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High School Teachers Describe Growth Mindset Related to Teaching Pedagogy and Students' Academic Achievement

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Abstract

The purpose of this qualitative descriptive study was to explore how high school teachers described the influence of a growth mindset as it related to teaching pedagogy and students' academic achievement for grades 9, 10, 11, and 12 at a sizable urban public-school district in northern New Jersey. Dweck's (2016a) mindset theory was used as the theoretical foundation. There were 11 interviews and two focus groups conducted on Zoom. A thematic analysis included the construction of seven themes derived from the given data generated through transcriptions on Trint and coding on MAXQDA. The findings were that when teachers applied growth mindset in teaching pedagogy, most students developed a growth mindset, were able to transfer a growth mindset into various domains, and demonstrated success in academic achievement.

1. Introduction

Within each paradigm shift in education, the primary concern has enduringly been searching for ways to compel students in performing better. According to Hubers (2020), an ongoing concern and challenge in schools has been a priority to formulate initiatives creating students' success. The end goal for educational stakeholders is positive learning outcomes for students. Teachers foster growth students need in performing effectively. Students must believe they can grow,

and one way to do this is by establishing a growth mindset.

Dweck's (2016a) mindset theory focuses on growth and fixed mindsets. According to this theory, students who believe they have control over their intelligence have a "growth mindset" whereas students who think the opposite are said to have a "fixed mindset" thinking intelligence does not change (Dweck, 2016a). The students with growth mindsets are the ones who take greater ownership over learning, thus demonstrate pronounced accomplishments (Dweck, 2016a). However, growth mindset has not always been prominent in schools and teachers can formulate this way of thinking to students in facilitating change.

With a growth mindset, learners believed through arduous work, effective strategies, and effort, they could build intelligence (Haimovitz & Dweck, 2017). This means with motivation and a growth mindset, intelligence could change. The concern is that many teachers with a growth mindset are not passing it onto students (Haimovitz & Dweck, 2017). Thus, teachers have an opportunity in becoming an agent of change among their pupils.

A priority for educators is setting rigorous goals for children enabling them while working to capacity, and gaining academic achievement—an ongoing pressure in schools. Additionally, students performing with competence have always been an issue in America. For example, 20% of students in the United States will not finish high school on time (Yeager et al., 2019). The transition to secondary school represents an important period of flexibility in educational trajectories for adolescents.

There was concern for teachers passing a growth mindset to students so they could be successful. In the United States, students' grades tended to decrease during transition to ninth grade and often did not recover (Yeager et al., 2019). When such students underperformed in school or opted out of rigorous coursework, they were far less likely leaving secondary school prepared for advanced courses in college or leading a productive life (Yeager, et al., 2019). Therefore, growth mindset in relation to students' success was still an area that needed to be examined in current high school settings.

Three pieces of literature formed the primary gap for this study respecting growth mindset. Succeeding research was needed on the relationship between teachers' mindsets and students' achievement (Zhang et al., 2017). Teachers' mindsets affect the way students think of themselves and how they learn. Teachers must have a growth mindset in order to pass it on to children. In addition, the examination of teachers' growth mindset and teaching pedagogy was also lacking (Schmidt et al., 2017). High school teachers in this study described a growth mindset as it related to teaching pedagogy. An inquiry was also needed on what people believed about growth mindset and the implications of educational interventions (Sisk et al., 2018). The teachers in this study shared practices about growth mindset and how it was associated with students' academic growth. Therefore, the purpose of this qualitative descriptive study was to explore what the teachers' self-reported levels of growth mindset were and opinions about whether other individuals' mindsets could change plus how high school teachers

described the influence of a growth mindset as it related to teaching pedagogy and students' academic achievement for grades 9, 10, 11, and 12 at a sizable urban public-school district in northern New Jersey.

2. Literature Review

2.1. Intelligence

Intelligence incorporates ideas about how smart people are. According to Dweck (2000, 2016a), entity theorists defined intelligence in relation to capacity or potential. They rule out effort and motivation as something that increases intelligence because they think intelligence is something that cannot be changed.

On the other side, there is another way to look at mindset as something that is constantly evolving. Dweck (2016a) suggested incremental theorists defined intelligence in relation to skills and knowledge. They believe intelligence is associated with arduous work, effort, and accomplishment.

