

# Perceived Effects of Online Peer Tutoring on Personal Strength Awareness, Self-esteem, and Academic Engagement

Ethan H. Yuan, Jayden Su, Xiaoyou Wang, Ziyang Yu

United World College-USA, State Rte 65, Montezuma, NM 87731, New Mexico, USA; ethanhyan@gmail.com

**ABSTRACT:** Personal strength awareness helps individuals develop a positive self-outlook that acts as a buffer against negative experiences, enhancing a sense of self-importance and encouraging exploration and implementation of personal strengths in daily lives. Strength awareness is often associated with stronger academic self-efficacy and greater academic engagement and performance. Existing strength interventions usually adopt the form of explicit training. Our study explores the potential of online peer tutoring in enhancing one's personal strength awareness and development. We collected survey data from 25 secondary and primary school students who participated in an online peer tutoring program as tutors and interviewed six of them. We analyzed the survey data with descriptive and correlational statistics and thematically analyzed the interview responses. We discovered that voluntary online peer tutoring led to positive changes in K-12 students' awareness of and engagement with personal strengths, positive effects on self-esteem, and academic engagement. Our study calls for greater engagement of K-12 students in online peer tutoring to increase their strength awareness, academic learning, and self-esteem. We also advocate for future research on the effects of this form of strength intervention.

**KEYWORDS:** Behavioral and Social Sciences; Sociology and Social Psychology; Personal Strength; Online Peer Tutoring; K-12 Students.

## ■ Introduction

Personal strength is "one's strongest qualities or that one is best at."<sup>1, 2</sup> Awareness of one's strength is important as it helps buffer against negative experiences by directing individuals' attention towards the positive aspects of oneself, enhancing self-worth, and encouraging individuals to explore and utilize their strengths in everyday life.<sup>2, 3</sup> According to self-efficacy theory, self-efficacy influences behavior and emotional well-being, and awareness of strengths can enhance self-efficacy, making individuals more capable of handling challenges. Moreover, self-determination theory posits that fulfilling the basic psychological needs of autonomy, competence, and relatedness is essential for well-being. Awareness of one's strengths can enhance the sense of competence, thus buffering against negative experiences. Empirical studies have shown that awareness of personal strength can 1) enhance individuals' resilience against negative experiences;<sup>1, 4</sup> 2) increase one's level of self-assurance and optimism;<sup>3</sup> 3) develop a greater understanding and acceptance of the positive aspects of life (i.e., blessings),<sup>5</sup> resulting in a boost in general self-esteem;<sup>6</sup> and 4) increase individuals' sense of fulfillment, connection, and belongingness with others, while decreasing feelings of depression and stress, and elevating levels of happiness, overall psychological well-being, and life satisfaction.<sup>1, 4, 7</sup> Furthermore, it is shown that strength awareness is also associated with stronger academic self-efficacy, engagement,<sup>8</sup> and greater academic grades.<sup>9</sup>

Various approaches have been taken to help people increase awareness of personal strengths. Some researchers examined the effectiveness of strength intervention programs, such as strength training sessions that involve strength reflection, in-

dividual strength poster design,<sup>10</sup> and training sessions that raise awareness of and discuss the application of character strengths.<sup>7</sup> Other researchers explored other methods, including receiving feedback on character strengths and the use of reflective journals in enhancing strength awareness.<sup>1, 11</sup> Although some studies indicate a possible association between volunteering experience and an individual's awareness of personal strength,<sup>12</sup> few have explored how the volunteering experience might influence individuals' awareness of personal strength. Thus, empirical studies are needed to investigate whether volunteering experience can enhance students' awareness of personal strength.

This study examined whether and how engaging in online tutoring would affect adolescents' awareness of and engagement with personal strengths and if such awareness may carry over to their academic learning and self-esteem.

## ■ Literature Review

### *Effects of student volunteering and service experience:*

Previous studies have investigated the effects of student volunteering and service experience. Previous studies have found that service experience raised university students' attention to politics and community engagement,<sup>13</sup> and increased middle school students' social responsibility.<sup>14, 15</sup> More recently, online service experience has drawn much attention from researchers, and multiple studies have found positive influences of online service experience on adult learners in terms of social justice attitude and civic sense.<sup>16, 17</sup>

Prior research has also shown that student volunteering and service experiences positively impacted academic achievement and involvement in school,<sup>14</sup> leading to a decreased rate

course failure, suspension from school, and school dropout 15 among adolescents. Moreover, volunteering experience, including online volunteering, has been shown to positively affect volunteers' well-being and mental health, reduce health inequalities, and increase individuals' well-being.<sup>18</sup>

#### ***Volunteering and awareness of personal strength:***

In addition to the above benefits, volunteering experience can also affect an individual's awareness of personal strength. Grossman and Duchesneau<sup>19</sup> argued that service learning allowed people to cultivate and improve their social, emotional, and academic strengths. Through volunteering, students are given the chance to contribute what they are good at and to reflect on their performance. This subsection reviews the literature that focuses specifically on this research issue.

