How Does One-on-One Tutoring Support Student Self-Efficacy? A Case Study of One High School Student's Perceptions

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This study utilized a single-subject case study design to investigate the perceptions of a high school student with a learning disability of one-on-one tutoring. Students with learning disabilities have lower academic confidence and self-efficacy than non-disabled students. One-on-one tutoring provides a context in which students with learning disabilities demonstrate behaviors associated with high academic self-efficacy. In this qualitative case study, interview data was analyzed to ascertain key elements of the tutoring relationship as perceived by the student. Findings indicated that

having a personal connection, effective teaching strategies, and shared vulnerability central themes of the perception of the tutoring relationship. Re-

lation of these themes to academic self-efficacy are discussed.

Keywords: learning disability, self-efficacy, tutoring

Introduction

Federal law in the United States mandates that students with disabilities be educated in a manner that provides them with a free, appropriate public education, including meeting the educational standards set forth by each state (Every Student Succeeds Act, 2015; Individuals with Disabilities Education Improvement Act, 2004). However, even though providing a free, appropriate education for students with disabilities requires more resources, the federal government has consistently underfunded special education (National Council on Disability, 2018). This underfunding creates a resource strain for schools while they try to meet the requirements of federal regulations. Thus, developing interventions for students with disabilities that are resource-efficient is a critical need. One effective, resource-efficient intervention is using pre-service teachers as tutors in the school setting.

Maheady (1996) found that utilizing pre-service teachers as tutors was mutually beneficial for the pre-service teachers, students, and the local school

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in terms of gaining valuable teaching experience, improving student academic outcomes, and providing the school with free educational resources. In a review of literature on implementation of tutoring programs, White et al. (2022) found that tutoring is an effective intervention, particularly when there is a positive relationship between the tutor and student and when the tutoring has a clear purpose. In addition, Watt and Wasburn-Moses (2018) found positive impacts on the development of pre-service teachers and the university-school relationship. Using a similar program structure, Hord and DeJarnette (2020) used preservice teachers to provide Algebra I tutoring for students with learning disabilities and found similar results among the perceptions of the pre-service teachers and school faculty. Such tutoring programs provide schools with an effective, resource-efficient intervention.

However, students with learning disabilities in reading, writing, or mathematics are discrepant from peers in areas other than academics. Students with learning disabilities show lower degrees of self-efficacy, confidence, and effort relative to non-disabled peers (Idan & Margalit, 2014; Lackaye & Margalit, 2006). This lower academic self-efficacy may often stem from a prior history of academic failure (Idan & Maraglit, 2014). Further, low rates of self-efficacy may in turn reduce the students' willingness to perform and persist under stressful situations (Lackaye & Margalit, 2006). Thus, for students with learning disabilities, academic failure creates a potential cycle where previous failure impacts their present performance. Since students at the secondary level have a longer academic history, there is a greater potential for them to have previous academic failure and, consequently, lower academic self-efficacy and confidence. Therefore, interventions are needed that can address both a student's academic skills and their level of academic self-efficacy and confidence.

Despite the general finding of lower self-efficacy for students with learning disabilities, Marita et al (2018) reported positive interactions and behaviors associated with higher self-efficacy, particularly taking risks, in the tutoring context for students with mild learning disabilities. In addition, Hord et al. (2018) reported that supporting students emotionally to assist with their confidence was critical for success. They noted that students required extensive emotional support through focusing on prior success and using frequent praise and encouragement. And, after experiencing success with the math through tutoring, Hord et al. (2018) found that students were able to relax, and the math anxiety subsided. Further, Hord and DeJarnette (2020) found that preservice teacher-tutors reported one of the challenges in tutoring was managing students' anxiety towards math. These findings are consistent with the review of literature conducted by White et al. (2022) that noted that tutoring can improve both academic skills and confidence. Taken together, it appears that students entering tutoring may have higher academic anxiety, but active strategies, such as

frequent praise, may assist in reducing this. Both Hord and DeJarnette (2020) and Marita et al. (2018) identified that tutors adjusted instructional strategies to assist in mitigating academic anxiety for students; however, these studies did not explicitly examine students' low self-efficacy and confidence.