2.2. Growth Mindset versus Fixed Mindset

Mindset is a series of self-perceptions or beliefs people hold about themselves (Dweck, 2016a). Dweck's (2016a) mindset theory postulates a premise that embraces challenges, persists in obstacles, sees effort as necessary, learns from criticism, and is inspired by the success of others. An individual's mindset can be characterized as fixed when intelligence is unchangeable, growth when intelligence is malleable, or developed through effort (Dweck, 2016a). Malleability in students causes them to believe abilities can be further developed (Wonch Hill et al., 2017). Therefore, growth mindset advocates think intelligence is malleable or adjustable.

2.3. Self-efficacy, Resiliency, Persistency: Threads to Growth Mindset

Self-efficacy is a factor predicting an individual's approach on a novel task. The construct of self-efficacy was first developed with the social learning theory, which asserts that cognition, behavior, and the environment interact with each other to produce the human condition (Bandura, 1977). Self-efficacy refers to an individual's judgment about performing an activity and is related to how capable learners believe they are in following through with a pre-determined task (Garcia & Duran, 2017). People with self-efficacy beliefs influence the way they demonstrate accomplishing goals.

Resiliency is an essential factor when developing a growth mindset. Essential to growth is resiliency in times of hardship (Barnes & Fives, 2016). Students who are resilient and work hard do better than students who are not resilient and give up easily (Fitzgerald, 2016). Resiliency involves inner traits of an individual assisting in the survival of challenging situations and coping skills necessary to overcome adversity (Pena et al., 2018). Resilient people have goals, a sense of purpose, and an optimistic attitude and outlook on life (Haimovitz & Dweck,

2017). Those students end up choosing harder tasks to complete, and persist more, thus, are more resilient, enjoy more, and perform better (Dweck, 2016a).

Persistency is yet another thread to growth mindset. Legend (2014) stated people who become great, learn from failures, are tenacious, and persistent. An example of persistency is seen through the work of Mischell (2014) who conducted "The Marshmallow Test." The marshmallow experiment was a study on delayed gratification and preschoolers led by psychologist Walter Mischell, a professor at Stanford University. In this experiment Mischell offered the children a choice between one small but immediate reward, or two small rewards through delayed gratification. In this respect, the preschoolers were taught strategies in willpower and persistency.

2.4. Motivation and Goals Orientation

Educators influence motivation which has a critical effect on academic achievement. Feedback from teachers "convey messages affecting students' opinions of themselves, motivation, and achievement" (Dweck, 2016b: p. 207). The development of growth mindset enables children to exercise autonomy and life-long learning habits (Boylan et al., 2018). How a person reacts to challenges, criticism, and obstacles are embedded in a person's mindset (Allen, 2018). Mindsets can change for the greater good by staying motivated and creating goals.

2.5. Growth Mindset Interventions and Learning

Growth mindset plays a significant part in academic success or failure. Liu et al. (2018), reveals how the determination in achieving goals or failure in achieving goals fluctuates depending upon an individual's mindset. A person has the ability to respond positively or negatively to challenges and setbacks (Liu et al., 2018). Students with a growth mindset respond to achieving goals with a cheerful outlook while students who respond negatively to goals demonstrate a fixed mindset.

Gladwell (2008) supported "The 10,000 Hour Rule" suggesting proficiency comes from continued steady practice for hours attained by talent and preparation. At the very top of the success scale is a person who practices exceedingly much more than an average person. A five-year-old who takes on a skill and practices for about 10,000 hours was in far better shape by the time he or she was 20 years old.

2.6. Growth Mindset Learning Outcomes and Academic Achievement

Students who express a growth mindset through a world view lens, transferring learning to different areas, attain more profitable success. The capacity of cultivating a growth mindset grounded in a person's world view has positive outcomes (Allen, 2018). Students with growth mindsets are more inclined to meet challenges (Barnes & Fives, 2016). Children orientated with growth mindsets see abilities as something increasing with time and effort in terms of learning goals

(Boylan et al., 2018). The children with growth mindsets have a different world view enabling positive learning outcomes.

2.7. Growth Mindset Sets the Climate and Culture in School Systems

When individual teachers incorporate growth mindset strategies, many students benefit. When the whole school or district is invested in growth mindset practices, most children benefit. School mindset compared favorably with mindset theory enabling schools to incorporate this theory in terms of climate and culture (Hildrew, 2018). When a school culture represents a growth mindset, administrators and teachers interact in informal and formal structures supporting each other, the students, and the organization as a whole (Hildrew, 2018). Mindset theory can grow into a school-wide effort where not only teachers are incorporating strategies in their individual classrooms, but as a group of school members functioning in unison.

