews were conducted by one of the researchers, each of them with a lot of experience in conducting qualitative research and in-depth interviews.

All the interviews with the Deaf and hard-of-hearing participants were conducted via Zoom. A certified Israeli Sign Language interpreter assisted in interpreting the questions and comments of the interviewer and the participant's responses. These interviews were recorded and then transcribed. The recordings were outsourced to a company that employs people

with disabilities as transcribers, enabling them to work from home.

The interviews of teachers with a physical disability were conducted face-to-face in a location of the interviewee's choice. These interviews were also recorded and transcribed.

Data Analysis

The transcribed interviews were analyzed using content analysis [36]. Content analysis includes several analytic stages, through which distinctions and then generalizations can be derived from the transcripts. Initially, the researchers read through the transcripts to identify segments (i.e., initial codes, based on sentences or paragraphs) that focused on the experiences of teachers with disabilities in the classroom and of their perceptions of professional efficacy. During this stage, each researcher worked individually, examining the data sequentially, to gain a holistic sense of the texts. In the second stage, the researchers reviewed the data together to identify categories that were relevant to several initial codes, such as motivations to become a teacher or difficulties in entering the education field or being accepted at the schools. In the third stage, categories from all interviews were combined into several themes that emerged repeatedly [37], such as classroom management ability, teaching the curriculum, personal contact with their students and its impact on the students, and teachers' self-efficacy in the organizational sphere

Ethics

The study was approved by the ethics committee of the relevant higher education institute. All participants were informed about the goal of the study, its framework, and the voluntary nature of their participation. In addition, they were all guaranteed that they could withdraw from the study at any point without repercussions and that confidentiality and anonymity would be maintained throughout the study. Each signed an informed consent form, which was kept separately from their taped interview and transcript. These standards were upheld throughout the study to avoid compromising the participants' privacy. In addition, participants were informed about their right to withdraw the interview after its completion, with no repercussions for them.

Rigor

At each stage, each researcher analyzed the data separately. Each stage of the research was followed by comparing results and resolving coding and categorizing differences. When consensus could not be reached, in 18% of the codes, an experienced researcher with expertise in qualitative research helped resolve the problem.

A licensed school psychologist, the principal researcher has worked with people with disabilities and their families for many years. As a sign language interpreter, he was active in the local Deaf community early in his career. His previous research includes narratives of occupationally successful adults with disabilities and studies on teachers with Attention Deficit Hyperactivity Disorder, as well as motivations for choosing a career in special education for various groups.

The co-author worked for several years as a school counselor and is an experienced researcher on the issue of teachers with disabilities. She has published several articles on teachers with disabilities in leading journals and identifies herself as a person with a disability.

Results

The purpose of this study was to examine the self-efficacy of teachers with physical disabilities and teachers who are Deaf or hard-of-hearing, as well as their challenges and opportunities. The study's findings point to several themes, reflecting the differences and similarities between these two groups of teachers. The self-efficacy of teachers relates to managing a classroom ably, teaching the curriculum, creating significant relationships with the students, and being a role model in some cases. Another aspect of professional efficacy was manifested in their sense of influence at the school/organizational level and a sense of belonging to the school.

Professional Self-Efficacy and Class Management
Some of the participants of this study teach in special education classes, while others teach in general education classes, where students with disabilities are sometimes included. All study participants reported that coping with students with a disability was a strength. Both Deaf and hard-of-hearing teachers and teachers with a physical disability felt that specifically, due to their disability and their experiences of coping with the disability, they were more fit to work with students with special needs.

The most substantial issue until today is students with difficulties. I teach remedial instruction, and small groups or individual students with difficulties come to me. And with them, I am adamant. I transmitted a message: "Don't give up! Push yourself." (Neta, a teacher with a wheelchair)

Advancing students with disabilities is an important goal in the education system (Reddington & Price, 2018) [38]. The fact that these teachers succeed in this challenge reflects their contribution to the students. In addition, these teachers can serve as models to their colleagues in effective way that can support students with disabilities.