Marita et al.'s (2018) findings suggest that the tutoring context may be one which enables students with disabilities to demonstrate behaviors associated with higher self-efficacy. However, while Hord et al. (2018) identify strategies that were used to address students' low confidence, little research has examined student perceptions of the tutoring relationship. Gaining an understanding of student perceptions may assist in identifying specific factors that allow students to engage in the behaviors associated with higher self-efficacy that Marita et al. (2018) found. To investigate this further, the present study will examine the following research question: What are the perceptions of a high school student in a one-on-one tutoring context of the tutoring relationship?

Purpose

The purpose of this study was to gather the perceptions of one high school student and his preservice teacher-tutors of the tutoring relationship to gather insight into how tutoring may relate to student self-efficacy. Limited research has explicitly examined student perceptions in a tutoring context, particularly at the secondary level (White et al., 2022), and this study seeks to provide data in this area. Understanding student perceptions of the tutoring relationship may assist in identifying key parts of the tutoring relationship which enable student success.

Метнор

A constructivist grounded theory design (Creswell, 2015) was adopted to analyze and describe the perceptions of a high school student and his tutors in the tutoring process. In order to gain a data-rich insight into student perceptions, a single case study design was utilized. A suburban secondary school in the Midwestern United States that was participating in a preservice teacher tutoring program was selected as the research site. The tutoring program had been conducted at this site since 2017 and was an established part of the school's organizational structure. During the school year, students who were struggling with mathematics received one-on-one tutoring from pre-service teachers.

Participants

Purposive sampling of one student within the tutoring program was used (Etikan et al., 2016). Vince was a ninth-grade student with mild learning disabilities who received intervention services for both mathematics and reading. He5 was a social and amiable student who appeared to enjoy verbal interaction with peers and adults. In addition to these strengths, Vince reported working part-time outside of school and engaged in school athletic teams. Records noted

that Vince had below average performance in both reading and mathematics and a history of academic failure. His primary weakness was in the area of basic reading skills with difficulty in decoding.

Vince's tutors, Morgan and Avery, who are also third and fourth authors of this paper, provided tutoring to Vince over the course of an academic semester. Morgan and Avery reported working with Vince typically three times per week for approximately 90 minutes during each tutoring day.

Data Collection and Analysis

Audio-recorded interviews with Vince and his tutors were conducted. The interviews were conducted by the first author over a period of approximately one month. During this time, the tutors were continuing to provide tutoring to Vince. Initial interviews were conducted separately with Vince's tutors, Morgan and Avery. Each of these interviews lasted approximately 30 minutes. Both tutors were asked to describe the tutoring process with Vince and their perceptions of the tutoring relationship with Vince. At the time of these interviews, both tutors had worked with Vince for approximately 3 months. Three separate interviews were conducted with Vince. In the initial interview, which lasted approximately 30 minutes, he was asked to describe his thoughts of the tutoring and his tutors. After this interview, Vince's responses were reviewed by the research team and areas for expansion and clarification were identified. In the second interview, these areas were addressed with Vince to allow him to further expand on his responses. The third interview was conducted following the data analysis and the written write up of the findings were read aloud to Vince to ensure that the findings reflected his thoughts and beliefs.

Data analysis was conducted in three stages. Stage one comprised being immersed in the data by reading the transcripts in their entirety. The goal for this stage was to gain an overall understanding of the data (Miles, Hubermann, & Saldana, 2013). Stage two included isolating examples in the data that were indicative of perceptions of the tutoring process. Stage three saw the development of themes from the identified examples in the data. Themes were identified through a process of identifying similar examples from multiple perspectives of both Vince and his tutors that express a common idea or conception (Creswell, 2015).

Member checks and external auditors were used to monitor the interpretive validity of the findings and analysis. Member checks were conducted with all participants to ensure that the statements reported were reflective of their thoughts (Brantlinger et al., 2005). Tutors were provided with a written transcript of their interviews to ensure that their statements were recorded accurately and with intended meaning. Vince was read aloud the results sections that represented his statements to ascertain if these sections accurately represented his thoughts. Two external auditors, who worked in the tutoring program and

were familiar with Vince, were used to review the study and assess the interpretive validity (Maxwell, 1992).

RESULTS

Data from the participant interviews were analyzed to answer the central research question of what the perceptions of a student in a one-on-one tutoring context are of the tutoring relationship. Several themes were pulled out from the participants' interviews. These themes were *personal connection*, *effective teaching strategies*, and *shared vulnerability*.