3. Research Questions

Two short growth mindset scales were administered to potential participants in determining if they met the criteria for the study. The first scale called "Growth Mindset Scale" was administered to see if the teachers had a growth mindset themselves by believing their intelligence could change and grow (Dweck, 1999a). The second scale called "Kind of Person Implicit Theory Scale" determined if the teachers thought other people's intelligences could expand (Dweck, 1999b). The data generated from the teachers' results on the scales assisted in answering the first research question by providing descriptive statistics. Only high school teachers who had a growth mindset, thought students mindsets could be changed, plus used growth mindset strategies in class were chosen for the study so sufficient and effective data could be collected in answering the research questions.

Since it was not known how high school teachers described the influence of a growth mindset as it related to teaching pedagogy and academic achievement, there were two main research questions, one about growth mindset and teaching pedagogy, and one regarding growth mindset and students' academic achievement. In addition, the research questions connected to Carol Dweck's mindset theory. Dweck (2016a) proposed intelligence was constantly evolving. Dweck defined intelligence as the amount of knowledge someone had, and how much effort they incorporated for the willingness to learn. Intelligence also included someone who knew how to work hard and was determined to accomplish a task, with capacity to understand an idea and think about a concept (Dweck, 2016a). Teachers' mindsets and teaching pedagogy influenced students and impacted what students believed about themselves.

This qualitative descriptive study incorporated three research questions based on the theoretical foundation of Carol Dweck's mindset theory, which guided this qualitative descriptive study (Dweck, 2016a).

RQ 1: What are the teachers' self-reported levels of growth mindset and opi-

nions about whether other individuals' mindsets could change?

RQ 2: How do high school teachers describe the influence of a growth mindset as it relates to teaching pedagogy for grades 9, 10, 11, and 12?

RQ 3: How do high school teachers describe the influence of a growth mindset as it relates to students' academic achievement for grades 9, 10, 11, and 12?

4. Methods

A qualitative methodology was the best method for this study. Qualitative research focuses on making sense of live, observed phenomenon, within a specific context, as in a classroom setting with specifically selected individuals, rather than attempting to generalize a broader context. The teachers in this study were interviewed in relation to daily classroom experiences associated with growth mindset.

A descriptive design was suitable for this study while exploring individual experiences describing phenomenon on real life everyday encounters. According to Kim et al. (2016), the goal of a researcher indulging in a qualitative descriptive study was to have a foundational account of information, gathered in everyday terms on specific events of individuals, or groups of individuals' experiences. The sample was high school teachers who described the influence of a growth mindset as it related to teaching pedagogy and students' academic achievement. Multiple sources helped develop a comprehensive description of social phenomenon based on a theoretical foundation. In this study, mindset theory was the premise considered as the theoretical foundation while exploring high school teachers' everyday lives.

For this qualitative descriptive study, there were three sources of data. The first source of data incorporated two teacher self-reported mindset scales determining who the best participants were for the study. Sources of data assisted in answering the research questions through 11 interviews with high school teachers and a different pool of teachers for two focus groups.

5. Measurements

The phenomenon in this study was examined through inductive reasoning while concentrating on the specific topic. The high school teachers were asked questions about how a growth mindset influenced teaching practices and students' academic growth. The use of 12 open-ended questions stimulated teachers' thoughts extending information about mindset theory and growth mindsets in schools.

The theoretical framework produced a lens to look at the phenomenon. The criteria to participate in the study included high school teachers who had a growth mindset by thinking they could gain knowledge if they worked at it, thought other individuals could obtain a growth mindset by changing and growing, and utilized growth mindset as a teaching pedagogy. The data collected from high school teachers provided a deeper understanding of mindset theory to professionals who already understood the concepts of a growth mindset or initial un-

derstandings to professionals who were not familiar with mindset theory.

The sample population encompassed teachers who had at least one full year of teaching experience, taught high school, and worked at one of the high schools in an urban district in northern New Jersey. The use of quantitative data in a qualitative descriptive study offered an additional piece to the overall assessment of the sample population. Descriptive statistics were gathered providing additional information to strengthen the study in addition to expert panel, one field test, checking individual transcripts, member checking, and triangulation of the data sources. Triangulation was evident through one-on-one interviews and focus groups while investigating the research problem. The same questions for interviews and focus groups were asked to all teachers in the study triangulating the data. The reason for this was to gain a better understanding of the phenomenon and how the data addressed the research questions. The focus groups provided additional data in answering the research questions. This process further enhanced trustworthiness and added credibility for the study.

The Trint software package was utilized to transcribe the interviews and focus groups. Then the raw data were prepared for analysis after finishing all data collection. The sources of data were self-reported results from each participant on the two mindset scales, 11 individual interview transcripts, as well as two focus group transcripts. The transcripts were uploaded for coding utilizing MAXQDA software. Initial coding on MAXQDA as well as extensive hand coding produced an inductive procedure based upon a thematic analysis in relationship to mindset theory. The theoretical framework provided an opportunity to channel the data collection and data analysis but did not prevent consideration of other elements not within the framework.

