STAKEHOLDERS PERCEPTIONS OF ORGANIZATIONAL GOAL ATTAINMENT AT THE SECONDARY SCHOOL LEVEL THROUGH THE LENS OF AUTHENTIC LEARNING THEORY

A Dissertation

presented to

the Faculty of the Graduate School

at the University of Missouri-Columbia

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

---

by

JONTHAN M. HART

Dr. Nissa Ingraham, Dissertation Supervisor

July, 2020

The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

STAKEHOLDERS PERCEPTIONS OF ORGANIZATIONAL GOAL ATTAINMENT AT THE SECONDARY SCHOOL LEVEL THROUGH THE LENS OF AUTHENTIC LEARNING THEORY

presented by Jonathan M. Hart

a candidate for the degree of doctor of education,

and as a result of this certify that, in their opinion, is worthy of acceptance.

_____

Dr. Nissa Ingraham

_____

Dr. Timothy J. Wall

_____

Dr. Tyler Tapps

_____

Dr. Dana Melton

DEDICATION

To the students we serve and teachers who find passion in making a difference.

ACKNOWLEDGMENTS

There are a lot of people who have helped along the way. There is no way I could possibly thank all of you individually for what you have meant and mean to me. The friendship and love you have given me not only through this paper, but life has taught me more and changed me more than any degree ever could. This is for all of you.

TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

ABSTRACT

School systems in PK-12 are being challenged to incorporate real-world learning into their curriculum to better prepare students for success after graduation (Karakas-Özür & Duman, 2019). As high school organizations are beginning to apply authentic learning strategies, there is a gap in knowledge for implementation as much of the research has be conducted at the collegiate or adult learning levels. The research question: What are head administrators' and teacher participants, in three midwestern secondary authentic learning programs, perceptions of Authentic Learning Theory (ALT) best practices being implemented to achieve their program goals? This multi-case study used document analysis, interviews, and focus groups to find most promising authentic learning strategies of three high school authentic learning organizations. The study used the ALT, and more specifically Herrington, Reeves, and Oliver's (2009) Nine Characteristics to Achieve Authentic Learning Environments, as the theoretical framework. The research found an overarching theme to be a shift in mindset in head administrators and teachers. It also revealed new authentic learning practices beyond the nine characteristics of Herrington et al. (2009). This research provides a better understanding of ALT, its most impactful practices for practitioners at the secondary level, and data for future researchers.

SECTION ONE

INTRODUCTION TO THE BACKGROUND OF THE STUDY

Background of the Study

The goal of education in the United States was to "promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access" (U.S. Department of Education," 2020, p. 1). With the best intentions in mind, education has not evolved at the same rate as the needs of its consumers (Brkich, 2013). The obedient conformity of accumulating then repeating information was once useful to an industrial society (Pearce, 2016). The 21st century has demanded skills, such as curiosity, collaboration, problem-solving, and a deeper understanding of the world (Pearce, 2016). As the demand for these types of skills have grown, educators have realized not only did they need to redefine success, but they also needed to restructure the approach in which to achieve it (Parker, Maor, & Herrington, 2013). For the last 40 years, adult academics have been exploring authentic learning theory (ALT) with outcomes that better prepared learners for life after graduation (Parker et al., 2013). The PreK-12 public educators have seen the benefits and have begun experimenting with ALT practices (Snape & Fox-Turnbull, 2013). Since ALT curriculum at the high school level was just being introduced, little was known about best ALT practices for that age group (Brkich, 2014). This provided a better understanding of ALT practices at the secondary level (Munawaroh, 2017). This study provided insight for secondary ALT practitioners to strengthen their pedagogy and inform scholars for future research (Munawaroh, 2017).