Personal Connection

Both Morgan and Avery noted the importance of a personal connection with Vince. Morgan stated that having a personal connection gave her an "in." Recalling her first interaction with Vince, she reported, "I was like, oh, I ride horses too. And then from that moment on, he and I had the connection. The student teacher relationship was built because I told him I ride horses." Here, Morgan identified Vince's passion for horses and not only showed an interest in this, but also established that she has a personal relationship with horses as well. Morgan attributed the foundation of her and Vince's relationship to this shared personal connection. She added that this personal connection was able to change Vince's demeanor. Morgan stated that Vince was mad during his first tutoring session because he had been taught something the wrong way by a different tutor. However, when she intervened and began discussing horses with him, she stated that he "lit up" and his attitude changed.

Similarly, Vince indicated that he was able to develop a personal connection with his tutors. He stated, "I like having someone to talk to when I'm here. We have lots of conversations about like off-topic things. I could talk to them about things that I can't talk to my teachers. They understand it." Here, Vince referenced that he enjoys not only the academic assistance of the tutoring, but also having someone else to talk to. The "off-topic" things Vince mentioned referred to conversations around things other than his schoolwork, including his work outside of school, personal relationships, and interests and hobbies. Avery noted that these "off-topic" conversations were a structural part of the tutoring process with each session beginning with briefly discussing Vince's interests.

Further, both Avery and Morgan reported viewing the personal connection as a tool for building a relationship with Vince. For instance, Morgan stated:

You know, he was mad and I was like, okay, he's a country boy. Give me something that I can work with because I work on farms. So, I was like there's got to be something I can use here.

Morgan referenced using both the present situation and a preplanned notion to seek out information with which to connect to Vince. There was an element of taking in personal information from the student while also scanning for connections to her lived, authentic experience. In so doing, the personal connection foundation that Morgan discussed went beyond superficial knowing of personal information about Vince.

Vince expanded this personal connection beyond common interests to also include how Morgan and Avery taught math to him. Vince noted that his relationship with the tutors is different from his teachers:

They're [tutors] kind of different. It's not like learning wise, like I could talk to them about things that I can't talk about to my teachers. They understand it. Sometimes it's off-topic stuff, sometimes math stuff because some people have different understandings about math. And they [tutors] have a really good understanding that can help me with it. But the only teacher that has that is Mr. White.

Vince made a distinction between both how the tutors and teachers have different "understanding" of math. In his perspective, the tutors' understanding of math allows them to explain it to him in a way that others cannot except for his intervention specialist, Mr. White, with whom he reports a good relationship. To Vince, the personal connection with his tutors includes both connections with personal interests and an ability to explain mathematics in an effective way to him.

Morgan and Avery reported being perplexed by Vince's willingness to consistently report to tutoring multiple times per week. Morgan stated, "Like I said, he doesn't have to come down here. Yet he chooses to come down here for an hour and a half. Three times a week. You know? You know what I mean?"

Morgan and Avery both reported that Vince's demeanor and motivation for schoolwork varies greatly despite this consistent commitment to reporting to tutoring. Vince himself stated that he "really likes it [tutoring]." He went on to state that he likes it "because it helps me with, like not just math but like other things too like health, ELA, science, pretty much all my subjects." However, these descriptions are in contrast to Morgan and Avery's reports of Vince often not wanting to work on his assignments. Morgan noted, "[At times] he's definitely not engaged to participate, you know. I mean, but he comes down here for two bells, so he wants to be here. He wants the attention. He wants the reassurance."

Morgan and Avery noted that the demands and expectations for tutoring do not change and that if Vince is not participating, he would be required

to return to class. Interestingly, the consequence of having to return to class increases Vince's engagement.

Effective Teaching Strategies

Another theme in the interviews was the importance of effective teaching strategies. In explaining what the tutors do that works for him, Vince stated:

I don't know how to explain it. It's like we go slower. And we'll go slower, but we go faster, because if they explain, like, they take more time to explain it then I get it. And I can do it by myself half the time, but sometimes I can't and they help me out more.

Vince went on to clarify that the tutors go "slower" by taking a longer time to explain it. However, even though this explanation takes longer, it ends up being faster because he can then work through subsequent problems independently and at a faster rate. Vince contrasted this with what he described as "do this, do this, do that" where the pace is faster, but it ultimately takes him longer because he doesn't understand it.