A thematic analysis was conducted utilizing six steps in answering the research questions (Braun & Clarke, 2006). The first step was becoming familiar with the data. The data from interviews were compiled organized, prepared, and reviewed assessing credibility and usefulness of the information collected. In step two, information from the transcripts were exported to MAXQDA, codes were formulated and highlighted, searching for themes by collating codes, then reviewing themes while generating a thematic map. Step three included thinking about the relationships between codes, themes, and various levels of themes. Initial codes formed main themes, whereas some formed sub-themes, and others were discarded. In the fourth phase, it became clear that various candidate themes were not themes because there was not enough data supporting the theme, others collapsed into each other, while other themes were broken down into separate themes. During the fifth step, defining and naming the themes came next. In the final phase six, the themes were named, a final analysis performed, as well as a write-up of the report.

6. Results

Table 1 below shows the data for collective results in each category for all participants on the "Growth Mindset Scale" in answering RQ 1. Sixteen volunteers

Table 1. Growth mindset scale one: all teachers' responses on each individual question.

Teacher	Question 1	Question 2	Question 3	Score Number	Score Label
1	6	6	6	18	Strongly agree
2	6	6	6	18	Strongly agree
3	6	6	6	18	Strongly agree
4	5	5	5	15	Agree
5	5	5	2	12	Mostly agree
6	5	2	5	12	Mostly agree
7	6	6	6	18	Strongly agree
8	6	6	5	17	Strongly agree
9	6	5	5	16	Strongly agree
10	6	6	6	18	Strongly agree
11	6	6	6	18	Strongly agree
12	5	5	5	15	Agree
13	6	6	6	18	Strongly agree
14	6	6	6	18	Strongly agree
15	4	5	4	13	Agree
16	6	6	5	17	Strongly agree
Total Responses	16	16	16	16	11 Strongly agree 3 Agree 2 Mostly agree 16 Responses

Note: N = 16 (Scoring: 16 - 18 = strongly agree, 13 - 15 agree, 12 mostly agree).

were administered the scale including those who participated in interviews and focus groups. The score range to meet the criteria for the first mindset scale was 12 - 18 points with a score of 12 as the cut-off score. The results indicated how much the teachers *agreed* with growth mindset theory and believed their own intelligence could grow and change. This table displayed the teachers' total scores. Eleven teachers *strongly agreed* with having a growth mindset, two *agreed*, and two *mostly agreed*.

The following **Table 2** showed the data for collective results in each category for all participants on the "Kind of Person Implicit Theory Scale." Sixteen volunteers took the surveys for the study including those who participated in interviews and focus groups. The score range to meet the criteria for the second mindset scale was 32 - 48 points with a score of 32 being the cut-off score. The results indicate how much the teachers *agreed* with growth mindset theory and believed other people's intelligences could grow and change. This table displayed the teachers' total scores. Six teachers *strongly agreed*, ten *agreed*, and one *mostly agreed*.

Table 2. Kind of person implicit theory scale two: all teachers' responses on each individual question.

| T	Quest 1	Quest 2	Quest 3	Quest 4	Quest 5	Quest 6	Quest 7	Quest 8	Score	Score Label
1	5	1	1	6	6	6	3	5	33	Agree
2	3	3	4	5	4	5	4	4	32	Mostly agree
3	6	6	1	6	6	6	6	6	43	Strongly agree
4	6	3	5	6	2	5	6	6	38	Agree
5	4	5	5	6	1	6	6	4	37	Agree
6	5	4	5	5	5	5	5	5	39	Agree
7	6	6	6	6	6	6	6	6	48	Strongly Agree
8	5	4	5	5	4	6	5	5	39	Agree
9	5	5	2	5	5	4	4	5	35	Agree
10	6	5	6	6	5	5	2	2	37	Agree
11	6	6	1	6	6	6	6	6	44	Strongly agree
12	5	5	5	5	4	5	4	4	37	Agree
13	6	6	6	6	6	6	6	6	48	Strongly agree
14	6	5	6	5	5	5	5	5	42	Strongly agree
15	5	5	6	6	5	6	4	5	42	Agree
16	6	5	5	4	5	5	6	6	42	Strongly agree
Total	16	16	16	16	16	16	16	16	16	Totals: 6 Strongly Agree 9 Agree 1 Mostly Agree 16 Responses

Note: T = Teachers, N = 16 (Scoring: 41 - 48 = strongly agree, 33 - 40 agree, 32 mostly agree).