Previous studies have examined the impact of volunteering on the self-awareness of adults. Jo *et al.*<sup>20</sup> surveyed 312 Korean adults on the frequency of their volunteer experience in daily life and their self-identifications in terms of individual uniqueness, future planning, sociability, self-acceptance, autonomy, adaptability, and value. The survey results confirmed that volunteer experience can significantly predict the aforementioned self-identifications. In South Africa, Cronjé<sup>21</sup> collected reflection assignments from 800 university students who took a Therapeutic Psychology course and volunteered at facilities requiring therapeutic assistance. This study found that volunteering experience not only helped students develop their self-awareness regarding personal behaviors and characteristics but also helped them find meaning in life. Cronjé further found that strengthened awareness of self was associated with a better understanding of career choice and future societal roles.

Existing literature further reveals that volunteering can enhance people's engagement with personal strengths. Iqbal *et al.*<sup>12</sup> interviewed nine British South Asian volunteers aged 29 to 66 with at least one year of working experience in volunteering organizations. After analyzing the interview responses, the authors found that volunteering experience helped these volunteers develop a better understanding of their strengths (i.e., activities they are good at). The experience also gave the participants a better idea of necessary actions to nurture their strengths further. Moreover, Palmer<sup>22</sup> conducted a quasi-experimental study on 92 adult American participants, 46 of whom volunteered in a breast cancer walk and the other 46 did not. Surveys were conducted seven days before, seven days after, and 30 days after the event on the participants' awareness of personal strengths and weaknesses and their use of individual strengths to influence others. Although no significant difference was found in immediate tests, there was a substantial effect in the test conducted 30 days after the event, showing the benefits of volunteering.

Although most existing literature has examined the impact of volunteering on adults, one study explored the implication of volunteering on personal strengths among adolescents. From studying 44 adolescent volunteers between 11 and 17 years old involved in community improvement projects such as childcare and community services, Hamilton and Fenzel<sup>23</sup>

strengths and reported acquiring new skills. Survey responses on the Social and Personal Responsibility Scale (SPRS) before and after the project revealed substantial progress on social responsibility. Girls generally exhibited more significant gains than boys.

Despite evidence of a correlation between volunteering experience and awareness of personal strength, research on the effect of volunteering experience on adolescents is limited. Few studies have examined the impact of volunteer tutoring service experience on students' personal strength awareness and academic engagement, as the literature on tutoring services has focused more on the impact of receiving tutoring and factors that influence people's engagement in voluntary tutoring services.<sup>24</sup> Moreover, even fewer studies explore the impact of online volunteering experience on adolescents' awareness and engagement with personal strength.<sup>19</sup>

To fill the research gap, this study examines the effect of online volunteering during and after the COVID-19 pandemic on a group of adolescents' awareness of personal strength (i.e., "the characteristics of a person that allow them to perform well or at their personal best"<sup>25</sup>), use of personal strength for personal development or community service, and associated benefits on academic learning and self-esteem. This study answers the following research question:

Does online volunteering change secondary and primary school students' awareness and reported engagement with personal strengths, academic learning, and self-esteem?

## **■ Methods**

This study examines how engaging in online cross-country tutoring (e.g., students from the U.S. tutor English reading for students in mainland China) experiences affect school students' self-concept and engagement with personal strengths and related benefits in academic learning and self-esteem. Individual interviews supplement online survey data to answer the research question. Surveys are used to obtain general data. However, the answers may not give distinct reasonings and examples. Therefore, interviews are needed to gain an in-depth understanding of the volunteers' experiences.

### ***Research Context:***

This study was conducted in the context of online tutoring. The online tutoring was organized by Tutoring for Good Cause (TGC), a certifying non-profit organization dedicated to providing peer-to-peer, free, live instruction, regardless of location. Tutors in TGC were K-12 students from different parts of the world. They would indicate the subject areas they wanted to offer tutoring, and the organizer helped match the tutor and the tutees. The online tutoring is conducted via online conferencing tools such as Zoom, and each session often lasts around 40-60 minutes in small groups with a tutor-to-tutee ratio ranging from 1:3 to 1:5. The frequency of tutoring depends on the tutor's availability, usually once per week for each tutoring group.

### ***Participants:***

The participants in this study were all student tutors involved with TGC. They were recruited from within the TGC organization worldwide through an announcement in the TGC WeChat groups.