The history of the United States public education began April 23, 1635, in Boston, MA, with the Boston Latin School (Crooks, 2013). This led to the Massachusetts School Law of 1642, which mandated parents taught their children to learn reading, writing, and the law of the land (Jernegan, 1918). The citizens did not follow the Massachusetts School Law of 1642, so in 1647, the Old Deluder Satan Act was passed (New England Historical Society, 2020). The law required that a town with more than 50 families established a reading school known as dame schools (New England Historical Society, 2020). If a town had more than 100 families, a reading school and a grammar school was required to be established (New England Historical Society, 2020). At that time, schools were without any centralized education system (New England Historical Society, 2020). The decentralization motivated former President Thomas Jefferson in 1817 to promote the Bill for Establishing a System of Public Education, but his requests went unheard (Carpenter, 2013). In the early 19th century, the Monitorial System, created Bell and Lancaster, started being adopted by many US schools (Cunningham & LaMarca, 2015). This system used more scholarly students to teach students who were less educated (Cunningham & LaMarca, 2015). This method was also known as the Madras System, Lancasterian System, the Bell Lancaster Method, or the Mutual Instruction (Cunningham & LaMarca, 2015). The Monitorial System was challenged and later overtaken by Stow's Glasgow System, or the Training System, (“The Glasgow,” n.d.). The Training System recommended professionally training teachers to teach students (“The Glasgow,” n.d.). This method was used by Horace Mann to shape the U.S. educational system (Watters, 2015).

In 1837, Mann, became the first secretary of the Massachusetts State Board of Education (Sass, 2020). He spearheaded the creation of teacher training schools to professionalize teaching (Sass, 2020). Mann also was the first to establish teacher training schools called normal schools (Sass, 2020). The first normal school in the U.S. was in Lexington, MA, and established in 1839 (Sampaolo, 2016). The curriculum for teachers going through a normal school was an intense two-year program covering no less than 25 separate courses (Brown, 1919). Mann then established common schools (Sass, 2020). Common schools were an effort to establish a public-school system supporting elementary and secondary education (Sass, 2020).

Mann modeled the school system after the Prussian model of education (Hyde, 2012). Mann used it, because the Prussian model fostered obedient workers, soldiers, civil servants, and clerks, who thought alike about major issues (Hyde, 2012). Mann liked the Prussian model, because it created the human resources needed for the future (Gatto, 2000). Mann viewed this as a great advantage, as this was during the United States Industrial Revolution (Rose, 2012). The goal was to intellectually condition students for obedience, subordination, and collective life ideals (Hyde, 2012). Prussian Model was described as an assembly line to create human capital for the workforce (Watters, 2015). In 1867, Barnard supported Mann's vision and continued to when he became the U.S. commissioner of education in 1867 (Steiner, 1919).

The responsibilities of the position were to formulate educational policy and to coordinate education at a national level (Encyclopedia.com, 2020). Barnard continued to use the Prussian model and spread it across the United States (Steiner, 1919). The Prussian model of education utilized a one-room schoolhouse (Mydland, 2012). In a one-

room schoolhouse, one female teacher taught all the children gathered, no matter the age (Mydland, 2012). Teachers used a teacher-centered transmission approach (Breunig, 2017). To represent the spread of the Prussian model of education across the US, from 1860 – 1920, more than 200,000 one-room schoolhouses were constructed (Mydland, 2012). These widespread phenomena of the Prussian model were the foundation for modern public education.

For more than a century, the U.S. has used the Prussian model for education (Watters, 2015). In 2015, at Emerson High School in Oklahoma City OK, chalkboards were discovered from 1917 (Hohenadel, 2015). The content on the board was the same curriculum and the same methodologies used to educate students today (Hohenadel, 2015). A one-room schoolhouse classroom layout from the 19th century was comparable to most classrooms in schools, and they looked remarkably similar (Pavlekovish 2018). The student's seats were in rows and columns for the lecture method of teaching (Hussain, Azeem, & Shakoor, 2011). This type of learning was what Preble and Gordon (2011) referred to as the "graveyard model of education," where students sit silently and motionless in rows (p. 112). Traditional education has had the introduction of evolving technology, learning theories, students in the classroom, and the world surrounding them, yet education has remained essentially unchanged (Karakas-Özür & Duman, 2019).

Statement of Problem

The educational system in the country has evolved over the years (Church, 2020). According to Brkich (2013) "Educators, as a whole, are facing increased pressures of conservatism and accountability as applied to their curriculum, resulting in excessive test preparation, narrowed curricula, and an inability to prepare students satisfactorily for

their lives as adult citizens" (p. 63). Hill and Smith (1998) adds "Education for the new millennium must provide authentic educational experiences for our youth. Closing the gap between school life and workplace life is an important step in this direction" (p. 32). Pearce (2016) agrees, "The outcome of any schooling or education system should be to send students into the world prepared for both their personal and professional lives" (p. 3).