Morgan shared similar thoughts in her approach to teaching Vince math. In describing her approach to teaching Vince, she shared:

So usually I'll like tell him, "Vince, come on, like, sit up here, let's look at it this way or let's skip that problem go to a different problem. It's not the only thing we have to do right now." You know, I will usually have four different whiteboards at the table with us and write a different problem on each whiteboard as a kind of setting it up and then let him pick which one he wants to work on.

Morgan highlighted her use of flexible teaching strategies and incorporating choice into teaching Vince. She noted that he responds better to these strategies, and they allow her to keep his momentum when he becomes frustrated with a particular problem or activity.

In a seemingly contradictory notion, Avery noted that a key aspect for teaching Vince is expecting him to attempt things independently. She stated:

Vince, like, we're not explaining this to you, you need to explain it to us. We know you know what you're doing. I think it's more forcing him. Not forcing him to know what he's doing but forcing him to complete the problem in order to know that he can do it rather than being, like, okay here's step one. Here's step two. Yeah, stuff like that. Just really forcing him to do it rather than us walking him through it.

Here, Avery discussed a balance that Morgan also referenced of having high expectations for Vince along with supporting him to meet those expectations. She went on to say that after Vince attempts a problem independently, "I'll be like, 'See I told you, you could do it.' He was like, 'Yeah, I know, but.' Yeah, it's like he knows he can do it. He just doubts himself."

Vince highlighted that some of the strategies that the tutors utilize, Mr. White also utilizes. However, Vince stated:

There's really hard stuff and I get mad and don't know what to do. And ... one way of helping with that is in here with the UC tutors and coming in here. It helps me a lot. They break it down and explain it. My teachers don't have time to do that. [Because] there's so many other kids in there [the classroom].

Vince went on to say that while Mr. White "breaks it down" in a manner similar to the tutors, "half the time, he's busy talking to somebody else." In addition to feeling that other students present in the classroom limited the teachers' ability to work effectively with him, Vince also stated that he is unable to utilize certain accommodations in the classroom setting:

And in class I can't use the voice to text thing because there's other people in the class. And I was thinking about asking to go in the hallway, but I don't know if this teacher would let me because she doesn't know my... How do I explain this? She doesn't know my, like my ability, like I need. She doesn't know like my IEP, whatever, I don't think, like other teachers do because it's like a new teacher, the health teacher. You really don't think I would need it in there but you do because like this project is the first project and I'm already struggling.

Here, Vince was discussing how he utilizes a speech-to-text accommodation when reading and writing. When asked about how it is different in the tutoring setting, Vince stated, "Well for one because it's embarrassing. And when other people are talking around it; it messes it all up. Half the time I don't catch it." Vince was referring to the use of the speech-to-text in front of other students being embarrassing for him and that when other people are talking nearby, the microphone picks that up and incorporates it. When asked to clarify if it was also embarrassing to use in the tutoring setting, Vince replied, "No, because everyone is far away," referring to other students not being near him.

Shared Vulnerability

As stated previously, Vince indicated feeling embarrassed when using his accommodations in the presence of other students. However, he reported feeling less embarrassed to do so during tutoring because there were fewer students around. But beyond the feelings of embarrassment, Vince shared that he seeks out tutoring to assist with academic tasks that are more cumbersome for him because of these accommodations:

Remember how we were doing the health work earlier? That's probably what I'm going to have them help me with. Because slides take me forever to do by myself. Half the time I don't even do them... because of the typing thing.

Vince referenced how when using the speech-to-text accommodation it takes him longer to complete assignments. He stated how he sought out tutoring to help him with these tasks because it provides both a more comfortable and effective environment in which to use them.

Morgan reported that she shared with Vince that she also utilizes accommodations to assist her with reading. Morgan reported that

I noticed that on his computer he had Read Right, which is an accessibility tool. He was like, "well usually I use this Read Right program" and he went to pull it up. He was like, "but I don't want to use that in here because there's so many people around, they'll hear it." I pulled up on my computer my Read Right program because I also have that on my laptop and that made him feel a little bit better.

It was reported that Vince expressed disbelief that Morgan used the same accommodation as him. Morgan noted that Vince's attitude towards using the accommodation during tutoring sessions changed after this interaction, stating that he was more likely to engage with using the program.