According to the results, most teachers thought more of themselves being able to grow, change, and become more capable than other individuals. In comparison, seven more teachers *strongly agreed* their own intelligence could change versus what they believed about other people changing and growing. The findings were similar on the second scale. Eight more teachers *mostly agreed* others could change and grow on the second scale whereas on the first scale only one *mostly agreed* their own intelligence could change. The teachers appeared to believe in themselves more as being able to grow than they believed other people could change and grow. Even though the teachers influenced students with a growth mindset, they realized they could only encourage individuals to make changes. This finding was important because in the research it was noted that although teachers had a growth mindset themselves, the problem was that they were not transmitting it to students (Haimovitz & Dweck, 2017).

Confidence and motivation were intricate elements for growth mindset as well as an enriching classroom environment. Teachers helped build a growth mindset in students through teaching strategies and specific language. Themes were identified through a thematic analysis by coding transcripts for interviews and focus

groups. There were four themes identified in answering RQ 2 where teachers described the influence of a growth mindset as it related to teaching pedagogy. They were as follows: 1) Teachers used deliberate opportunities building confidence and motivation in students toward growth mindset attributes 2) Teachers provided an enriching growth mindset environment 3) Teachers applied growth mindset teaching strategies 4) Teachers demonstrated growth mindset dialogue and language to students (**Figure 1**: Themes related to RQ 2).

There were three themes identified in answering RQ 3 where teachers described the influence of a growth mindset as it related to students' academic achievement. They were as follows: 1) Students developed self-reflection techniques 2) Students utilized growth mindset learning strategies 3) Students transferred a growth mindset to various academic domains (**Figure 2**: Themes related to RQ 3).
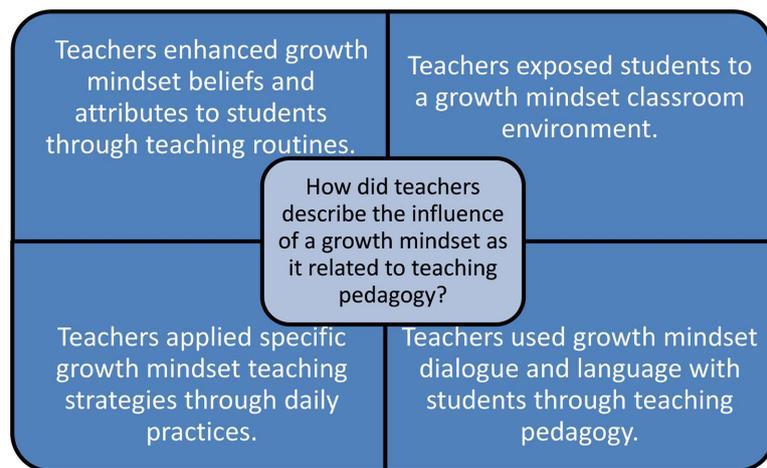
Figure 1. Themes related to RQ2.
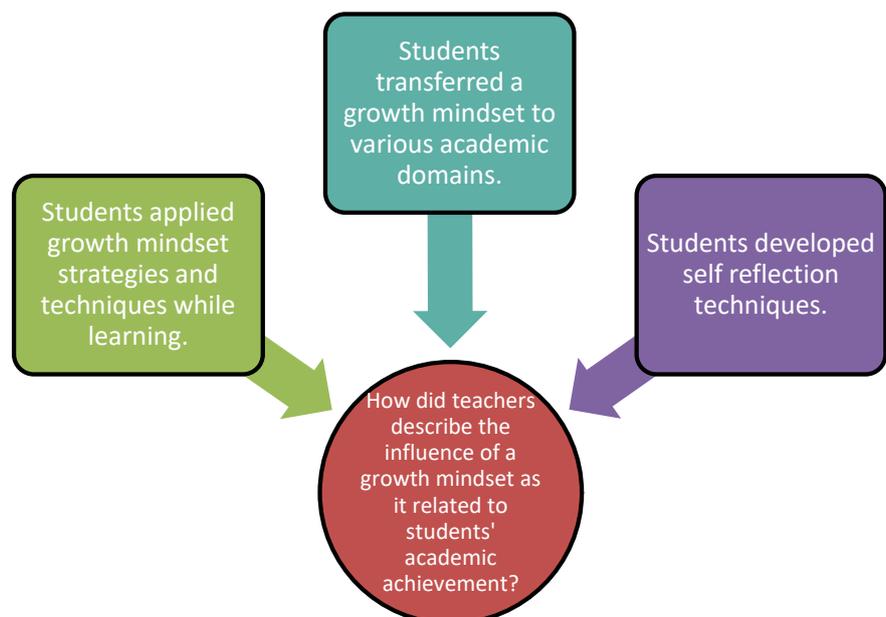
Figure 2. Themes related to RQ3.