One of the challenges many teachers face is managing a heterogeneous class where the students have different educational needs. This is a challenge faced by many teachers, with and without disabilities, in the general education system [39]. Both the Deaf and hard-of-hearing teachers and the teachers with physical disabilities who participated in the study felt that they successfully coped with this challenge:

There is a student in class who is very smart and another student at a much lower level. I need to deal with the heterogeneity of the class. Especially nowadays, when some people are Deaf, and some are hard-of-hearing, and some have an implant [cochlear implant], and they don't even know sign language … and some hear, and we need to cope with it, it's not simple. I need to deal with a heterogeneous group of students, and to adapt the lesson to all of them. (Alina, a Deaf teacher)

As Hannah describes below, the ability to deal with students' diversity is manifested not only in classroom teaching but also in physical education classes:

There are children here with ADHD, children with cognitive difficulty, children on the [Autistic] spectrum. There are tall kids and there are short ones. ... I know who is standing in front of me. We have a child at school with mild cerebral palsy. This child will do push-ups differently. He will not do it like his friends who have four healthy limbs. … I know how to work with everyone. (Hannah, a physical education teacher with CP).

The fact that the teachers who participated in this study believe in their ability to successfully deal with common teaching challenges reflects their positive self-efficacy perception.

However, as soon as the diversity in the classroom was reflected in the combination of hearing and non-hearing children, children who use sign language and children who speak oral language, a new challenge arose. This challenge was unique to Deaf teachers. For them, when coping with a heterogeneous class they face a double complexity - both different educational needs of the students and different communicative needs. Many Deaf teachers who teach in heterogeneous classes, with a mixture of hearing students, or deaf students who do not use sign language, and Deaf students who do use sign language, experienced a great communication difficulty with the students who used oral communication. Dana describes the challenge and the rough emotions she felt when she taught in a hearing students' class. She felt ignored and as if she was not acting as a teacher in class: In my class, I had no control. I lost control. I would tell the teacher's aide: "I want you to interpret their words to me, and that's it. Don't hold a conversation with them. Interpret them for me." I would say this each time, but she would have her own conversations with them. And in other classes, they would put me with another teacher, so I felt as if I was the teacher's aide. I told the principal that I had arrived here not as an assistant. I came to teach, but they would not listen to me.

The communication difficulty that affected their classroom management was reported only by Deaf teachers. This finding points to the need of specific accommodations to make the communication more accessible.

Professional Self-Efficacy When Teaching the Curriculum
Many teachers define a successful teacher as one who succeeds in introducing the learning materials in a way that engages students and interests them in internalizing what is taught in class. For example, Dana, a Deaf teacher said, "A successful teacher can teach the learning materials excitingly and positively, allowing students to enjoy the lessons and learn."
According to these parameters, many teachers with a disability feel that they are successful teachers and demonstrate a high level of professional efficacy. Helena, for example, describes her strengths as an English teacher and how she was appreciated by other colleagues.

My success was meteoric and within two years, I became an English coordinator. Everyone was amazed at what a good teacher I was. I was very creative, doing English quizzes and responsible for designing an English language board [on one of the walls] in the school hallway. I knew how to teach best. (Helena, a teacher with CP).

Experiences of success, in which students got good grades, or when a student showed higher ability than expected, reinforced and encouraged the teacher's perception of their self-efficacy. This is a circle in which the teachers have a positive feeling about their performance, the students show positivity towards them and this strengthens their sense of self-confidence even more [40].

For instance, Yulia, a Deaf teacher, was proud of the achievement of one of her students whom she helped:
There was a matriculation exam. Matriculation exams for students I wasn't sure would pass. I was uncertain if I had done the right thing, and they all passed with excellent grades. … He [one specific student] told me that he decided to take the exam since my sign language helped him understand all grammar rules. He passed the exam. He told me that my signs helped him with his learning difficulties.

