

**EXPLORATORY STUDY OF FACTORS IMPACTING MINDSET IN
YOUTH INVOLVED IN THE INDIANA 4-H ANIMAL SCIENCE
PROJECT**

by
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A Thesis

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Master of Science



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PREVIEW

ABSTRACT

Author: Sajdera, Kelsey, A. MS

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Title: Exploratory Study of Factors Impacting Mindset in Youth Involved in the Indiana 4-H animal science Project

Major Professor: Colleen Brady

Youth develop beliefs about one's own ability at a young age, however feedback and information about the learning process can help youth understand that they can continually grow and learn. Their belief about their abilities is considered their mindset, a concept that has come forth by Dr. Carol Dweck. This research is based in the 4-H program and looking at the factors that can contribute to the mindset of youth involved in the animal science project through 4-H. The 4-H program is one of the largest youth development programs in the United States. This program involves over six million youth, 611,800 volunteers, and 3,500 professionals. With mounting research, scientists have come to believe that learning can be lifelong as the brain has greater capacity to develop than thought in the past (Dweck, 2006; Quendler & Lamb, 2016; Zuber-Skerritt, & Teare, 2013). Some believe that your mind can only take in so much and that max is a fixed integral while others believe in the lifelong learning. However, the 4-H program believes in lifelong learning and has a unique feedback system that allows youth to ask questions about the process of their project. Feedback according to Earley, Northcraft, Lee, and Lituchy (1990) can "provide information about the correctness, accuracy, and adequacy of work behaviors (p. 87)". There is always room for mistakes and having the chance to try again next year. In order to select the participants for this study the researcher grouped agricultural classrooms into one of the five 4-H districts. Then randomly selected five different agricultural classrooms to gather information about demographics, experiences of the youth involved, mindset, mastery, and feedback mechanisms. There was one district that the researcher could not find a school willing to participate thus data was collected from four schools. Questionnaires were completed by 255 students in their agricultural classroom. The study revealed that most of the youth

involved in animal science project have a growth mindset and receive the most feedback from their parents or other relatives, (19.3%). Additionally, mastery was related to the feedback received and the mindset of the youth. There is a significant correlation between the animal science project and the mastery of the content ($r = .279, p < .000$). By using Goal Orientation Theory (Schunk, Meece, & Pintrich, 2012) the researcher could find two main conclusions of mindsets and feedback of youth that are involved in animal science project. One conclusion being that 4-H really should utilize the volunteers and leaders to instill a growth mindset and allow a youth to master the material that they are interested in. Secondly, there was a correlation to the amount of feedback, type of feedback, and from whom the feedback came affected the mindset of the youth. Practical recommendations would be that those working with youth understand mindset, give intentional feedback. It would also be recommended that further research be done on the feedback that youth in animal science project receive. There were a few constraints to the study including only reaching four of the five 4-H districts as one district could not be contacted. However, with the data provided there was still a good number to analyze the mindset of youth that are involved.

CHAPTER 1: INTRODUCTION

Background

There is a lot of power in the small word ‘yet.’ Carol Dweck (2014) points out in her TED talk that using the word yet allows students to know that they have the capability of reaching their goal, but it has not happened ‘yet’, there is still room to grow. By developing a growth mindset there is a greater chance that one will master a skill, a person believes they can learn and grow from mistakes. Developing a growth mindset fosters the mastery of skills than compared to a fixed mindset. A fixed mindset is the belief that one has a set of abilities that cannot change, they are not malleable (Dweck, 2006). The ideology behind a growth mindset is that one can learn and grow, allowing them to reach their potential to master any skill. However, to develop a growth mindset, feedback is necessary and not any feedback but intentional feedback. The 4-H program has a feedback system but little research has been done to determine what type of feedback youth receive most or how often.

America's largest youth development organization, 4-H, has many youth and adult interactions (National 4-H Council, 2015). 4-H is a non-formal, voluntary program and is recognized in more than 50 countries that have programs very similar to the one in the United States (National 4-H Council, 2015). Feedback is a large part of 4-H; however, whether the youth realizes they are being given feedback or not can be situational. The feedback that is received can play a role on how a 4-H member views their own abilities and skill set. It is important that leaders, volunteers, and Educators give intentional feedback to the youth to help develop mastery and growth. Intentional feedback that is

provided praises the process of doing something well. For example, telling the youth "I really liked how you prepared your animal for the show. It looks as though it took a lot of work, but you did it and he/she looks great!" This type of praise acknowledges the process of doing something rather than the natural ability or talent that it takes to complete a project.

