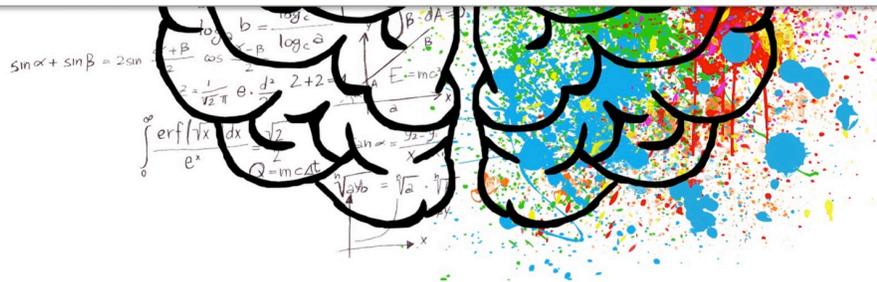


GROWTH MINDSET IN THE CLASSROOM



Evaluation Report: Growth Mindset in the Classroom

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Abstract

This report discusses evaluation results for the first of three courses on training teachers to implement Growth Mindset practices. Growth Mindset, developed by psychologist Carol Dweck, addresses self-perception. In the context of the Growth Mindset training that was evaluated, Growth Mindset refers to the mindset of students in a classroom setting. This Growth Mindset course series was originally a workshop implemented in Oakwood School District, a K-12 environment. The workshop was proven successful in application as the teachers were engaged and seemed to enjoy the training, but there were no measures in place to determine actual gains toward course objectives or goals. Thus, the district issued a Request for Proposal (RFP) so the Growth Mindset training could be formally evaluated with data collected and used to improve the training program. This report contains evaluation results for the first course as well as recommendations for next steps.

This evaluation was conducted by a group of five Arizona State University graduate students: Tessa Etzioni, Freeman Pruett, Shannon Simmons, Aniesa Sakwall, and Lindz Lewandowski. The timeframe for this evaluation was five weeks, beginning March 26, 2018 and ending April 28, 2018. Effectiveness of the first Growth Mindset training course was measured in single group pretest/posttest field study. The evaluation team converted the first course, of the original three-course Growth Mindset training, to a 20-minute e-learning module. A sample group of 17 K-12 teachers then took the training online. Participant learning gains were measured through an online, multiple-choice/short answer pretest and posttest. Participant attitudes were measured through an online Likert Scale survey.

The evaluation reveals positive results and shows there was growth amongst learners in a variety of areas following course completion. Learners felt more confident and comfortable with Growth Mindset principles after completing the course. Learners also met the principle objective and mastered the Growth Mindset concepts in the course as revealed by the pretest and posttest data. Learners for this course were relatively familiar with the Growth Mindset ideology upon starting the training module but increased both their competencies and comfort with applying Growth Mindset concepts in the classroom. In addition, the results reveal that learners are ready to proceed with the training program and the additional courses to follow.

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Introduction

Overview

The purpose of this evaluation is to measure the degree to which educators comprehend the initial components that go into implementing Growth Mindset and how comfortable they are with using it in the classroom. The program is designed to give teachers a baseline level of knowledge regarding Growth Mindset in order to begin preparing them for implementation in the classroom. To begin with, teachers must feel comfortable identifying the components of this theory. The program has been developed with the idea that teachers will work through activities that equip them with Growth Mindset basics. The evaluation is aimed at measuring the degree to which the first course of the program is successful at instilling the baseline comfort and knowledge K-12 teachers will need to be successful proceeding with the other portions of this training program.

Program Description

Growth Mindset, developed by psychologist Carol Dweck, addresses self-perception. The Growth Mindset e-learning module that was evaluated here is the first course of a three-course series that instructs teachers how to utilize the principles of Growth Mindset in their K-12 classrooms.

This first course, and subject of this evaluation, asks teachers to identify the components of Growth Mindset in order to prepare them for further courses. The two additional courses of the program, which move learners through a process that has them classify, compare, and create Growth Mindset strategies, will be evaluated at a later date after the evaluation results from the first course have been reviewed.