Twenty-five (25) volunteers completed the online survey. The participants could understand the surveys and the purpose of this research. They were from three countries: the U.S., China, and Japan, with an average age of 12. Among the 25 survey participants, fourteen were middle school students (56%), five were high school students (20%), and six were upper primary school students i.e., grade 4-5 (25%). The average length of voluntary service was 1.67 years, with the longest being three years and the shortest being one month and a half. Volunteers who participated in the survey tutored frequently, from one session per week to as many as seven sessions per week, averaging about 2.2 sessions per week, with one session lasting 45 to 60 minutes. These participants tutored many different subjects, including reading (19 participants), math (8), vocabulary (6), second languages (5), history (3), science (1) and others such as chess).

Six survey participants, four of whom were in high school and two in middle school, were invited to one-on-one interviews. All the interview participants were experienced volunteers with more than one year of online tutoring experience. We targeted experienced volunteers because they would be able to provide detailed reflections on their experience throughout their involvement and how the tutoring experience impacted their self-concept.

#### **Research Instruments:**

The study was based on two primary data sources: an online survey and semi-structured interviews. The survey consisted of three sections: 1) ten Likert-scale questions on students' strength development after participating in online tutoring experience. This construct included two sub-dimensions: awareness/understanding of personal strength ( $n=4$ ; Cronbach  $\alpha=0.84$ ), measured using items like "The volunteer experience helps me have a better understanding of my strength," and the engagement/use of personal strength ( $n=6$ ; Cronbach  $\alpha=0.90$ ), measured using items like "After joining the volunteer experience, I find myself using my strength to help others more often";<sup>26</sup> 2) seven Likert-scale questions on the benefit of online tutoring on academic learning ( $n=7$ ; Cronbach  $\alpha=0.92$ ), measured using items like "The volunteer experience makes me study more about the topics I'm tutoring";<sup>27</sup> and 3) 10 Likert-scale questions on possible changes in self-esteem after the online tutoring experience (Rosenberg Self-Esteem Scale (RSES)  $n=10$ ; Cronbach  $\alpha=0.96$ ), including items like "The volunteer experience makes me feel good about myself." These items were all on a scale from one, strongly disagree, to four, strongly agree. Demographic information and backgrounds of participants were also elicited through the survey, including age, grade, years of tutoring experience, tutored topics, country of residence, and volunteer experience satisfaction. The questionnaire was pilot-tested with four secondary school students with online tutoring experience to identify potential wording issues. Revisions were made accordingly (e.g., "The volunteer experience helps me better understand my school subjects" was changed to "The volunteer experience helps me better understand what I study in school").

The interview questions explored participants' perceptions of whether and how the experiences impacted personal strength, academic learning, and self-esteem. Example questions include "Does the online tutoring experience impact your understanding of your strength? If yes, how? If not, why not?" As each participant had different experiences and feelings, we used different follow-up questions to solicit more details.

#### **Data Collection:**

The survey was conducted online from late April to early May of 2023. The surveys were bilingual, so responses from volunteers in both Chinese and English-speaking countries could be obtained. The first author translated the English questions into Chinese, and the second author translated the Chinese version back to English to check and make sure that the meaning was not lost in translation. The bilingual surveys were distributed among teenage volunteers through WeChat groups volunteers and their parents.

We invited senior volunteers who have volunteered more than 100 hours for the interviews. With rich experience, these volunteers could share more insights and reflections. Interview sessions were all conducted in one-on-one conversations, allowing interviewees to provide detailed experiences. As volunteers are from different countries and places worldwide, all interviews were conducted on Zoom, with audio recorded upon obtaining participants' and their parents' permission. Each session lasted about 15-20 minutes.

#### **Data Analysis:**

Responses to 27 items in 3 survey sections (i.e., personal strengths development, benefit on academic learning, and changes in self-esteem) were calculated and tabulated. For each section, we computed statistics, including average ( $M$ ), median, and standard deviation ( $SD$ ). We also calculated the correlation between the length of tutoring experience, the participants' awareness of and engagement with personal strength, and the correlation between awareness of and engagement with personal strength and academic benefit and self-esteem. Due to the small sample size, Kendall's  $\tau_b$  was used to calculate the correlations.

Interviews targeted three main aspects: 1) awareness of personal strength, 2) academic learning, and 3) self-esteem. Quotes from each interviewee were extracted from their responses. Quotes relevant to an aspect were categorized into a range of dimensions, allowing further analysis of the factors that led to the responses in the survey. Pseudo-names were used in the Results section to protect the participants' privacy.

## **■ Results**

### **Online volunteering and awareness of personal strength:**

Self-concept of personal strength refers to the understanding of individual strengths. When asked whether the online volunteering experience changed their awareness of personal strength, the survey participants reported a positive change ( $M=3.54$ ,  $SD=0.52$ ) (see Table 1). In the interview response, the participants elaborated on the enhanced awareness of different aspects of personal strength. Some participants mentioned that online tutoring experiences helped them improve their interpersonal skills. One participant, Faith, expressed that before participating in the online tutoring experiences, he did

not “get along with others.” The tutoring experience helped to increase his confidence and “help [him] get along with others better.” Another participant, Destiny, stated that the tutoring experience helped her “gain self-confidence” and became more of an “outgoing” person due to her interactions with students.