7. Discussion

1) Growth Mindsets—Important for Effective Lifelong Learning

Teachers used growth mindset strategies and concepts in this high school setting where the study was conducted. Students with growth mindsets are eager to learn innovative ideas, take risks, and embrace challenges (O'Brien et al., 2015). When difficulties are apparent, students with a growth mindset press on in spite of things being hard (Dweck, 2016a). The students look at challenges as a way of learning and growing, not as a recipe for failure. Students with fixed mindsets have limiting beliefs about their capabilities and will attribute academic success to elements beyond their control (O'Brien et al., 2015). Innovative teaching practices improve students' mindsets and engagement in learning. Overall, students with growth mindsets displayed great strides in academic achievement. Dweck (2016a) stated when children believe they can do better it put them on a learning curve for growth. Children applying mindset theory optimize academic achievement (Boylan et al., 2018). As a result, growth mindset applications assisted many students in school.

2) Growth Mindset Language

The teachers in this study had a growth mindset and felt it was important to impress and influence this theory to their students. The teachers used specific language and dialogue motivating students and putting students on a learning plane through working hard in becoming successful. For example, the word "yet" is very powerful because it gives students the opportunity to grow. Teachers made comments to students recognizing how hard they were working or trying rather than telling them how smart they were which puts limitations on learning and growing. Bearing in mind that not everything comes easy, teachers let students make mistakes while learning and growing.

3) Growth Mindset Showed Prodigious Results

According to the participants, it was evident in the data that most students who had a growth mindset displayed better grades and demonstrated an increase or growth in academic achievement. The students were able to persist at a task and did not easily give up when met with a challenge. In addition, growth mindset students were not only able to apply this theory to academic subject areas, but in all areas of their lives. Teachers thought it was worthwhile to share this philosophy with others, especially with their students, who needed it most. It is possible to change thinking from negative to positive by looking at learning differently.

8. Limitations

There were several limitations present in this research. First, only high school teachers' perceptions were considered in one city within northern New Jersey, limiting the demographic sample. Associated consequences for generalizability and applicability of findings were that the study only focused on one urban area in the state, thus not giving a representation of other areas.

Lack of time was other limitation affecting the scope of this study. A signifi-

cant limitation was the international pandemic, COVID-19, which held up recruiting participants and collecting data. Schools were closed for in person teaching and learning in this demographic area for 18 months. Therefore, it took longer to recruit volunteers plus collect and analyze the data.

9. Recommendations

There were three recommendations for future research: 1) A study on growth mindset practices following students to college and into adulthood 2) How administrators relate to growth mindset and in what ways the curriculum could influence a social-emotional plan 3) How administrators recount a growth mindset plus how it transcends to teachers and students through climate and culture, the curriculum, professional development, and educational resources.

The first recommendation for future research was to explore if students still applied growth mindset skills in higher learning situations, when in challenging learning environments, or if a student received a teacher who was not growth mindset orientated. For example, giving and receiving feedback often caused distress in college students, an element not often looked at (Jeffs et al., 2021). Recommendations for future research in higher education are to investigate college students and how they maintain a growth mindset where there may not be any reinforcement and where feedback or expectations may be stressful. This can be embraced through future research about students at the collegiate level following how they navigate through college and adulthood.

Next, there is research lacking in the areas of how administrators relate to growth mindset and in what ways the curriculum can enforce a social-emotional plan for resources, materials, training, literature, and professional development programs for teachers (Jacovidis et al., 2020). Teachers expressed the need for more professional development and training on growth mindset, and since it is usually school personnel that decide on topics for trainings, future research is needed on how stakeholders' decisions affect growth mindset in classrooms.

Finally, there is research lacking in how all other stakeholders such as the community, parents, and Board of Education members relate to a growth mindset (Jacovidis et al., 2020). School leaders could be studied on how they recount a growth mindset plus how it transcends to teachers and students through climate and culture, the curriculum, professional development, and educational resources.

10. Conclusion

Individuals with a growth mindset appear to accomplish more by placing increased effort into acquiring knowledge and development, compared to individuals with a fixed mindset. As uncertainty increases, organizations that promote continuous learning adapt faster than competitors (Karlsson & Eckerwall, 2021). If an entire organization adopts a growth mindset, employees will be more motivated to learn (Karlsson & Eckerwall, 2021). Growth mindset has therefore, received increased attention from research and organizations such as school sys-

tems.