Significance of the Problem

The philosophy of mindset has been studied in many different areas, however, not including 4-H. There has been research on younger youth, adults, and business entities through Carol Dweck's (2006; 2014) work. Developing a growth mindset focuses on how making mistakes are a part of the learning process. The 4-H program encourages youth to become inspired to learn and grow by "making the best, better," which is the 4-H motto (National 4-H Council, 2015). In order to make the best, better there needs to be intentional feedback focused on developing a growth mindset. Thus, this research aims to begin to fill the gap of research on the mindset of youth involved in 4-H while comparing the feedback that is received to the mastery and mindset. By exploring mindset, new doors can be opened to help Educators, leaders, and volunteers understand what is meant by a growth and fixed mindset. As a result, Educators and adult volunteers involved in the 4-H program can tailor the feedback, praise, and learning experiences provided to youth in an effort to foster a growth mindset and a higher degree of mastery.

The 4-H youth programs are designed to promote mastery, one of the four essential elements, which can be developed through a growth mindset (Ivey, 2005; Martz, Mincemoyer, & McNeely, 2016). While there has been research conducted on the outcomes of 4-H participants, there has been no study to describe the mindsets that 4-H

youth possess (Martz, Mincemoyer, & McNeely, 2016). There are many different projects that are included in the 4-H program but this research specifically targets animal science projects as National 4-H's annual report for 2016, showed 3 million animal science projects were completed making it one of the most highly enrolled projects (National 4-H Council, 2015). Because of this, animal science projects were the focus of the study as these projects involve a process of caring for the animal, preparing for the show, and showing the animal. Within the animal science project there is great diversity such as the showing, grooming, and activities that youth can participate in, this research will explore the difference in mindset among 4-H youth participating in the various species areas.

It is the hope of the researcher that after answering these questions, there will be a way to inform Educators and adult volunteers about which mindset youth have and how to use feedback to develop a growth mindset.

Significance of the Study

This study will be able to inform those that work with and develop youth programs. When understanding mindset, there can be a shift from feedback to intentional feedback about the process of caring for animals or learning about the animal that they have exhibited. By exploring youth mindset, the researcher will be able to make recommendations on how to enhance volunteer and staff training that will impact positive youth development. In addition, Extension Educators will be aware of the mindsets that youth possess in the 4-H program allowing them to adapt their activities. A better understanding of the mindset of youth will allow Educators, volunteers, and others involved to enhance the programs offered. This research can also inform how to

encourage and positively influence youth in the 4-H program to develop life skills that will prepare young adults.

Purpose and Research Questions

The purpose of this study is to explore the impact on mindset in relation to the feedback youth receive and mastery of skills by youth involved in Indiana 4-H. Animal science project were used as the platform for the following research questions that will guide this study:

1. What mindset (growth or fixed) do Indiana 4-H animal science project participants exhibit?
2. What type of feedback and to what degree do Indiana 4-H animal science project participants receive from 4-H Educators and adult volunteers who work with them?
3. In regards to Indiana 4-H animal science project participants, is there a relationship among: 1) youth's mindset type; 2) type of feedback received from 4-H Educators and adult volunteers; and 3) the amount of feedback received?
4. What is the correlation between growth mindset in 4-H youth participating in the Animal Science project and their perceived mastery of Animal Science project content?

Assumptions

The researcher identified the following basic assumptions for this study:

- Indiana 4-H animal science project members in Agriculture classrooms are representative of 4-H animal science project members of their age group.

- Youth will answer the questionnaire completely and honestly.

Limitations

The following limitations for this study are recognized by the researcher and may reduce the ability to generalize findings:

- The researcher allowed the individual to self-define involvement in their project on the survey instrument.
- Those that completed the survey has already passed the attrition rate, they are high school students that have more than likely completed almost ten years of 4-H.
- A convenience sample was used due to the availability of participants.
- Generalizability of the research is narrowed to the youth that are involved in the Indiana 4-H animal science project area.

Definition of Terms

4-H: America's largest youth development organization—empowering nearly six million young people across the U.S. with the skills to lead for a lifetime. Through our community of 100 public universities, 4-H reaches kids in every corner of America - from urban neighborhoods to suburban schoolyards to rural farming communities. Our network of 500,000 volunteers and 3,500 4-H professionals provides caring and supportive mentoring to all 6 million 4-H'ers, helping them grow into true leaders today and in life.

4-H Essential Elements: The main idea and the critical elements as supporting pieces of the 4-H program.

Animal Science Project: Project in which youth raise livestock or companion animals, the youth raise and care for an animal as they learn about the nutrition and management of specific species, while fostering decision-making, nurturing, self-motivation, and resiliency life skills (Purdue Extension, 2015).

Fair Judge: A person who is hired to evaluate project that 4-Hers exhibit.

Feedback: Information about reactions to a product, a person's performance of a task, etc., used as a basis for improvement.