Other participants have also reported that they felt their social skills increased during the online tutoring experience. The increase in social skills came from boosted empathy skills, as well as an increased awareness of each other’s feelings. One participant, Cathy, recounted: “When I teach, I get to, like, talk to others and know what they feel and what I feel.” The increased social skills also came from the enhanced comfort level of interacting with others. For instance, one participant, Bella, recalled: “I do make a lot more friends knowing that I can feel comfortable around them.”

The enhanced interpersonal and social skills led to greater perception and confidence in their organization and leadership skills. Another participant, Eden, mentioned that during the tutoring experience, she had to “tackle the problem of students not paying attention”; this forced her to take leadership and solve the issues. Another participant, Amy, also mentioned that the increased leadership skills showed up both in her tutoring experience and in her experience in other domains. She said, “[the tutoring experience] has helped me become a leader both in TGC and outside of TGC, like at school and my extra-curricular activities.” The participants also felt that the online tutoring experiences helped increase their understanding of their interests. Bella stated that after tutoring reading online, she became “more interested in reading books,” whereas Destiny gained a better understanding of her persistent potential. Destiny remarked:

“I used not to do something for a long time. There were times that I stopped doing it when I was not interested anymore. Moreover, at the beginning of my tutoring experience, I thought this activity should be very interesting. So I joined it, and then after these two years of practice, I realized that after sticking to it, I gained some experience, which is much better than my three-minute enthusiasm.”

### **Online volunteering and engagement with personal strength:**

**Table 1:** Students experienced positive effects from online tutoring on self-concept and engagement with personal strength.

|      | Self-concept of personal strength | Engagement with personal strength |
|------|-----------------------------------|-----------------------------------|
| Mean | 3.54                              | 3.59                              |
| SD   | 0.52                              | 0.45                              |

Engagement with personal strength refers to the increased usage of personal strength. When asked whether online volunteering experience led to perceived changes in their engagement of personal strength, the survey participants reported a positive change ( $M=3.59$ ,  $SD=0.45$ ) (see Table 1). Moreover, Table 2 reveals that engagement with personal strength positively correlated with the length of volunteering experience ( $r=0.41$ ,  $p<.05$ ), indicating that the longer the students participated in online volunteering, the more likely they were to use their strength to help others. Engagement with personal strength also positively correlated with awareness of personal

strength ( $r=0.78$ ,  $p<.001$ ). This suggests that the more aware the participants were of their strengths, the more likely they were to utilize them to help others.

Participants also felt more interested in improving their strengths after the online tutoring experience. For example, Eden mentioned she proactively explored history more by “search[ing] for suitable history books” outside of school. Participants also mentioned the importance of turning personal weaknesses into strengths. Bella states: “I’m really shy when it comes to talking to people, but [through the online tutoring experience], I learned that communication can be really important.” Other participants mentioned that the online tutoring experience helped them feel more confident using their strengths. Destiny stated, “I did not know how to plan anything at first; however, after communicating and organizing classes with parents and students online, I was able to develop and feel more confident in using my organization skills.” Destiny also mentioned that “before the tutoring experiences, there were many things I was scared to do and tutoring students helped me realize that in some respects where I thought I was weak at, I was actually pretty good at it and now I am more confident in using it.” Participants also mentioned that online tutoring influenced them by using their strengths more and setting career goals. Destiny recalled: “Using my ability, I contacted my classmates on teacher’s day last year and organized a surprise event for our teacher. My teacher liked it a lot, and we all had the opportunity to enhance our capability.” Amy also mentioned: “So again, I’ve now wanted to be a teacher when I grow up, and I’ve enrolled in another organization for the summer where I’ve been teaching, and it [my tutoring experience in TGC] has helped my role there.”

### **Relationship of personal Strength with perceived aca-**

**Table 2:** A significant and positive correlation is observed between volunteering experience length and personal strength engagement. A stronger correlation is observed between self-awareness of personal strength and engagement with personal strength ( $N=25$ ; \*:  $p < 0.1$ ; \*\*:  $p < 0.05$ ).

|                                   | Length of volunteering experience | Awareness of personal strength |
|-----------------------------------|-----------------------------------|--------------------------------|
| Engagement with personal strength | 0.41*                             | 0.78**                         |

### **demical benefit and Self-esteem:**

The survey data also revealed that enhanced personal strength is associated with perceived academic benefits inside and outside school. When asked whether the online volunteering experience benefited their academic learning, the survey participants reported a positive change ( $M=3.46$ ,  $SD=0.52$ ) (see Table 3). There was a positive association between the increase in perceived academic benefit and the length of online tutoring experience ( $r=0.35$ ,  $p<.05$ ), meaning that the longer the students participated in the online tutoring experience, the more likely there was an improvement in their academic learning. Moreover, awareness of personal strength ( $r=0.66$ ,  $p<.001$ ) and engagement with personal strength ( $r=0.77$ ,  $p<.001$ ) also had positive correlations with perceived academic benefit, indicating that the participants with a greater awareness of and engagement with personal strength were more likely to have more perceived academic benefit.