Deaf teachers sometimes feel difficulty teaching hearing students, and they are more confident when teaching Deaf students. Deaf and hard-of-hearing teachers believe they can promote and advance Deaf and hard-of-hearing students in a way that hearing teachers cannot. This is consistent with reports of teachers with other types of disabilities who believe that their disability allows them to help students with disabilities in a special way [41,42].

There is one student with an implant (cochlear), and his parents oppose sign language, so he didn't know how to use it. The implant didn't help him, and I started to teach him sign language. He really opened up, and it had a remarkable impact on him and his ability to express himself. At the beginning, it was impossible to communicate with him, and if he wanted to say something—he couldn't. It was as if he was imprisoned. It's like I gave him a key to communicate with the world. (Alina, a Deaf teacher)
The metaphor of the student feeling imprisoned by his inability to communicate his needs and wishes, only emphasizes how learning sign language and connecting with a Deaf teacher were a key to his freedom - to communicate, and to become a more wholesome student.

Professional Self-Efficacy in Building Meaningful Relationships with Students
The ability to form meaningful relationships with students is an important component in defining teachers' self-efficacy. According to many teachers in this study, a successful teacher can create personal relationships with students and affect them and their point of view. According to this criterion, the participants believed that they are successful teachers who can personally contribute to their students and have a positive influence over their lives.

I think I am a successful teacher. My parameter is my relationships with the students. My students keep in touch with me even after they graduate, and sometimes they come to visit. I feel like a successful teacher. (Mona, a Deaf teacher).

Another Deaf teacher was surprised that her students preferred to spend time with her during breaks: Perhaps these students sought the teacher's proximity due to the lack of other people they felt close to, or comfortable communicating with, at school, at home and even in their neighborhood. She shared the following scenario:
Sometimes during breaks … They want to talk with me, even though I'm a teacher and older than them. During breaks, when I supervise in the yard, they come and communicate with me in sign language. It gives them an adult model. And it's surprising. (Masha, a Deaf teacher).

Many teachers felt close to their students. The fact that the students liked being with them and loved them made them feel successful. For example, Helena describes how she loved her students and they expressed their love for her. This made her believe she is a good teacher.
The boys had discipline issues, and I was so full of energy and loved them, and they loved me back. They would see me approaching the car and run to me. I received a lot of love from them, and they would make me small gifts. I felt I was their ray of light. (Helena, a teacher with CP).

This metaphor, of being a ray of light for her students, reflects the metaphor of the lighthouse effect, coined by Pemberton (2021) [43]. Perhaps, it also reflects that her students felt they were traveling in stormy weather, and that her energy and enthusiasm were the beacon of light they needed to navigate their life to safe shores.

Being a Role Model for Students

Teachers with different disabilities view themselves as a role model for their students, both those with disabilities and nondisabled students. They believe that exposing students, and especially students with disabilities, to a teacher with a disability can be positively impactful and enable them to understand that a disability is not necessarily a barrier to success.

There are gymnastics exams. There is a girl in class with muscular dystrophy. As far as I am concerned, she doesn't need to climb to the top, like in the army training. There are two walls: 1.8 meters and 1.3 meters. For me, it's enough if she can pass the 1.3 m wall. I told her that if I can pass it, so can she. (Hannah, a physical education teacher with CP).

Teachers with physical disabilities spoke of themselves as role models for succeeding in spite of having a disability and for overcoming difficulties. However, Deaf teachers spoke of themselves as role models for being a Deaf person and forming a deaf identity. For Deaf teachers, meaningful relationships with students allows them to be more than role models and to show the example of a successful deaf person. It also allows them to convey aspects of Deaf identity and Deaf culture to students. However, teachers with a physical disability did not mention in the interviews that they see themselves as meaningful in shaping their student's disability identity.

As a Deaf teacher, I feel that I am a sort of role model. For the Deaf students, when they see me as an independent person who is empowered as a Deaf person, it automatically creates a connection with a Deaf identity, leading to empathy, belonging, and many other things. (Moshe, a deaf teacher).

In interviews with the Deaf teachers, the importance of conveying aspects of what it means to be a Deaf person and communication in Israeli Sign Language, the authentic language of the Deaf community, was constantly raised.