Some of the concerns with growth mindset suggested by Karlsson & Eckerwall (2021) are being mindful and investigating continuous improvements in uncertain times, insufficient leadership behavior, and employees' unwillingness to grow in the workplace. These ideas and concerns affect school age children because if the teachers are adamant on holding old ideas, and do not want to try growth mindset strategies, learning may be difficult for some students. Karlsson and Eckerwall suggested that even though growth mindset has immense results, the question of fostering a growth mindset in organizations still remains fairly unexplored.

Dweck herself, realized that growth mindset theory is an overly complex topic as more research continues to come out. "We don't think it works every time; we want to know where it does not work so we can find out why," Dweck explained (Severs, 2019). Dweck's concern about children becoming "test takers," not "challenge seekers" and her fears that teachers who have misunderstood her work may now be pressuring children (Severs, 2019). Dweck realizes growth mindset philosophy is still a work in progress.

Another concern is about teaching the concept to students with a lecture defining the two mindsets, and then thinking the students should just be able to role play or "act" their way into a growth mindset. Dweck argued, it is not about teaching the concept alone, it is much more about implementing practices that focus on growth and learning (Severs, 2019). "Growth mindset is simply about praising effort," but Dweck also suggested that "teachers also need everything else around it" (Severs, 2019). Educators need to be mindful of these elements.

There are some concerns of slippage between the concept and its implementation in the classroom. However, the challenge for Dweck has always been how educators interpret her research in practice since some of it seems to get lost in the translation (Sisk et al., 2018). Some practitioners are concerned that growth mindset may be nothing more than a new learning style.

In conclusion, there is more work to do on growth mindset. The results of this study brought on further inquiry and curiosities. In order for this topic to not become another trend or learning style that eventually falls by the wayside, innovative studies need to be incorporated to keep the theory alive.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

Allen, L. Q. (2018). Teacher Leadership and the Advancement of Teacher Agency. *Foreign Language Annals, 51,* 240-250. https://doi.org/10.1111/flan.12311

Bandura, A. (1977). Self-Efficacy: Toward a Unifying Theory of Behavior Change. *Psychological Review, 84,* 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Barnes, N., & Fives, H. (2016). Creating a Context for Growth-Focused Assessment. *Mid-*

dle School Journal, 47, 30-37. https://doi.org/10.1080/00940771.2016.1226638

Boylan, F., Barblett, L., & Knaus, M. (2018). Early Childhood Teachers' Perspectives of Growth Mindset: Developing Agency in Children. *Australasian Journal of Early Childhood, 43,* 16-24. https://doi.org/10.23965/AJEC.43.3.02

Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. Qualitative *Research in Psychology, 3,* 77-101. https://doi.org/10.1191/1478088706qp063oa

Dweck, C. S. (1999a). *Growth Mindset Scale.* Stanford University SPARQtools. https://sparqtools.org/mobility-measure/growth-mindset-scale

Dweck, C. S. (1999b). *Kind of Person Implicit Theory Scale.* Stanford University SPARQtools. https://sparqtools.org/mobility-measure/kind-of-person-implicit-theory-scale

Dweck, C. S. (2000). *Self-Theories: Their Role in Motivation, Personality, and Development.* Taylor & Francis Group.

Dweck, C. S. (2016a). *Mindset: The New Psychology of Success.* Random House.

Dweck, C. S. (2016b). *Self-Theories: Their Role in Motivation, Personality, and Development.* Psychology Press. https://www.ted.com/talks/carol_dweck_the_power_of_believing_that_you_can_improve?language=en

Fitzgerald, C. J. (2016). Helping Students Enhance Their Grit and Growth Mindsets. *Journal plus Education, 14,* 52-67.

Garcia, C. A., & Duran, N. A. (2017). Revising the Concept of Self-Efficacy as a Language Learning Enhancer. *Gist Education and Learning Research Journal, 15,* 68-95. https://doi.org/10.26817/16925777.391

Gladwell, M. (2008). *Outliers: The Story of Success.* Back Bay Books/Little, Brown and Company.