Feedback (Intentional): Feedback that is aimed at the process that the learner is doing, rather than the outcome.

Feedback (Verbal): Information about reactions to a product, a person's performance of a task, etc., used as a basis for improvement given through words.

Feedback (Written): Information about reactions to a product, a person's performance of a task, etc., used as a basis for improvement that is written down.

Mastery: The building of knowledge, skills, and attitudes and the demonstration of the competent use of this knowledge and skill to be a proficient practitioner (Martz, Mincemoyer, & McNeely, 2016).

Mindset: A belief about your own abilities (Dweck, 2006).

Mindset (Fixed): The belief that we have a certain capability and there is no need to put in effort or practice since they should already have those talents (Dweck, 2009).

Mindset (Growth): The belief that your basic abilities can be improved through effort and practice (Dweck, 2006).

Positive Youth Development: Strength-based conception of adolescence, emerges when the potential plasticity of human development is aligned with

developmental assets by using the five C's (competence, confidence, connection, character, and caring) (Lerner, Almerigi, Theokas, & Lerner, 2005).

Static Project: A project that is exhibited as a poster such as photography or that can exhibited in a building such as foods.

PREVIEW

CHAPTER 2: LITERATURE REVIEW

Introduction

The literature review is composed of information regarding mindset, 4-H youth development, and feedback systems. Mindset was reviewed first to better understand the need of the study within the 4-H program area. The 4-H program was then reviewed to better understand the elements of 4-H, more specifically the element of mastery and how it can be connected to mindset. The element of mastery and mindset lead into looking to feedback mechanisms of 4-H to better understand how feedback contributes to mindset and mastery within the animal science project.

Mindset

Observing and analyzing how youth interact in different circumstances can lead to thinking that some are naturally smart and others not as smart. However, this natural ability can be either enhanced or hindered at a young age. With mounting research, scientists have come to believe that learning can be lifelong as the brain has greater capacity to develop than thought in the past (Dweck, 2006; Quendler & Lamb, 2016; Zuber-Skerritt, & Teare, 2013). Some believe that your mind can only take in so much and that maximum is set at a specific criteria while others believe in the lifelong learning process. For example, a youth may have had a bad experience in school and were not the top performing student, generating their mentality that they thought would not be at the top of the class. They were not on the top and that was all there was to it, you were the best or you were not going to be good at all. In contrast, when a parent tells their child

that they did a great job, this encouraged the child to believe that they are able to continue to learn and grow even though they would not be at the top of the class. At the same time it is important to not dilute mindset and compliment solely on effort as this will only perpetuate the failed self-esteem movement. While there are two mindset types everyone is a mixture of both (Dweck, 2015). Figure 2.1 shows the growth and fixed mindsets in a flow chart to better explain the differences of the two mindsets (Dweck, 2009).