It is vital that they [Deaf students] have Deaf teachers who they can identify with. They can look at someone and see that the person is just like them. I think that eventually, they don't identify with the hearing teachers. Moreover, the language is also an issue. Sign language is my native language, and so it is for them. Communication is much easier and more comfortable when using the same native language. (Miriam, a Deaf teacher).

Ivy, another Deaf teacher, stressed the importance of viewing successful Deaf adults as role models for the students:
And it also gives them a role model. A model for success for the children, as they see that I am successful and work and all. So, it gives them a model. With hearing teachers, they do not feel the same.

Teachers' Professional Self-Efficacy—The Organizational Sphere

Some teachers referred to their integration into the teaching staff, the creation of social ties with other teachers at school, and the ability to participate in various activities at school.

Most teachers with a physical disability described efforts by the school to create an accessible environment. They described cases in which such accessibility was not sufficient, but usually, they could participate in different activities at school.

During my first year at work, we had an off-site fun day for teachers at the end of the year. When we arrived there, someone from the school's management called me. He showed me the room to make sure my wheelchair could enter the door. However, the restroom was not accessible. So, he said we were going to move to another place. I was surprised and told him I could manage the inaccessible restroom, but he insisted on moving. . .Eventually they have found an accessible, more expensive room for us. Despite the higher price, they put the teachers who were my friends in the room nearby, so I wouldn't be alone. I was very moved. (Neta, a teacher with Achondroplasia, in a wheelchair)

Deaf teachers needed to cope with another type of inaccessibility to school activities based on communication and language. They expressed their difficulties, at times, in creating social ties with the hearing teachers. These obstacles to full access to various school activities and interpersonal and professional interactions limit the meaningful inclusion of Deaf teachers in the school's culture, minimize their sense of belonging to the organization, and in turn their organizational efficacy.

In the first school where I worked [a school for hearing students], it was utterly difficult for me. It was difficult for them to accept me since I am deaf and talk in sign language. Sometimes, in the teachers' lounge, I was very bored and could not understand what everyone was talking about. Sometimes, I would chat with the Deaf teachers' aides since it was more comfortable for me. In the school where I work today (part of the staff is Deaf and others are hearing), it is more convenient for me to converse with the Deaf staff. Communication is a real barrier. I mean, it is very convenient to talk with those who know sign language. (Ivy, a deaf teacher)

On the other hand, some Deaf teachers described their impact on school-wide activities relating to Deaf culture and sign language that she and other Deaf teachers initiated, thus enhancing their organizational efficacy:
We have a good team here, thinking about ways to improve the inclusion of Deaf and hard-of-hearing students with the hearing students, and we have all kinds of activities, such as games of Deaf and hard-of-hearing students with hearing students in the school yard. And there's also a Week of Deafness every year. It was our initiative to do all kinds of activities relating to sign language and various simulations of experiencing Deaf students' lives and it gives the Deaf students a sense of empowerment. And we invite people who will come and give a presentation about Deaf people. So, they are used to it by now, and when they hang out with each other, they try to talk to someone who is Deaf and they already know how to try to communicate with him. (Michelle, a Deaf teacher)
Some teachers with physical disabilities describe the difficulty in integrating into the school at the organizational level. Some describe difficulties in working the required number of hours, in teaching a class with a very large number of students, or in fulfilling the role of homeroom teacher. For example, a teacher with a physical disability shared her challenges fulfilling certain roles: "There are parts of the job I just can't do. For example,

being a yard attendant. Standing outside in the sun chasing after kids who are hitting each other is something that is beyond my capabilities" (Ora, a teacher with a physical disability due to a stroke).

Thus, not considering the particular needs and appropriate teaching and organizational requirements of teachers with physical disabilities, may increase their frustration, dissatisfaction and consequently lead to burnout. Concomitantly, it can decrease their sense of organizational efficacy.