Haimovitz, K., & Dweck, C. S. (2017). The Origins of Children's Growth and Fixed Mindsets: New Research and a New Proposal. *Child Development, 88,* 1849-1859. https://doi.org/10.1111/cdev.12955

Hildrew, C. (2018). *Becoming a Growth Mindset School: The Power of Mindset to Transform Teaching, Leadership and Learning.* Routledge Taylor & Francis Group. https://doi.org/10.4324/9781315179506

Hubers, M. (2020). Paving the Way for Sustainable Educational Change: Reconceptualizing What It Means to Make Educational Changes That Last. *Teaching and Teacher Education, 93,* 1-14. https://doi.org/10.1016/j.tate.2020.103083

Jacovidis, J. N., Anderson, R. C., Beach, P. T., & Chadwick, K. L. (2020). *Growth Mindset Thinking and Beliefs in Teaching and Learning.* Inflexion Policy Paper: Growth Mindset in Education.

Jeffs, C., Nelson, N., Grant, K. A., Nowell, L., Paris, B., & Viceer, C. (2021). Feedback for Teaching Development: Moving from a Fixed to Growth Mindset. *Professional Development in Education, Taylor & Francis Online,* 1-14. https://doi.org/10.1080/19415257.2021.1876149

Karlsson, C., & Eckerwall, A. (2021). *Factors Fostering a Growth Mindset in Organizations: A Qualitative Study about Actors and Challenges in Fostering a Growth Mindset in Organizations.* LUP Student Papers.

Kim, H., Sefcik, J., & Bradway, C. (2016). Characteristics of Qualitative Descriptive Studies: A Systematic Review. *Research in Nursing & Health, 40,* 23-42. https://doi.org/10.1002/nur.21768

Legend, J. (2014, August 14). *John Legend: Success through Effort.* [Video]. Khan Academy. https://www.youtube.com/watch?v=LUtcigWSBsw

Liu, Y., Robinson, M. N., & Xu, H. (2018). The Effect of Mindset on Students' Desire to Work for Big Four Accounting Firms and on Academic Performance. *E-Journal of Business Education & Scholarship of Teaching, 12,* 92-106.

Mischell, W. (2014). *The Marshmallow Test: Why Self-Control Is the Engine of Success.* Little Brown Spark.

O'Brien, M., Fielding-Wells, J., Makar, K., & Hillman, J. (2015). How Inquiry Pedagogy Enables Teachers to Facilitate Growth Mindsets in Mathematics Classrooms. In *The Annual Meeting of the Mathematics Education Research Group of Australasia* (pp. 469-476). Sunshine Coast: MERGA.

Pena, C., Jones, L., Orange, A., Simieou, F., & Marquez, J. (2018). Academic Success and Resiliency Factors: A Case Study of Unaccompanied Immigrant Children. *American Journal of Qualitative Research, 2,* 162-181. https://doi.org/10.29333/ajqr/5797

Schmidt, J. J., Shumow, L., & Kackar-Cam, H. (2017). Does Mindset Intervention Predict Students' Daily Experience in Classrooms? A Comparison of Seventh and Ninth Trajectories. *Journal of Youth & Adolescence, 46,* 582-602. https://doi.org/10.1007/s10964-016-0489-z

Severs, J. (2019). Growth Mindset: Where Did It Go Wrong? *Times Educational Supplement.* https://www.tes.com/news/growth-mindset-where-did-it-go-wrong

Sisk, V. F., Burgoyne, A. P., Sun, J., Butler, J. L., & Macnamara, B. N. (2018). To What Extent and under Which Circumstances Are Growth Mind-Sets Important to Academic Achievement? Two Meta-Analyses. *Psychological Science, 29,* 549-571. https://doi.org/10.1177/0956797617739704

Wonch Hill, P., McQuillan, J., Talbert, E., Spiegel, A., Gauthier, G. R., & Diamond, J. (2017). Science Possible Selves and the Desire to Be a Scientist: Mindsets, Gender, Bias, and Confidence during Early Adolescence. *Social Sciences, 6,* 55. https://doi.org/10.3390/socsci6020055

Yeager, D. S., Hanselman, P., Walton, G. M., Murray, J. S., Crosnoe, R., Muller, C., Tipton, E., Schneider, B., Hulleman, C. S., Hinojosa, C. P., Paunesku, D. Romero, C., Flint, K., Roberts, A., Trott, J., Iachan, R., Buontempo, J., Yang, S. M., Carvalho, C. M., Hahn, P. R., Dweck, C. S. et al. (2019). A National Experiment Reveals Where a Growth Mindset Improves Achievement. *Nature, 573,* 364-369. https://doi.org/10.1038/s41586-019-1466-y

Zhang, J. F., Kuusisto, E., & Tirri, K. (2017). How Teachers' and Students' Mindsets in Learning Have Been Studied: Research Findings on Mindset and Academic Achievement. *Psychology, 8,* 1363-1377. https://doi.org/10.4236/psych.2017.89089