Program Objectives

For this first course, the applicable learning objective is as follows: *given text and visual resources, learners will identify the components of a growth vs. fixed mindset with 100% accuracy.*

Program Components

In the first course of the Growth Mindset training, learners interact with materials exclusively online. The program asks learners to respond to a brief pretest (located in Appendix A) in order to measure prior knowledge regarding Growth Mindset before they begin the course. Learners then progress through the course material. The course is offered in the format of a *Nearpod* interactive, online presentation (slides are located in Appendix C) that takes approximately 20 minutes to complete. The materials include course content, which is presented in slides with videos that learners are instructed to watch. Learners are given a note-taking template and asked to organize their ideas using the template while viewing the instructional videos. After completing the course content, learners are instructed to take a short posttest (located in Appendix A, same as the pretest) and attitude survey (located in Appendix B). The purpose of each is to measure both learning and attitude changes that took place after completing the course, as well as gather information about learner attitude towards the course.

Statement of Purpose

The purpose of the evaluation was to draw precise conclusions about how well the first course of the Growth Mindset program is preparing learners for the remainder of the course

series. Since the purpose of the first course was to offer learners preemptive knowledge for the completion of the other parts of the course, the evaluation analyzes how proficient learners have become upon completion of the first course, and their attitudes towards the training itself.

Evaluation Steps and Major Questions Answered by the Evaluation

The evaluation team developed a 20-minute Growth Mindset e-learning module and asked participants to complete it online. As part of the e-learning module, participants were asked to take a pretest, posttest and attitude survey in order to address the following evaluation questions:

- Are learners able to identify components of the growth mindset?
- Are learners able to distinguish between a growth and fixed mindset?
- How comfortable are learners with the components of growth mindset?
- How likely are teachers to use these strategies in the classroom?
- Did learners feel the training provided valuable information?
- Did learners feel the training was interesting?
- Did learners feel the training was too long or too short?
- Did learners feel the training was well organized and easy to use?

Evaluation Methods

Participants

The participant group consisted of 17, K-12 teachers. Of that 17, only 11 completed all three of the required assessments (the pretest, the posttest and the attitude survey). Of those who completed the first course, one participant did not indicate grade level taught. However,

the remaining participants indicated they were teachers who worked in secondary education; all teaching grades 9 through 12 (Figure 1).

Grade Levels Taught by Participants

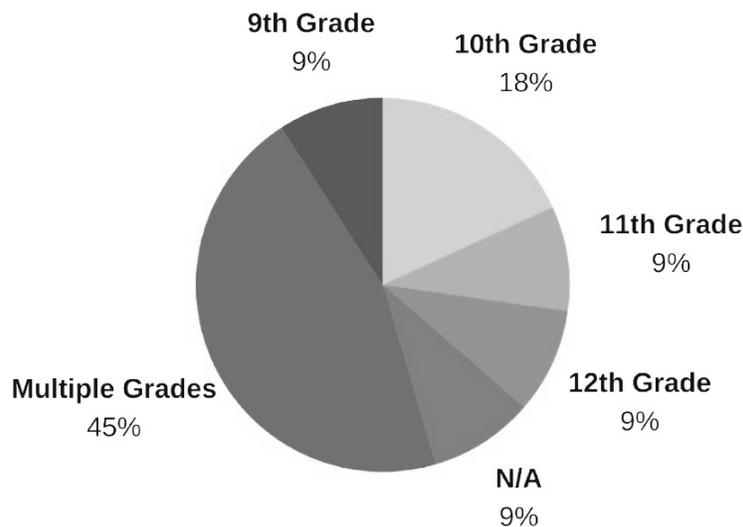


Figure 1: Grade Levels Taught by Participants

Data Sources

Data was collected pertaining to user performance and user satisfaction, so the evaluation team could draw conclusions about what the participants learned throughout the course and how comfortable they were with the training. With regards to performance, learners were asked to take pre- and post-assessments (located in Appendix A) that offered statements allowing participants to indicate what they learned throughout the course. These assessments were taken as Google Form questionnaires. Answers given during the survey were then organized into a database for easy analysis.