Teachers whose disabilities are invisible have the option to hide the disability from their colleagues and the administration at school, so professionals with whom they work may be unaware of their challenges and what they must do to cope. One of the participants (Mona), a hard-of-hearing teacher, said:
I only told one teacher—she was really a good friend of mine—but other than that I did not tell anyone. Not even the principal or school counselor. I did not feel it was hurting my ability or that it was something I should share. If I felt it was hurting my functioning in the classroom or I needed support then maybe I would share.

Discussion

The main purpose of this research was to explore the self-efficacy of teachers with disabilities, an issue on which the literature was scarce. We also aimed to reveal the similarities and differences between two groups of teachers with disabilities: teachers with physical disabilities and teachers who are Deaf or hard-of-hearing. There is voluminous literature on the importance of teacher efficacy to increased students' achievements, and many other beneficial factors [44,45]. In addition, there is a steadily growing body of knowledge of self-efficacy among adults with disabilities in the workforce [46]. However, little is known about the self-efficacy of teachers with disabilities, a small yet slowly growing group of unique individuals who endured the challenges of teacher training, recruitment and inclusion in the teaching force.

The findings reveal five main themes that reflect the experiences of these teachers, and can be divided into two spheres: First, classroom efficacy, which included the following themes: professional self-efficacy in class management, professional self-efficacy when teaching the curriculum, professional self-efficacy in building a meaningful relationship with students, and being a role model for students. Second, organizational efficacy, referring to teachers' professional self-efficacy as they function at the school level in various activities and commitments.

In the classroom sphere, class management as well as teaching skills are significant factors in professional self-efficacy [12]. Deaf and hard-of-hearing teachers, as well as teachers with physical disabilities, felt that they were better equipped to work with students with special needs because of their disabilities and their experience in coping with them over the years [26,47,42]. However, this research points out that for Deaf teachers, teaching a combined class of hearing students or oral deaf students (who do not use sign language) and Deaf students who use sign language caused communication difficulties with the students who used oral communication. This is consistent with previous research that suggests that Deaf teachers face communication barriers with hearing students [26]. Since a sign language interpreter is not available in every classroom, these classes that require Deaf teacher to use both oral and signed

modes of communication are inaccessible to those teachers who rely on sign language as their primary communication mode with students. Fluent communication is necessary for the teacher- student relationship, but unlike other fields where teachers with disabilities receive accessibility accommodations in this field, sufficient accommodations are often not provided by the school.

We found that many teachers with disabilities consider themselves successful teachers and demonstrate high levels of professional efficacy. However, Deaf teachers often feel less confident when teaching hearing students than when teaching Deaf students. In their opinion, they are able to promote and advance Deaf students in a way that hearing teachers cannot.

The relationships of teachers with their students are important and can affect their professional and personal self-efficacy [27,48]. The results of this study are consistent with previous research that showed the positive relationship between teachers with disabilities and the special ability of teachers with disabilities to be significant to students with disabilities [47,42]. Based on our findings, Deaf teachers saw themselves not only as significant to the students but as mentors who convey aspects of what it means to be a Deaf person. This finding reflects one of the differences between teachers with physical disabilities and Deaf teachers.

One of the unique findings of this study was that Deaf teachers felt efficacious in helping Deaf or hard-of-hearing students specifically when it comes to their Deaf identity [49]. However, while teachers with physical disabilities do feel significant in conveying a message of overcoming disability, they do not believe they serve as role models for disability identity for their students with disabilities.

The framing of being a role model as part of the way teachers define their success is a significant finding of this research, and adds to the body of knowledge on teachers self-efficacy. While previous studies have shown that teachers with disabilities see themselves as role models [42], this study emphasizes this through the prism of self-efficacy and therefore expands the definition of self-efficacy for teachers with disabilities.