In more recent years, some public-school organizations have turned to the authentic learning theory (ALT) to help bring the real world into education (Parker et al., 2013). As Lombardi (2007) wrote, "Going beyond content, authentic learning intentionally brings into play multiple disciplines, multiple perspectives, ways of working, habits of mind, and community" (, p. 2). ALT has made the learning environment as close to real life as possible (Koksal, 2019).

The ALT was a constructivist approach to learning, which meant people constructed their knowledge and understanding of the world through experiences. (Luo, Murray, & Crompton, 2017). Over the past few decades, collegiate education has begun to take a more constructivist approach to their curriculum, and ALT has become more applied (Parker et al., 2013). Until the last two decades, the collegiate and adult learning levels have used ALT (Kaider, Hains-Wesson, & Young, 2017); this has created research findings for best teaching strategies catered for those age levels (Kaider, Hains-Wesson, & Young, 2017).

As more secondary-aged programs began to implement ALT tenets into the curriculum, teaching roles and pedagogy have changed (Fox-Turnbull & Snape, 2011). Research continued for ALT, but the data for most promising practices to implement

ALT was not specific for use in secondary public education. A gap in knowledge existed between the tenets of ALT and how secondary ALT organizations used ALT to achieve these goals.

Purpose of the Study

As traditional education was influenced to change educational goals, more secondary organizations abandoned the transmission method of education and shifted to a more student-centered constructivist approach (Van Aalst, 2009). To achieve constructivist learning, some secondary organizations used ALT (Roelofs & Terwel, 2009). While district's administrators introduced ALT into their curricula, ALT's most promising practices at the secondary level had minimal research offerings (Brkich, 2013). Most of the ALT research focused on adult learners (Herrington, Reeves, & Oliver, 2009; Newmann & Wehlage, 1993). The lack of research at the secondary level caused a lack of specificity and differentiating opinions on the best characteristics necessary for ALT to have been successful (Snape & Fox-Turnbull, 2013). This study added to the existing body of knowledge and filled gaps in ALT's most promising practices to achieve secondary ALT organization's goals (Munawaroh, 2017).

Research Question

The overarching question which guided this study was: What are head administrator and teacher participants, in three midwestern secondary authentic learning programs, perceptions of Authentic Learning Theory best practices being implemented to achieve their program goals?

Theoretical Framework

The theoretical framework used in this study to discover the most promising practices of secondary authentic learning theory organizations was the principles of the authentic learning theory (ALT), but more specifically Herrington et al.'s (2009) Nine Characteristics of Authentic Learning Environment. The ALT's beginning came from the constructivist ideology and was rooted in the sociocultural theory, zone of proximal development, situated learning theory, and cognitive apprenticeship (Lasry, 2006)

Constructivism

The authentic learning model was an education model founded in the constructivist philosophy of learning (Har, 2013). Constructivism was the notion that learners build, or construct, knowledge on preciously gained knowledge (Cobern, 2012). Other theories based around constructivism were Vygotsky's (1978) sociocultural theory and zone of proximal development, Lave and Wenger's (1991) Situated Learning Theory, and Brown, Collins, and Duguid's (1989) Cognitive Apprenticeship. The emphasis of ALT was that when it was utilized in learning settings, the scenarios needed to be as close to real-life as possible (Lewis & Williams, 1994).

Authentic Learning Theory

Many researchers agreed authentic learning was an educational theory that made positive impact on learning (Westberg & Leppien, 2018). These researchers all agreed the closer to real life the learning was the more beneficial it was to the person learning (Pearce, 2016). Although there was agreeance on the usefulness of ALT as a tool, there were differentiating opinions on the best way to achieve ALT in education (Snape & Fox-Turnbull, 2013). This study used Herrington et al. (2009): Nine Characteristics to

Achieve Authentic Learning Environments as the framework to recognize authentic learning practices being implemented.

Nine Goals of Authentic Learning Theory

Herrington et al. (2009): Nine Characteristics to Achieve Authentic Learning Environments, and these characteristics were supported by Koksal, (2019), Luo, Murray, and Crompton. (2017), Wornyo, Klu, & Motlhaka (2018) and others in their research on ALT. The Nine Characteristics to Achieve Authentic Learning Environments: real world relevance, authentic activates, expert performance and modelling, multiple roles and perspectives, collaborative construction and knowledge, reflection for enabling abstractions, articulations for tacit knowledge to be explicit, coaching and scaffolding by teacher, and integrated assessment of learning in tasks.