The instruments used for data collection of learner attitudes/user satisfaction (located in Appendix B) were also Google Forms. There were 10 statements offered to learners, which prompted them to rate their impressions of the program. All responses were ranked using a five-item Likert Scale (1-5), with the lowest (1) being “strongly disagree” and highest (5) being “strongly agree.” The survey included statements that were intended to glean learner satisfaction and comfort with different aspects of the course such as: length, quality of presentation, and effectiveness of the course material. Additionally, this portion of the course offered data that indicate the likelihood of transfer and how likely learners are to implement such strategies within the classroom.

In order to gather more in-depth qualitative data with regard to participant attitude towards the first Growth Mindset training course, follow up interviews are scheduled to be conducted via Skype in the next phase of evaluation.

Evaluation Procedures

On April 9, 2018, the evaluation team requested that 20, K-12 teachers complete the Growth Mindset e-learning module, asynchronously, within a time period of one week. These participants were provided with a link to the e-learning module via email. Of the 20 teachers asked, 17 completed the training, and of that 17, only 11 completed all three of the required assessments (the pretest, the posttest and the attitude survey). After the participants completed the e-learning module and the assessments, the data were analyzed by the evaluation team and cooperatively compiled into a report.

Results

The team analyzed the data provided by the participants who completed all aspects of the training including the pretest, posttest, and attitude survey. The pretest revealed that many of the participants that took the training had a prior understanding of what constitutes a Growth Mindset approach. The pretest questioned the comfort level of the participants with the training topic and included three separate questions about their current understanding of a Fixed vs. Growth Mindset. The level of comfort ranged between 1-5, with one being the least comfortable, and five being ready to implement. According to the pretest data (displayed in Figure 2 and Figure 3) the participants had an average of 3.27 with regards to their level of comfort with the topic of Growth Mindset and a median of 4. Posttest data revealed that after the training many of the participants were more comfortable with the approach of Growth Mindset being utilized in the classroom as evidenced by an increase in average to a 4.09. The increase of 0.82 in average and a .50 increase in median scores indicate there was a small, but evident, increase in participant comfort level with the subject matter after the training.

Participant Levels of Comfort			
	Average	Median	Scale
Pretest	3.27	4	1-5
Posttest	4.09	4.5	2-5

Figure 2. Growth Mindset Participant Levels of Comfort Results Table

Participants' Level of Comfort with Growth Mindset in the Classroom

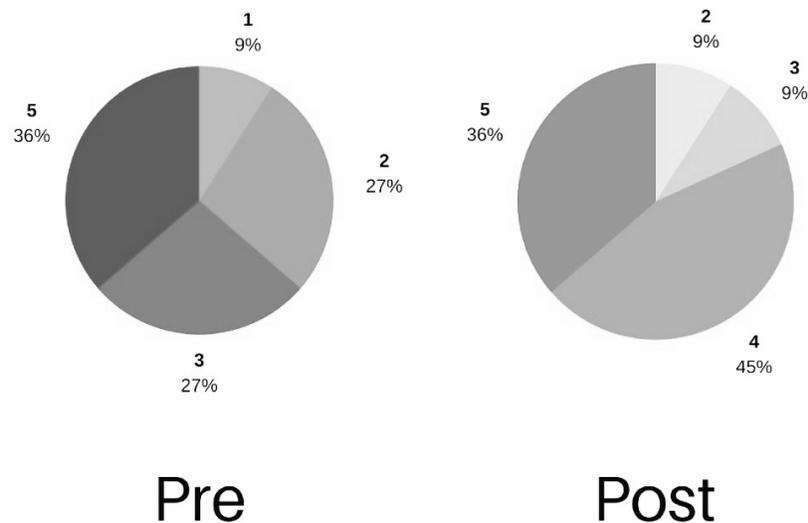


Figure 3. Growth Mindset Participant Levels of Comfort Results Graph

After further evaluation of pretest data, the results revealed that participants scored an average of 82% and had a median score of 6 on the questions pertaining to Growth Mindset knowledge, which were scored on a 0 to 6 scale (Figure 4 and Figure 5). According to posttest data, the average score for participants increased to 100%. This 18% increase in the average score indicates a rise in participant learning gain. The increase to 100% also suggests that participants fully met the learning objective for this course. The median score did not increase, which was expected due to the participants' knowledge of Growth Mindset prior to completing the training.