DISCUSSION

Vince's perceptions of the tutoring relationship could be constructed across themes of personal connection, effective teaching strategies, and shared vulnerability. Data from interviews with Vince and his tutors revealed that these themes appear to be central to the construction of the tutoring relationship for Vince. And, the tutoring relationship being built across these themes, enable Vince to engage in behaviors associated with higher self-efficacy and mitigate his anxiety around academic tasks, consistent with Margalit et al.'s (2018) findings.

The personal connection was a critical factor in Vince's view of the tutoring relationship. Tutors were viewed as being different from teachers and as individuals that the student may connect with over topics outside of academics. This difference in role perception may be critical in understanding why students continue to have anxiety in the tutoring context, but demonstrate behaviors associated with higher self-efficacy. Tutors, being seen as distinct from teachers, did not appear to be viewed as evaluative of the student's performance. Rather, Vince reported feeling he was able to share things with his tutors, both personally and academically. This implies that Vince viewed the tutors as less likely to evaluate or judge him. This finding is consistent with Marita et al.'s (2018) finding that students in tutoring responded best when the tutor created a caring environment.

Effective teaching strategies were also cited as a key factor in the perception of the tutoring relationship. Because the strategies used by the tutors were perceived to produce results by Vince, he was more likely to engage with the tu-

toring and build a personal relationship with the tutors. This is consistent with Idan and Margalit's (2014) findings that prior academic failure leads to lower self-efficacy. Here, the relationship was established on academic success, leading Vince to identify the tutoring as helpful.

What was most surprising is that Vince connected both this personal connection and effective teaching strategies. For Vince, these seemed to go hand in hand of his perception of the tutoring relationship. He appeared to give a lot of weight to having tutors that were able to "understand" him, both for his personal interests and his unique learning strengths and weaknesses. Thus, the tutoring relationship is contingent on understanding the student holistically. Establishing rapport that is disconnected from the academic tasks may be insufficient for producing a relationship that also leads to academic success. For Vince, engaging in the tutoring with confidence required a relationship that was both personal and academic.

In that same vein, when establishing the tutoring relationship, having a shared vulnerability may assist in facilitating the connection. When Morgan shared with Vince that she uses a similar reading accommodation, it appeared to have a significant effect on his perception both of her and of himself. In so doing, Morgan tapped into this idea of "understanding" that Vince placed weight on. To Vince, Morgan not only recognized that Vince uses accommodations, but also has an intimate understanding of what it means to need to use such accommodations. Further, this shared vulnerability allowed Vince to see himself in someone that is academically successful.

These themes of personal connection, effective teaching strategies, and shared vulnerability shed some light on how students in the tutoring context engage in behaviors associated with higher self-efficacy while still reporting math anxiety. Through these themes, the tutoring context creates an environment that is perceived by the student to be different from the classroom environment. The tutors themselves are also perceived as different from teachers. While the same hesitancy around the academic work may exist, the difference in relationship and the environment allows for a space for the student to engage in behaviors that they typically would not in the classroom setting. This difference seems analogous to that between parents and aunts and uncles. Kids can share things with aunts and uncles that they would not share with their parents because there is often "less at stake."

Limitations and Future Research

This study examined the views of one student and his tutors. Results indicated that critical themes to student perceptions of the tutoring relationship are a personal connection, effective teaching strategies, and shared vulnerability. Given the small nature of this study, the results are not generalizable to students in other settings. Future research may use similar methods with larger samples to

determine if patterns exist across groups of students. In addition, the timeframe and depth of this study was limited and occurred at a point after the student had participated in the tutoring program. Future research may investigate student perceptions over the course of the tutoring to gather data on how student perceptions develop and change over time. Similarly, this study relied on the perceptions of the student and his tutors without combining them with other sources of data such as observations or permanent product. Future research may combine student perceptions with other sources of data to provide context and richer understanding of how the student perceptions relate to the tutoring context. Further, this study highlighted the importance of shared vulnerability for this student in the tutoring relationship. Future research may examine this concept further and its role in establishing the student-tutor relationship. Finally, the themes uncovered as part of the tutoring relationship may be measured in their relation to academic measures in future research to ascertain how these themes may interact with academic success.

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