Methodology

This qualitative multi-case study gathered the participants' perspectives on secondary authentic learning theory (ALT) programs through interviews, focus groups, and document analysis (Creswell, 2014; Merriam & Tisdell, 2016). The study employed a constructivist worldview because of the complexity of the participants' perspectives collected (Creswell, 2014). The members of the three organizations explored by the researcher were typical of a secondary ALT organization (Hill & Smith, 1998). The input from members of the three programs provided insight into the situations, events, and an overall holistic view of ALT secondary programs. This study used the data collected from the multi-case study to compile promising practices of secondary ALT programs, according to Jupp (2006), making it a “good practice study” (p. 130).

Design of Study

In this qualitative multi-case study, the researcher gathered the perspectives of participants in three secondary ALT schools. Through interviews, focus groups, and on-line document analysis, the researcher sought to find practices in ALT pedagogy (Creswell, 2014; Merriam & Tisdell, 2016). As stated by Merriam and Tisdell (2016), these three data collection techniques were used to achieve triangulation, validity, trustworthiness, and to avoid bias in the study. Additionally, Walliman (2017) defined triangulation saturation as the combination of data from multiple sources. Creswell (2014) claimed triangulation builds coherent justification of themes, and Tong, Sainsbury, and Craig (2007) added it can provide a more sophisticated understanding of the phenomenon. Baxter and Jack (2008), Creswell (2014), and Law et al. (1998) all agreed triangulation of data also promoted trustworthiness by avoiding bias.

Merriam and Tisdell (2016) recommended using a theoretical framework so the researcher could use existing theories and concepts to inform the study. Creswell (2014) suggested using a theoretical framework as a "transformative perspective that shapes the types of questions asked, informs how data are collected and analyzed and provides a call for action or change" (p. 65). Herrington et al.'s (2009) Nine Characteristics of Authentic Learning Environment was the theoretical lens to guide the researcher in this study.

The questions used to guide the research during the on-line data collection, interview, and focus group were open-ended questions as recommended by Kumar (2019). (see appendix A and B). Law et al. (1998) claimed open-ended questions provided the participants with a better opportunity to express themselves freely, resulting

in a greater variety of information. Kothari (2004) supported this by stating, "Such questions give the respondent considerable latitude in phrasing a reply" (p. 103). The interview and focus group data were Zoom recorded. As recommended by Krueger and Casey (2015) and Merriam and Tisdell (2016) the recordings were transcribed verbatim, using an on-line transcription service so accurate coding took place. Creswell (2014) suggested the transcripts member checked, or checked for accuracy, by the participants to internally validate the data. Misinterpretations and biases of the researcher were eliminated due to internal validation (Seidman, 2013).

Once the transcripts were member checked, the transcripts and the on-line documents were open coded to allow themes and patterns to emerge (Creswell, 2014; Merriam & Tisdell, 2016). The vocabulary recognized these themes and patterns used to answer the questions (Creswell, 2014; Krueger & Casey, 2015; Merriam & Tisdell 2016). Once themes emerged, comparative analysis to Herrington's nine goals/charateristics was performed. Repetition of ideas aligned with the words, theories, and tenets of the ALT framework defined themes and patterns (Creswell, 2014). Each organization's data was coded using open coding, then coded again using axial coding (Creswell, 2014; Merriam & Tisdell, 2016). Axial coding was used to organize the open coding data results into relating schemes related to the central research question (Merriam & Tisdell, 2016).

Taking Creswell's (2014) suggestion, the researcher was reflective of possible bias. The researcher had been an instructor in a secondary ALT organization for the last five years. The researcher was aware of their own positive perception of ALT in secondary education. This positive perception was a motivating factor in finding promising practices in secondary ALT organizations to share the findings with the

participating organizations and other secondary ALT programs. To avoid confirmation bias, the researcher used three data collection methods and three different samplings from three different secondary ALT programs (Merriam & Tisdell, 2016). The researcher was transparent and thorough with their data collection and findings to create a clear audit trail (Merriam & Tisdell, 2016).