PREVIEW

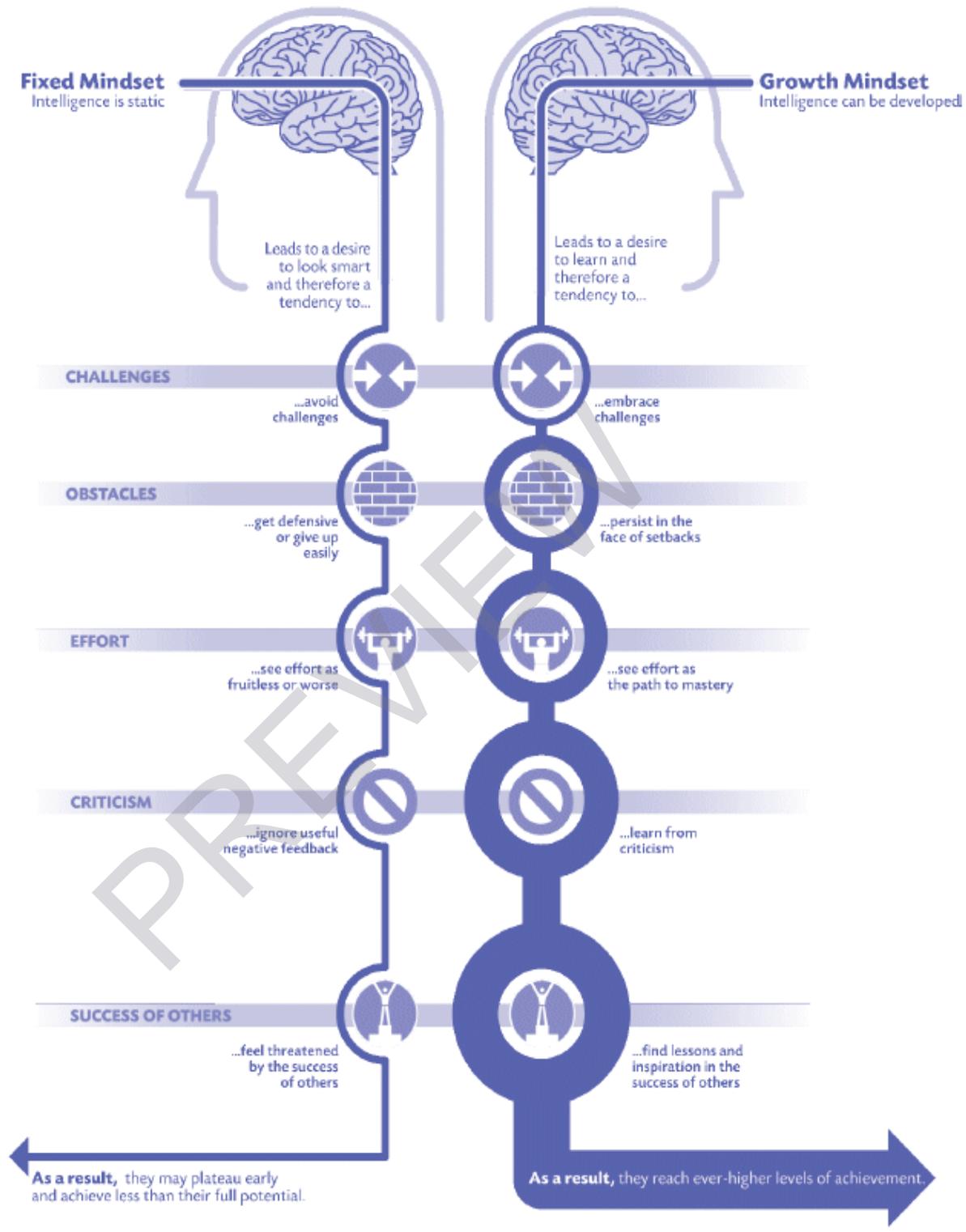


DIAGRAM OF MINDSETS BY NIGEL HOLMES

Figure 2.1 Mindset Flow Chart (Dweck, 2009)

Based on research by Crooks (1988), there is evidence that children up to the age of 10 look at learning as an ability that can be gained through effort, however, older children and adults view this ability as stable. This research could provide reasoning into how adults praise and encourage their child leading their child to develop a fixed mindset. Another example of how a fixed mindset may develop is when an adult praises the work of more skilled youth, while ignoring the efforts of those less skilled. According to Dweck (2006), mindset is a belief that a person has about their own abilities and whether those abilities can be changed or are a fixed asset.

In the field of evaluation, researchers have found that learners place more importance on the performance of a task rather than the learning and understanding of content (Crooks, 1988; Thiele, 2016). The evaluation process for 4-H is done through judging, judges are hired to rank the project. This evaluation can then lead to a fixed mindset as the youth think their ability is only as good as their project in 4-H. However, one can also view this evaluation process used by 4-H in a growth mindset as the judge provides feedback and the youth can come back with a better project the next year (Indiana 4-H, 2004).

Fixed Mindset. A person with a fixed mindset believes they have a certain capability and cannot go any higher than that level of achievement. They feel they should not need to put in effort or practice since they should already have those talents, so there is no reason to improve. Dweck (2009) lists three rules that a fixed mindset person would follow:

1. Look talented at all costs;
2. Do not work too hard or practice too much; and
3. When faced with setbacks, run away or conceal your deficiencies.

There is a feeling of urgency to prove themselves repeatedly (Dweck, 2006). It is important for that person to prove it because they believe that they only have so much of that talent or ability. These people tend to avoid risks and challenges to be sure they do not look bad or make any mistakes.

These three rules highlight how the fixed mindset works. They believe they are judged on all their "performances" and must not fail in front of others. Any exposure of weakness, failure, or rejection can be catastrophic to themselves considering this is all the ability they have. Dweck (2009) gave college students and adolescents a choice between hard challenges that would foster growth and learning or an easy task that would be done quickly. Those with a fixed mindset took the easier task to look smart. This does not mean that those with a fixed mindset fail. However, those with a growth mindset often start to catch up or outperform those with a fixed mindset.

Growth Mindset. The growth mindset is the belief that your basic abilities can be improved through effort and practice (Dweck, 2006). When a person with a growth mindset fails, they figure out what went wrong and learn from it. They feel in control of their abilities and do not perform based on judgments by others. Challenges are welcomed and confronted with energy to take the risk, in hopes of succeeding but always learning. Like the fixed mindset, Dweck (2009) has three rules that the growth mindset person tends to follow:

1. Learn, learn, learn
2. Work with passion and dedication - effort is the key
3. Embrace your mistakes and confront your deficiencies.