Participants reported more active engagement in class after the online tutoring experience in their interview responses. They mentioned that the online tutoring experience gave them the confidence to ask more questions at school. Bella reported that after tutoring online, she felt “more confident talking to [her] teachers” and started to “like asking questions in class.” Cathy stated that from the materials she prepared for her online tutoring experience, she was able to learn some topics before she learned them in school: “So when I learn something I already know, I would participate more in the discussion.” Destiny even mentioned that because she would check references when preparing for her tutoring class, the increased knowledge about the subject helped her generate new perspectives. She sometimes even started to question teachers on some of the points.

This improvement in perceived academic engagement is also reflected in their greater attention in class. For instance, Destiny mentioned that because of her increased interest in history due to the tutoring experience, she paid closer attention to relevant content in her Chinese class to obtain historical information that she could share with her students in online tutoring. The greater attention and involvement in class is partly due to their increased academic interest. Destiny has also stated that before she started tutoring, she “did not enjoy history or the school lessons on history.” Still, after tutoring students online and discussing interesting historical events with them, she “started to have a deeper understanding and connection with history,” which led her to “enjoy history classes at school more.” This increased interest in history also broadened her interest in reading. She used to like detective stories, but now she also pays attention to historical stories.” The increased academic interest helped enhance students’ academic performance at school; as Amy mentioned: “From the tutoring, I was able to use a lot of the information from things that I taught and applied them in school.”

**Table 3:** Students reported a positive impact of online tutoring on academic benefits and self-esteem.

|      | Academic benefit | Self-esteem |
|------|------------------|-------------|
| Mean | 3.46             | 3.65        |
| SD   | 0.52             | 0.47        |

**Table 4:** Significant and positive correlations are observed between the length of volunteering experience and perceived academic benefits/self-esteem. Stronger correlations are observed between awareness of and engagement with personal strength and perceived academic benefits/self-esteem, respectively ( $N=25$ ; \*\*  $p < 0.05$ \*\*\*;  $p < 0.01$ ).

|                   | Length of volunteering experience | Awareness of personal strength | Engagement with personal strength |
|-------------------|-----------------------------------|--------------------------------|-----------------------------------|
| Academic benefits | 0.35*                             | 0.66***                        | 0.77***                           |
| Self-esteem       | 0.33*                             | 0.65**                         | 0.65**                            |

Table 3 also reveals perceptions of increased self-esteem in students ( $M=3.65$ ,  $SD=0.47$ ). There was a positive association between the increase in self-esteem and the length of the online tutoring experience ( $r=0.33$ ,  $p<0.05$ ), indicating that more experienced participants gained more self-esteem compared to the less experienced participants (see Table 4). There was also

a positive correlation between the increase in self-esteem and the awareness of personal strength ( $r=0.65$ ,  $p<0.001$ ), suggesting that the more aware the participants were of their strength, the more confident they felt they would be. There was also a positive correlation between the increase in self-esteem and the engagement with personal strength ( $r=0.65$ ,  $p<0.001$ ), indicating that more confident participants would use their strength more frequently than the less confident participants.

Data from the interview responses also reflect a perceived overall increase in self-esteem, which led to a stronger sense of community and responsibility. Participants reported instances where their service experience helped them improve their self-esteem. Amy recalled personal growth in self-esteem through her TGC experience. Before participating in online service learning, Amy thought she “wasn’t as good as everyone else.” After tutoring others online, she started to believe in herself: “I believe in myself more, and I kept telling myself that I could do it. Moreover, as long as I believed in myself, everyone else would believe in me too.”

Similarly, Eden also mentioned “a sense of fulfillment” she felt while teaching others, which made her “feel like [she’s] gotten better.” The participants attributed the increased self-esteem to a greater understanding of and connection with other peers. Cathy pointed out that the online service experience helped her to “get to know others better.” She made her feel “more confident when [she is] talking.”

Participants also reported that the increased self-esteem came from solving problems with others and the sense of fulfillment after helping others. The increase in the volunteers’ self-esteem can be seen through their actions as they took the initiative to use their skills to help others. Upon gaining self-esteem from the tutoring experience, Cathy expressed a more substantial interest in “teach[ing] more.” Amy recalled that her increased self-esteem led to greater involvement in volunteering experiences inside and outside of school to help younger peers: “I got to learn how to communicate with younger students and help those around me. I wanted to become a teacher, so I participated in many organizations in and outside school to help younger students.” For Eden, the successful online tutoring experience boosted her self-esteem. It led her to believe in and encourage herself to try and persevere through difficult situations such as sports: “I used to give up when I did physical exercise, but now, after two years’ of online volunteering, I learned to tell myself ‘hold on, and hold on more’ and then I can finish it.”