Participants

The three northwest Missouri secondary ALT programs were from school districts classified as rural and suburban, according to the Missouri Department of Elementary and Secondary Education (MODESE) (MODESE, 2018). The organizations were within a 29-mile radius of each other in the state. Each organization was given a pseudonym. The pseudonyms for the organizations were 1E Organization (1E), 2E Organization (2E), and 3E Organization (3E). A pseudonym protected the anonymity of the organizations (Creswell, 2014).The first sampling was a bounded system within each of the three organizations, creating two groups of participants: (a) the head administrator and (b) faculty participants of the ALT programs (Kumar, 2019). These two samplings were selected to reach saturation from their variety of perceptions (Creswell, 2014). All participants provided oral consent to the purpose of the study, procedures involved in the research, all foreseeable risks and discomforts to the subject, successes of the research, length of time, statement of voluntary participation, as well as the participants' rights to confidentiality and rights to withdrawal (American Educational Research Association, 2011; Fink, 2013; Seidman, 2012). (see appendix C).

Head Administrator

One participant from each organization was the head administrator of each organization. The head administrator was a purposeful sampling (Merriam & Tisdell, 2016). They were purposeful, because they were key informants due to their unique viewpoints, statuses, and knowledge of the program (Law et al., 1998). Their job was to direct programming, to hire/fire staff, to manage budgets, and to oversee the attainment of the organizations' goals.

Teachers

One focus group from each organization consisted of at least three teachers per organization. An e-mail went out to the teachers in the ALT organization with a brief description of the study, requesting volunteers to participate and to establish a communication line. (see appendix D). The bounded system was the first tier of a two-tiered system, and the second tier was the teachers' chosen sampling (Merriam & Tisdell, 2016). Once the teachers volunteered, communication occurred to establish times to meet for the focus group to provide input.

Data Collection

The data collection tools for each organization were on-line document analysis, interviews with the head administrators, and focus groups of teachers for triangulation (Creswell, 2014). These three data collection techniques were to achieve saturation, validity, and trustworthiness and to avoid bias in the study (Merriam & Tisdell, 2016).

On-line Documents

The on-line data collection was from each ALT organization's website. The data collection was a purposeful sampling because it was the only website for the organization

(Merriam & Tisdell, 2016). Using the aforementioned questions, the researcher examined the websites for patterns and themes from the websites similar to Herington et al.'s (2009) nine goals (Merriam & Tisdell, 2016). The websites were each given a pseudonym aligned with the pseudonym given to the organization it represented. The pseudonyms were Website 1E (W1E), Website 2E (W2E), and Website E3 (W3E). The pseudonyms protected the anonymity of the organizations (Creswell, 2014).

Interviews

The interview was conducted with the head administrator of each organization. An e-mail was sent to the head administrators to schedule the interview times for approximately an hour interview (Seidman, 2012). The head administrators were given a pseudonym like the pseudonym given to the organization they represented. The pseudonyms were Head Administrator 1E (HA2E), Head Administrator 2E (HA2E), and Head Administrator 3E (HA3E). The pseudonyms protected the anonymity of individuals (Creswell, 2014). The interviewees did not receive the questions beforehand. The interview questions were open-ended to permit free response and to avoid bias (Kumar, 2019). The interviews were recorded through Zoom and transcribed verbatim, using an on-line transcription service, so accurate coding took place (Merriam & Tisdell, 2016). The interviewee had the opportunity to member check the transcripts. Member checking internally validated the data (Creswell, 2014; Merriam & Tisdell, 2016; Seidman, 2013).

Teacher Focus Groups

The focus groups for data collection was at least three teacher participants of the ALT organization. The sampling was random, as all the teachers of the organization received the opportunity to volunteer for the study. Random sampling added to the

finding's validity (Kothari, 2004; Merriam & Tisdell, 2016). After the time was approved by the head administrator to conduct the focus group, blind carbon copy e-mails were sent to the participants to set up a time for focus group to take approximately an hour (Seidman, 2012). Each focus group was given a pseudonym per the pseudonym given to the organization to which they belonged. The pseudonyms for the focus groups were Focus Group 1E (FG1E), Focus Group 2E (FG2E), and Focus Group 3E (FG3E). Pseudonyms were also given to the individual teachers. Those pseudonyms were names given to the teachers at random to protect the anonymity of individuals (Creswell, 2014). The focus group did not receive the questions beforehand. The questions were open-ended to permit free responses and to avoid bias (Creswell, 2014). The focus group was Zoom recorded and transcribed verbatim, using an on-line transcription service, so that accurate coding occurred (Merriam & Tisdell, 2016). The focus group participants had the opportunities to member check the transcripts, which internally validated the data. (Creswell, 2014; Merriam & Tisdell, 2016).