Participant Pretest/Posttest Scores			
	Average	Median	Scale
Pretest	82%	6	0-6
Posttest	100%	6	6

Figure 4. Growth Mindset Participant Pretest/Posttest Results Table

Quiz Results

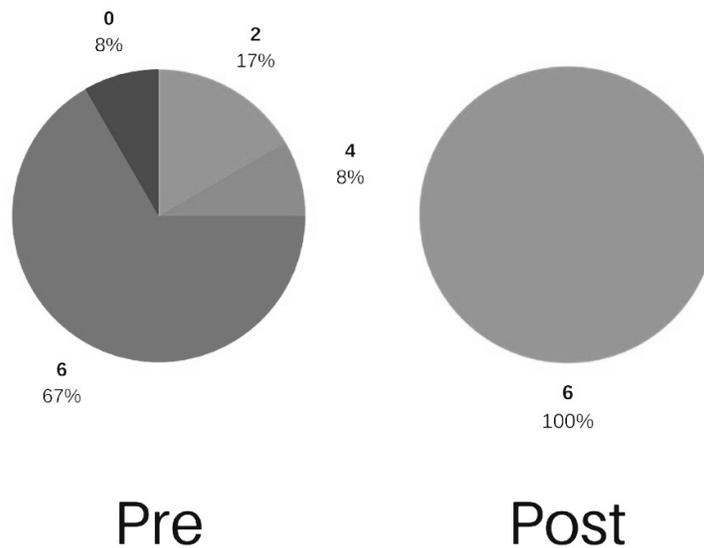


Figure 5. Growth Mindset Participant Pretest/Posttest Results Graph

The attitude survey was provided after all training and the pretest/posttest were completed. The attitude survey consisted of 10 questions that ranged between 1-5 on a Likert

scale, with one indicating that the participant strongly disagrees and five being strongly agree.

All participants answered each question. The data were analyzed and the scores are provided in Figure 6, which displays an average score and a median score for each survey question. Scores indicate that participants were generally comfortable implementing Growth Mindset in the classroom and can identify at least two strategies to promote Growth Mindset. Generally, participants thought the training content was well organized, that the length of the training was sufficient, and that the material was interesting. All of these areas had an average score of at least 4.3. The question that yielded the lowest average, a score of 4, pertained to participant knowledge of Growth Mindset before and after the training. Once again, this result is to be expected given participants' prior knowledge of Growth Mindset.

Participant Attitude Survey			
Question	Average	Median	Scale
1. Choose the level of comfort you have with implementing a growth mindset approach in the classroom.	4.3	4	1=Strongly Disagree- 5=Strongly Agree
2. I can identify at least two strategies that can be used to promote Growth Mindset.	4.5	5	1=Strongly Disagree- 5=Strongly Agree
3. The content was organized and easy to follow.	4.7	5	1=Strongly Disagree- 5=Strongly Agree
4. The length of training was sufficient.	4.5	5	1=Strongly Disagree- 5=Strongly Agree

5. The trainer was knowledgeable of the material.	4.7	5	1=Strongly Disagree- 5=Strongly Agree
6. The material presented was interesting.	4.8	4	1=Strongly Disagree- 5=Strongly Agree
7. The way the material was presented was an effective way for me to learn the material.	4.7	5	1=Strongly Disagree- 5=Strongly Agree
8. The material prepared me to create strategies to implement Growth Mindset.	4.2	4	1=Strongly Disagree- 5=Strongly Agree
9. I learned more than I previously knew about this subject, based on this training.	4	5	1=Strongly Disagree- 5=Strongly Agree
10. The resources materials given during this instruction were beneficial.	4.4	5	1=Strongly Disagree- 5=Strongly Agree

Figure 6. Growth Mindset Attitude Survey Results

Discussion

As stated in the introduction of this report, the major purpose of this evaluation was to discover how well the first course of the Growth Mindset program was preparing learners to continue on with the remaining portions of the Growth Mindset training. The assessments that were utilized in this evaluation aimed at identifying how proficient learners are with the material and their general attitude toward the program.