The organizational sphere is another aspect of teachers' professional self-efficacy [12]. Almost all teachers with physical disabilities described school efforts to create an accessible environment. In some cases, such accessibility was not sufficient, but generally they were able to participate in school activities. However, Deaf teachers described situations in which school activities were inaccessible. Their difficulties in forming social ties with hearing teachers were expressed at times. These findings indicate that in terms of accessibility, physical accessibility often receives more attention than communicative accessibility. Still, all types of reasonable accommodations will enable teachers with disabilities to "perform the essential functions of a job" (according to ADA requirements ; Title I of the Americans with Disabilities Act), or "apply, perform and advance in job functions, or undertake training" according to the European Union regulations [50].

Employment of teachers with disabilities creates diversity in the teaching force. The importance of diversifying the teacher workforce is supported by two main arguments. A common argument is that in a democratic society, teachers belonging to all types of minorities are needed as role models for all students,

but especially for minority students. In addition, minority teachers are particularly qualified to teach minority students because they have an inherent understanding of the cultural backgrounds and life experiences of these students [51]. Teachers with disabilities are role models for their students with disabilities [16,17,18]. Findings from this study indicate that this is very important for teachers and affects their sense of self-efficacy. According to our Deaf participants, being a Deaf person was both a source of pride and part of their cultural identity, which they could share with and pass on to their students. According to Vygotsky [52], it is the role of adults to scaffold the learning of young people and convey cultural tools and symbols through their social interaction. Deaf teachers play a significant role in these social interactions, especially for those students who grow up in a hearing family with little connection to other Deaf adults. Also, the findings of the study indicate that the employment of Deaf teachers is particularly important due to the cultural connection between them and their Deaf students.

While there are other studies that deal with the experiences and perceptions of teachers with disabilities, this study is innovative in that it specifically examines the self-efficacy of these teachers, both in the classroom and the organizational spheres. This focus is important because it enables both a theoretical understanding of the components of the sense of ability of teachers with disabilities and a practical contribution to improving the inclusion of these teachers. The findings of this study also support the importance of recruiting and retaining teachers with disabilities due to their unique contribution to the school system and especially to students with disabilities.

Limitations and Future Directions

This study examined the self-efficacy of two groups of teachers with disabilities: teachers with physical disabilities and teachers who are Deaf or hard-of-hearing, yet we acknowledge the differences between Deaf and hard-of-hearing persons. In addition, the small sample size of hard-of-hearing teachers is not sufficient to fully reflect this group, as most of our sample consisted of Deaf teachers. This research emphasizes the similarities between these two groups who may have different challenges and experiences and thus do not represent the full spectrum of Deaf and hard-of-hearing teachers. Therefore, a future study with larger samples of both Deaf and hard-of-hearing teachers could compare their experiences, challenges, and ways of coping, and might shed light on the differences between these two groups.

This study included a total of twenty interviews with teachers with disabilities: ten teachers with physical disabilities and ten who are Deaf or hard-of-hearing. We focused on the experiences of only two groups of teachers with disabilities; other groups may experience different challenges, such as teachers with low vision or blindness, teachers with mental health disabilities, teachers with Autistic Spectrum Disorder, etc. Therefore, conducting a large-scale study that will include a larger sample of teachers with disabilities and of teachers with other types of disabilities is recommended.

This study examined the self-efficacy perception of teachers with disabilities based on the teachers' personal experiences, based on their authentic voices. Therefore, conducting research that will examine the practices and performance of teachers with disabilities in practice, not just based on their perceptions and self-reports, is recommended.

Practical Implications

The research findings point to the difficulties and barriers experienced by teachers with disabilities, alongside a positive sense of self-efficacy. These findings point to the need to provide a proper response to the accessibility and communication barriers experienced by the teachers so that they can fulfill their potential and develop a sense of belonging to the school and their sense of organizational self-efficacy.

Each ministry of education should have a unit that supports training, inclusion and constructive supervision and mentorship of novice teachers with disabilities. For supervisors and principals, training workshops are needed to highlight the contributions of teachers with disabilities to the teaching staff, parents, and students, as well as effective ways to support, accommodate, and integrate them into the school and the teaching staff.