## ■ Discussion

Through interviews and surveys, we discovered that voluntary online peer tutoring in primary and secondary students positively changed their awareness of personal strengths (Table 1).

Previous studies have also found positive correlations between volunteering and the increase in awareness/understanding of personal strengths;<sup>12, 22</sup> however, these studies were mainly focused on adults and university students. Our study broadened the age range of beneficiaries of volunteering experience. Findings from our research suggest that online volunteering could be a viable approach to strength interven-

tion, which aligns with the argument made by Grossman and Duchesneau<sup>19</sup> that service learning allows individuals to improve their strengths. In contrast, current strength interventions mainly focus on individual strength poster designs,<sup>10</sup> strength training sessions,<sup>7</sup> and feedback reflections.<sup>1, 11</sup> This study adds to the existing pool of strength interventions. It provides a new way for individuals to be more aware of their strengths. Specifically, our participants found that the volunteering experience increased strength awareness, social skills, leadership, and the understanding of future potentials among adolescents. Our study also suggests that researchers and educators should focus more on the effect of volunteering experience on adolescents' awareness of personal strength. Notably, this tutoring program did not require volunteers to reflect on their strengths. Nonetheless, the experience per se is found to raise the participating students' thinking about their personal strengths to a varying degree. Given the importance of reflection on personal development, educators should build a reflection component such as periodic surveys and blog writing in volunteering programs to maximize the potential of online volunteering for strength intervention.

Our study further found that awareness of personal strength strongly correlates with engagement with personal strength (Table 2). Consistent with Iqbal's<sup>12</sup> and Lyons'<sup>28</sup> research findings, this study revealed that after participating in online volunteering experiences, students felt more interested in improving their strengths and learning to turn their weaknesses into strengths. Furthermore, we found that after tutoring online, students felt more confident in using their unique strengths at school and in daily life and using the awareness to set life goals, which aligns with the findings from previous studies.<sup>20, 21</sup> Therefore, our findings suggest that service experience can enhance the engagement with personal strength of not only university students and adults but also adolescents.

In addition, we found that enhanced awareness of personal strength because of service learning was associated with perceived benefits in academic learning (Table 4). This finding supports previous research on the effects of service learning on academic performance.<sup>14</sup> Similar to Moore and Allen's finding<sup>15</sup> that service learning increases class participation, our study found that students felt they gained more confidence in asking questions and became more attentive in class. We also found that enhanced academic engagement was reflected in their in-class participation and broadened reading interest beyond the classroom, both driven by increased academic interest from the online tutoring experience. This finding revealed the positive correlation between awareness of personal strength and greater educational benefits during the online tutoring experience.

Our data further indicated that the duration of the online tutoring experience and the awareness of personal strength were positively correlated with the increase in self-esteem (Table 4). This finding supports prior research on the effect of service learning on self-esteem.<sup>3, 6</sup> Our study revealed that the increased self-esteem came from a greater understanding of peers and the sense of fulfillment from solving problems collaboratively with others. As a result, participants expressed

a stronger sense of community and responsibility, more willingness to help others, and greater involvement in other volunteering activities. This finding backs up the research results from previous studies on the link between service experiences, social responsibility, and community engagement.<sup>13, 23</sup>

Our study found that online tutoring positively correlates with strength awareness, academic learning, and self-esteem. However, previous studies primarily focused on in-person service learning and in-person volunteering experiences. Therefore, our findings indicate that remote online tutoring might have similar effects on students as in-person events, proving that online tutoring experience can potentially develop students' self-awareness, self-esteem, and academic engagement. Although previous studies have investigated the effects of online tutoring experiences, they mainly focused on the impact on tutees' academic achievements and self-efficacy.<sup>29</sup> In our study, we found that online tutoring experiences not only had a positive effect on the academic learning of the tutors but also significantly benefited their self-awareness of personal strength and self-esteem. Therefore, future research on online tutoring experiences may pay more attention to the effects on tutors and the tutees. Moreover, research on online tutoring may also focus on outcomes beyond academic achievement, such as personal strength awareness.

#### **Limitations:**

This study is a small-scale exploratory study. Thus, the findings need to be interpreted with caution. First, our study is limited in its small sample size. It decreases statistical power and may lead to biased conclusions. Therefore, future research may increase the sample size. Second, our research participants were all voluntary tutors in an online tutoring program that featured an expertise exchange. It means that they already had some understanding of their strengths. Thus, the findings might differ if the participants were required to do service learning or participated in a different form of online tutoring. This study needs to be replicated in other research contexts. Third, this study is based on data collected through interviews and surveys, which were perceived changes and gains rather than actual ones. Both data collection methods are prone to personal bias and distortion of experiences. Therefore, in addition to collecting self-report data, future research should gather objective qualitative data through real-time observations.