The results of the program, generally speaking, illustrate that the program is successful with its major goals. The data gathered which assessed the proficiency of the learners in growth mindset before and after the course indicate that the proficiency increased almost 20%. This increase in proficiency aligns with the course learning objective which states learners will master the course objective with 100% proficiency. Additionally, responses to the survey that was designed to measure overall satisfaction with the course were overwhelmingly positive. Considering the Growth Mindset program, in its entirety, is meant to prepare instructors with necessary information and skills to teach Growth Mindset in their individual classrooms, the question that identified comfort with implementation was also overwhelmingly positive.

Given that this was an introductory section of the course and, considering that the population assessed likely had previous exposure to the subject matter, the results of the pre- and post- assessments are in line with expectations. The participants were made up of mostly seasoned teachers who, in large part, already had at least a passing familiarity with Growth Mindset principles. Therefore, the change from what can be described as an above average level of understanding to perfect scores on the post assessment is predictable. However, this characterization of the results should not detract from the success of this portion of the program, as evident learning was demonstrated through these assessments.

Considering the stated purpose of the evaluation, the most revealing results came out of the attitude survey. Instructors may be able to comprehend the material, but the willingness to take that understanding and translate it into actual lessons that take place in the classroom is completely contingent on the attitude of the participant to the course. With this consideration

in mind, the results of the survey indicate that participants were comfortable with the material and were interested in utilizing Growth Mindset in their classrooms. This is an indicator of motivation to complete the remaining portions of the larger Growth Mindset program. It is clear that participants, overall, were happy with the course and found it useful. As stated, the averages for each response were above 4 on a Likert scale of 1-5. Notably, students ranked above a 4 when considering how Growth Mindset strategies could be used in the classroom; which indicates a strong likelihood of transfer.

There is another specific conclusion that can be drawn from the survey, which brings up the question of necessity of the course for this specific population. Among the survey items was a question that asks participants to compare their knowledge of this subject before and after the course. Still, ranking a 4 on the Likert scale out of 5, it is identifiable as the lowest scoring item and the reason for this is most likely the nature of the participant population. The participating group was exclusively teachers, who came into the course with background knowledge regarding the subject of Growth Mindset.

Granted, this is the first of three courses comprising a larger program that instructs teachers how to utilize Growth Mindset strategies. This first course is largely introductory and serves to provide teacher participants who are not familiar with Growth Mindset a basic foundation. However, a recommendation can be offered that considers the target participants before the course is offered. For example, when considering the program in its entirety, the option to test past this portion of the program should be offered. So, if participants score well enough on the pretest, then they should be given the option to move past it into more complex stages of the program.

The objective of this evaluation is to arrive at conclusions regarding how well participants can demonstrate baseline knowledge of Growth Mindset strategies and how comfortable they are with utilizing these strategies in their classrooms. All things considered, this evaluation illustrates that the program is a success in its pursuits. As stated, there are some issues in regard to the rigor that is being offered to this particular population. This can be remedied in various ways, such as offering participants the opportunity to test past this first part of the program.

In addition to adapting the course to better suit this particular set of participants, perhaps more consideration should be offered to the timing of the course with respect to where the participant is in their teaching career. This course was given to teachers without regard to the years of experience this particular group brings to the course. It may be most efficient to more carefully select participants. Perhaps the course should be offered to teachers that are in their first years in the classroom, which would make this material more significant and novel at this point in their teaching career.

This formative evaluation was conducted in order to give feedback that will inform future implementation. Since it was illustrated that the course was successful in its overall pursuits, it is the recommendation from this team of evaluators that the course continue to be offered as the introductory portion of the larger program. It clearly gives participants the baseline knowledge necessary for the following courses, and offers participants comfort and confidence necessary for future success with the program.