In order to preserve the unique teaching force of teachers with disabilities, it is necessary to understand the barriers they face and to understand their unique needs. Teachers with disabilities encounter doubts from their employers and their colleagues regarding their abilities as teachers. That is why the systems for teacher training and school administration should rather emphasize their unique contributions as teachers with disabilities.

Teacher unions should provide self-advocacy training for teachers with disabilities to learn how to communicate their needs for reasonable accommodations at the school.

In order for all teachers to feel included and take an active role in school activities, including extracurricular activities, administrative support is crucial to the development of professional efficacy in the classroom and in the organization. It is also important that all school activities, including extracurricular activities, are accessible to all teachers physically and communicatively. In addition, in light of the transition in recent years to distance learning, it is important to make sure that these systems are indeed accessible to all people with disabilities, students or teachers.

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Appendix A: Semi-structured in-depth interview of teachers with disabilities

1. Tell me about yourself as a teacher
a. Tell me about yourself as a teacher with a disability
2. Why did you choose to become a teacher?
3. What are three words that best describe you as a teacher?
4. What makes a good teacher?
5. How confident are you in your abilities as a teacher? Have you ever doubted your ability to become a good teacher?
6. Could you give me an example of a situation or an event when you felt that you did a good job and succeeded as a teacher?
7. Do you feel that you have an influence over your students?
8. Do you feel that your influence over your students is different today compared to when you started working as a teacher?
9. What are your strengths and weaknesses as a teacher?
10. Does your disability affect your functioning as a teacher?
a. If so, in what way?
11. What helps you become a better teacher?
12. How do you think people around you view you and value you as a teacher?
13. How do you see your contribution to the school?
a. The staff?
b. The students' parents?
14. Do you see yourself continuing in the teaching profession?
a. (If answered "yes") Why? (If answered "no") Why not?
15. Is there anything else you would like to add or share?

Appendix B: Brief demographic questionnaire

1. What is your age?
2. What is your teaching tenure?
3. What is your teaching specialty/certificate?
4. What is your level of education/degree?
5. Where do you teach? A public (secular)/public (religious)/ultraorthodox/private school?
6. What are the grade levels that you teach? Elementary/middle school/high school classes?
7. What is your type of disability as you define it?

Appendix C: Informed Consent Form

TITLE OF PROJECT: **Study about self-efficacy of teachers with disabilities**

I am asking for your voluntary participation in our research project, which is conducted by First Author's name/Second Author's name. Please read the following information about the project. If you would like to take part, please sign below.
I, _____ (NAME), ID No. _____, hereby agree:
a) To participate in an interview about my teaching career and coping with various teaching challenges.
b) That it was explained to me by First Author's name/Second Author's name that this study focuses on the teaching career, coping with challenges by teachers with disabilities and their self-efficacy.
c) I understand that this study was approved by the Institution's Ethics Review Board.
d) The study is based on face-to-face or Zoom interviews that included several open-ended questions, and will last for about an hour. A mutually convenient time and place of the interview will be coordinated with each participant. When necessary, a professional sign language interpreter will assist with communication fluency.
e) I understand that the interview will be recorded for transcription and data analysis. The person interviewing you will be the only one who will be able to make the connection between you and your interview. The recording will be kept in a file on the personal computer of the researcher, which has a password known only to them
f) I understand that all personal information will be kept confidential. Pseudonyms will be I understand that used instead of the participants' names, and any identifying information will be removed.
g) I understand I am free to choose not to participate in the study and I am free to stop my participation in the study, at any time, without jeopardizing none of my rights or any implications on sanctions against me.
h) I understand that my personal identity and any identifying information will be kept confidential in the research report and any future academic and non-academic publications based on this study.

i) I understand the researchers are available to answer questions I may have regarding the study or my participation, and that I have the right to consult with other people regarding my decision to participate in the study. For any addition information I can contact Dr. XXXXXXXXXX (First author's name), at XXXXXX@gmail.com.

j) I gave my voluntary consent, and I understood all of the above.

_____   _____   ___/_____/_____
Participant's name   Participant's signature   Date

Thank you for your cooperation and participation in this study.
_____
Researcher's name and signature