Data Analysis

The interviews and focus groups data were Zoom recorded and then transcribed verbatim using an on-line transcription service so accurate coding took place (Krueger & Casey, 2015; Merriam & Tisdell, 2016). The transcripts were member checked by the participants to internally validate the data before coding occured (Creswell, 2014; Merriam & Tisdell, 2016; Seidman, 2013). Once the data from the on-line document analysis, interviews, and focus groups were collected, the researcher used triangulation to identify patterns and themes of the individual ALT organizations through open coding (Creswell, 2014; Merriam & Tisdell 2016). These themes and patterns were recognized

by the vernacular used to answer the questions (Krueger & Casey, 2015; Merriam & Tisdell, 2016). The repetition of words or theories that aligned with the words, theories, and tenets of Herringtons's (2009) nine goals were defined as themes and patterns. After each one of the organization's data was open coded, similar patterns and themes were then recoded in a process call axial coding (Merriam & Tisdell, 2016). Axial coding was used to organize the open coding data results into related schemes (Creswell, 2014; Merriam & Tisdell, 2016). The researcher examined responses for the schemes most saturated by the data within the central research questions (Creswell, 2014; Merriam & Tisdell, 2016). Findings provided a thick, rich description while being compared to Herrington et al.'s (2009) Nine Characteristics of Authentic Learning Environment for constant comparative use in future research (Creswell, 2014; Merriam & Tisdell, 2016).

Limitation, Delimitations, and Assumptions

Limitations

A limitation of the study was the lack of transferable data of best practices, specifically for secondary ALT programs from previous research (Merriam & Tisdell, 2016). A concern was the reliability of the answers given by the head administrators and teachers (Merriam & Tisdell, 2016). The head administrator and teachers could be bias. Another limitation was only one researcher was open and axial coding the data (Merriam & Tisdell, 2016). One researcher meant one assumptive truth created themes and patterns (Merriam & Tisdell, 2016). On-line document analysis, interviews, and focus groups were used (Merriam & Tisdell, 2016); observation could have been another useful data collection tool (Merriam & Tisdell, 2016).

Delimitations

The delimitations of the study were that there were only three ALT programs studied and all ALT programs were within a 29-mile radius of one another. With more ALT programs studied in different regions, different pedagogies, tenants, and/or practices may have been introduced (Merriam & Tisdell, 2016). These parameters may have caused the researcher to miss the perceptions of head administrators and teachers participating in ALT in traditional schools' settings and not only in secondary ALT organizations.

Assumptions

There were a variety of assumptions within the study. One assumption was that the programs studied were ALT programs. Another assumption was that the participants were honest, open, and forthright with their answers to the interviews and the focus groups (Krueger & Casey, 2015). An assumption was the bias of the researcher towards ALT programs (Krueger & Casey, 2015). Taking Creswell's (2014) suggestion, the researcher was reflective of the possibility of bias. The researcher had been an instructor in a secondary ALT organization for five years prior to the study. The researcher was aware of their own positive perceptions of ALT in secondary education classroom. This perception was a motivating factor to find the most promising practices in secondary ALT organizations to share the findings with the participating organizations and other secondary ALT organizations. To avoid confirmation bias, the researcher used three data collection methods on four different samplings from three different secondary ALT programs (Merriam & Tisdell, 2016). The researcher was transparent and thorough with

the data collection and analysis of findings to create a clear audit trail (Merriam & Tisdell, 2016).

Definition of Key Terms

Head Administrator. The person responsible for the organization before getting to district-level positions (MODESE, 2018). Using Bolman and Deal's (2013) structural framework, the head administrator was a person on the top of the structure within the day-to-day operations.

Assessment of Goals. Data collection tools to measure when an organization reaches goals (Merriam & Tisdell, 2016).

Authentic Learning Theory. The ALT is a theory of learning which allows students to explore, discuss, and learn through experiences which evolve around real-world projects and problems (Herrington & Oliver, 2000).