Project Cost

Time for this evaluation was billed hourly. The amount of time required and the associated cost for each portion of the evaluation is outlined in Figure 7:

Cost of Growth Mindset Evaluation	
Adaptation of original workshop to e-learning module: 5 hours x \$110 per hour	\$550
Coordination of participants: 5 hours x \$110 per hour	\$550
Compiling of results/data and final report: 20 hours x \$110 per hour	\$2200
Supplies/materials	\$500
TOTAL COSTS	\$3800

Figure 7. Cost of Growth Mindset Evaluation

Appendix A

Pretest/Posttest

Growth Mindset in the Classroom

Pre/Post survey to assess learner prior knowledge and current understanding of the components of fixed vs. growth mindset, specifically in a classroom setting.

Email address *

Valid email address

This form is collecting email addresses. [Change settings](#)

Name: *

Short answer text

What grade level do you teach currently? *

Short answer text

Choose the level of comfort you have with implementing a growth mindset approach in the classroom. *

	1	2	3	4	5	
No idea where to begin	<input type="radio"/>	I have the resources and am ready to begin!				

Identify at least two components of a fixed mindset. *

Short answer text

Identify at least two components of a growth mindset. *

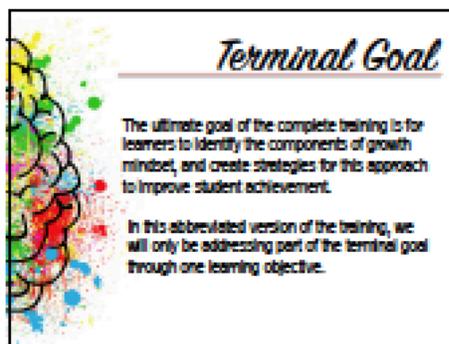
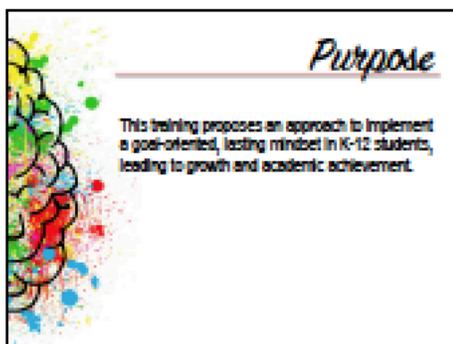
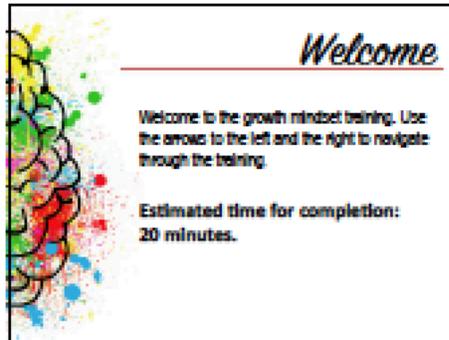
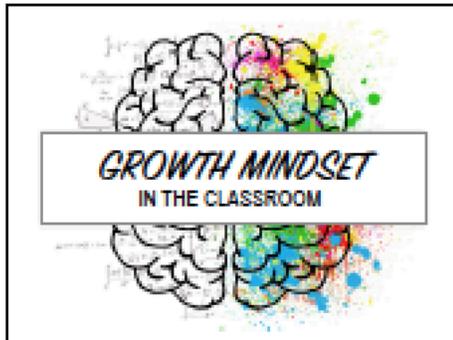
Short answer text

Provide a scenario about a fixed mindset classroom. What would be done differently to recreate it into a growth mindset classroom? *

Short answer text

Appendix C

Nearpod E-learning Module





But First...

Before we begin, please complete a short quiz to assess your prior knowledge about growth mindset.



Thank You!

Now you will begin a short training on how to identify the components of growth vs. fixed mindset.



Learning Objective

Given text and visual resources, learners will identify the components of a growth vs. fixed mindset with 100% accuracy.



Activity

Watch the following videos: *The Power of Yet* by Carol Dweck (11 minutes), and *What is Growth Mindset* (3 minutes) from mindsetkit.org.

Download and use the form provided on the next slide to take notes.



Activity cont'd

Now, using a piece of paper or a word processor, write an explanation of the components of growth vs. fixed mindset.



Lastly...

Please complete a short quiz and a survey. The quiz will assess the knowledge you have gained about growth mindset during this training. The survey will ask you to briefly evaluate the training.



The End

Thank you for completing the growth mindset training! We appreciate your participation.