Last but not least, this study was conducted primarily with secondary school students. Given that secondary school students are at an age of greater self-awareness, it is questionable whether the same effects would be observed among primary school students. Future research is needed to explore the effect of volunteer tutoring services on students of different age levels.

#### **Conclusion**

To understand the effects of online tutoring on adolescents, we conducted a survey and an interview study with a group of K-12 students who volunteered in online peer tutoring. Our goal was to examine possible changes in their awareness and development of personal strength, self-esteem, and academic learning after participating in the volunteering experience. We discovered that voluntary online peer tutoring positively chan-

ged primary and secondary students' awareness of and engagement with personal strengths. Furthermore, the boosted individual strengths were associated with higher self-esteem and greater academic benefit. Our findings suggest that online peer tutoring might have similar positive effects on K-12 students as other forms of service learning in increasing their awareness of personal strength. Educators are advised to adopt online peer tutoring as a viable approach to strength intervention, and researchers can also explore further the effects of online tutoring on personal strength development.

## ■ Acknowledgments

We would like to thank Tutoring for a Good Cause for providing a platform for online service learning and volunteers who participated in this study.

## ■ Appendix

### Interview Protocol

1. Can you talk about your online tutoring experience at TGC? (how long; what)

2. What do you think of the online tutoring experience? Do you enjoy the experience? What do you enjoy the most, and what do you enjoy the least? Do you find any impact of the experience on you? (why and why not?)

3. Does the online tutoring experience have any impact on your understanding of your personal strength? (If yes, how? If not, why not?) [prompts: Is there anything you thought you were not good at, but after the online tutoring experience, you found you actually are good at? Any example? Did you apply this in your daily interaction/school life?... Is there anything you thought you were good at, but found that you actually are not after the tutoring experience? Any example?]

4. Do you find any changes in your interest in further strengthening your personal strength outside TGC? (If yes, why? Any example? If not, why not?)

5. Do you find yourself using this personal strength outside TGC (more willing to use this personal strength; use it more often)? (If yes, in what aspects and why? If not, why not?)

6. Does the online tutoring experience have any impact on your learning at school? If yes, what aspects (motivation; learning efforts; interest in the strength area; ...); If no, why not?

7. Does the online tutoring experience have any impact on your self-esteem (confidence in yourself) (If yes, how? If no, why not?)

## ■ References

1. Dolev-Amit, T., Rubin, A. & Zilcha-Mano, S. (2021). Is awareness of strengths intervention sufficient to cultivate wellbeing and other positive outcomes? *Journal of Happiness Studies* 22, 645–666.
2. Seligman, M. E. P., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In *Flow and the Foundations of Positive Psychology* (pp. 279–298). Dordrecht: Springer.
3. Lopez, S. J., Hodges, T., & Harter, J. (2005). *Clifton Strengths Finder Technical Report: Development and Validation*. Princeton, NJ: The Gallup Organization.
4. Duan, W. (2016). The benefits of personal strengths in mental health of stressed students: A longitudinal investigation. *Quality of Life Research*, 25(12), 2879–2888.
5. Seligman, M. E. P. (2002). Positive psychology, positive prevention, and positive therapy. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 528–540). Oxford: Oxford University Press.
6. Linley, P. A., & Harrington, S. (2006). Strengths coaching: A potential-guided approach to coaching psychology. *International Coaching Psychology Review*, 1, 37–46.
7. Quinlan, D. M., Swain, N., Cameron, C., & Vella-Brodrick, D. A. (2015). How 'other people matter' in a classroom-based strengths intervention: Exploring interpersonal strategies and classroom outcomes. *Journal of Positive Psychology*, 10, 77–89.
8. Soria, K. M., & Stubblefield, R. (2015). Knowing me, knowing you: Building strengths, awareness, belonging, and persistence in higher education. *Journal of College Student Retention: Research, Theory, & Practice*, 17, 351–372.
9. Soria, K. M., & Stubblefield, R. (2014). First-year college students' strengths awareness: Building a foundation for student engagement and academic excellence. *Journal of The First-Year Experience & Students in Transition*, 26(2), 69–88.
10. Meyers, M. C., van Woerkom, M., de Reuver, R. S., Bakk, Z., & Oberski, D. L. (2015). Enhancing psychological capital and personal growth initiative: Working on strengths or deficiencies. *Journal of Counseling Psychology*, 62, 50.
11. Lavy, S., & Littman-Ovadia, H. (2017). My better self: Using strengths at work and work productivity, organizational citizenship behavior, and satisfaction. *Journal of Career Development*, 44, 95–109.
12. Iqbal, S., Di Martino, S., & Kagan, C. (2023). Volunteering in the community: Understanding personal experiences of South Asians in the United Kingdom. *Journal of Community Psychology*.
13. Hunter, S., & Brisbin, R. (2000). The impact of service learning on democratic and civic values. *Political Science & Politics*, 33(3), 623–626.
14. Scales, P. C., Blyth, D. A., Berkas, T. H., & Kielsmeier, J. C. (2000). The effects of service-learning on middle school students' social responsibility and academic success. *The Journal of Early Adolescence*, 20(3), 332–358.
15. Moore, C. W., & Allen, J. P. (1996). The effects of volunteering on the young volunteer. *Journal of Primary Prevention*, 17, 231–258.
16. Schwehm, J. S., Lasker-Scott, T., & Elufiede, O. (2017). A comparison of learning outcomes for adult students in on-site and online service-learning. *Online Journal of Distance Learning Administration*, 20(1), n1.
17. Ahmad, I., & Gul, R. (2021). Impact of online service-learning on civic and social justice behavior of undergraduate laboratory-based graduates. *Human Arenas*, 6, 639–654. <https://doi.org/10.1007/s42087-021-00244-9>
18. Seddighi, H., & Salmani, I. (2019). Online volunteering, a way to reduce health inequalities: A review study. *Journal of Community Health Research*, 7(4), 256–264.
19. Grossman, J., & Duchesneau, N. (2021). Advancing Equity through Service Learning: Building on Strengths Students Have Gained after a Year of Turmoil. *Solutions for Educational Equity through Social and Emotional Well-Being*. MDRC.
20. Jo, G. Y., Lim, H., Kim, D. R., Kang, K. H., Kim, S. H., Kim, Y. H., ... & Chang, K. H. (2021). A study on the relationship between volunteer experience and subjective self-awareness. *Journal of Digital Convergence*, 19(5), 449–460.
21. Cronjé, E. M. (2015). The effects of volunteering on student volunteers: leading article. *Progressio*, 37(2), 1–20.
22. Palmer, J. Q. (2014). *A quasi-experimental study of changes in self-awareness and authentic leadership after participation in a volunteer event*. PhD Thesis. Northcentral University.
23. Hamilton, S. F., & Fenzel, L. M. (1988). The impact of volunteer experience on adolescent social development: Evidence of program effects. *Journal of Adolescent Research*, 3(1), 65–80.
24. ChanLin, L. J., Lin, H. Y., & Lu, T. H. (2016). College students'

- engagement in e-tutoring children in remote areas. *Innovations in Education and Teaching International*, 53(5), 519-531.
25. Wood, A. M., Linley, P. A., Maltby, J., Kashdan, T. B., & Hurling, R. (2011). Using personal and psychological strengths leads to increases in well-being over time: A longitudinal study and the development of the strengths use questionnaire. *Personality and Individual Differences*, 50(1), 15-19. <https://doi.org/10.1016/j.paid.2010.08.004>
26. Biswas-Diener, R., & Diener, E. (2001). Making the best of a bad situation: Satisfaction in the slums of Calcutta. *Social Indicators Research*, 55(3), 329-352. <https://doi.org/10.1023/a:1010905029386>
27. Miller, G. M., & Neese, L. A. (1997). Self-esteem and reaching out: Implications for service learning. *Professional School Counseling*, 1(2), 29-32.
28. Lyons, K. (2023). Why focusing on our strengths matters: Reflections on leaving a volunteer role I actually liked. *Community Development Journal*, <https://doi.org/10.1093/cdj/bsad027>
29. Carlana, M., & Eliana L. F. (2021). *Apart but Connected: Online Tutoring and Student Outcomes during the COVID-19 Pandemic*. (EdWorkingPaper: 21-350). Retrieved from Annenberg Institute at Brown University: <https://doi.org/10.26300/0azm-cf65>

## ■ Authors

Ethan Yuan: Ethan is a high school student in the U.S. Since middle school, he has been volunteering in Tutoring for a Good Cause. Besides education, he is also intrigued by topics regarding the fusion between organic and inorganic materials and currently aims to pursue a medical career to serve people in need.

Jayden Su: Jayden is a high school student in Hong Kong. Throughout high school, he has been fascinated with ways service learning can benefit teenagers. Jayden is interested in Maths, Economics, and Computer Science. He hopes to use his knowledge and skills in these areas to benefit others.

Xiaoyou Wang: A high school student in Las Vegas, Nevada, Xiaoyou has a great passion for community service and the overall community's well-being. She is interested in studying business, computer science/information technology, and psychology. She hopes to apply these topics in the future to make positive changes in society.

Ziyan Yu: Ziyan is a high school student in Shandong, China. She has a great passion for community service and is interested in education, psychology, and gender studies. She hopes to apply these topics in the future to help more teenagers and children find themselves and grow up in happiness.