Authentic Learning Theory Organization/Program. A head administrator, secondary and teachers who participate in Authentic Learning Theory-based education.

Goals of Organization. The standards the educators were trying to teach the students to understand and/or to demonstrate (Bolman & Deal, 2013).

Pedagogy. Teaching strategies or practices used to achieve organizational goals (Merriam, & Bierema, 2014)..

Secondary Education. Formal education of students in grades nine through 12 (Hill & Smith, 1998).

Teachers. Certified instructors of lessons utilizing authentic learning theory in their pedagogy (MODESE, 2018).

Significance of the Study

This qualitative study added information to the field of ALT by researching ALT practices used at the secondary level. Secondary ALT practitioners will be able to recognize practices being utilized in other groups successfully and use those practices to achieve their own organization's goals. Additionally, head administrators of ALT organizations will be able to introduce ALT practices to their teachers that support student success. The results of this study could lead to a shift in mindset in not only ALT organizations but also traditional schools.

Practice

The study allowed programs that instituted ALT curriculum the opportunity to see how ALT secondary programs used ALT to achieve organizational goals. It helped leaders and teachers of ALT organizations see other ALT organizations' tenants, pedagogy, and practices. The study also provided stakeholders a better understanding of what was occurring in secondary ALT programs to help guide policy to foster a more successful ALT organizations.

Scholarship

This study showed the need for research on secondary ALT programs so other data can be collected and literature created. Ultimately, this study furthers the growth of ALT programs, or ones similar to, by providing a better definition of the programs and a better understanding of ALT practices at the secondary level.

Summary

Authentic learning theory was a learning theory that has become more popular as educational institutions saw the need to better prepare students for real-life (Karakas-

Özür & Duman, 2019). There has been research on ALT for adult learners, but there was a gap in knowledge for ALT's pedagogies for the secondary level. Additional research is needed to find the most promising practices of ALT implementation at the secondary level or high school education (Karakas-Özür & Duman, 2019. This research was warranted to help define the most promising practices for secondary ALT programs. (Wornyo et al., 2018).

SECTION TWO

PRACTITIONER SETTING FOR THE STUDY

Authentic learning dates to the 550's BC when Confucius said, "I hear and I forget, I see and I remember, I do and I understand" (Zhao & Kuh, 2004, p. 3) Confucius meant that different ways of learning created different results but doing provided understanding (Lang-8, 2014, p. 1). In 1914, authentic learning surged in the United States due to The Smith-Lever Act. The Smith-Lever Act created a national Cooperative Extension Service by granting land to universities to educate rural Americans about agriculture and technology (National Archives Foundation, 2019). In 1918 William Heard Kilpatrick wrote *The Project Method: The Use of the Purposeful Act in the Educative Process* and sold 65,000 copies (Pecore, 2015). Thus, people gave Kilpatrick credit for the creation of the project method (Sutinen, 2013). Though these theories of education were not new, they were notable foundations of educational organizations (Katula & Threnhauser, 1999). In the northwest region of Missouri, some organizations utilized Authentic Learning Theory (ALT) to educate secondary students about a variety of professional opportunities after high school.

As a practitioner in the northwest region of Missouri, the researcher experienced the importance of changing from traditional learning to authentic learning while teaching a 35mm film photography class. The head administrator of the school insisted the class change from film photography to digital photography. The researcher insisted the disciplines needed through the 35mm film process was important for students to know. The head administrator responded, "…what photography skills will help the students after graduation more, film photography or digital photography?" The consideration of

post secondary resonated with the researcher and motivated him to begin using authentic learning tenants to better prepare students for success after high school. This study focused on different organizations to examine the most promising ALT practices utilized to achieve intended outcomes.

Organizations

This study focused on three secondary Authentic Learning Theory (ALT) organizations located in the Northwest region of Missouri.

Organizational Analysis

Through an organizational analysis, there were five categories of information to give context to the secondary ALT organizations studied. The organizations were compared by (a) year established, (b) sending school demographics, (c) Bolman and Deal's (2013) structural framework, (d) student prerequisites to apply for the program, and (e) selection process.

1E Organization

1E Organization (pseudonym) was established in 2017. The organization's students came from two high schools in one school district. According to the Department of Elementary and Secondary Education (2018), the combined two sending high schools demographic were Table 1.

Table 1

Student Demographics of Sending Schools to 1E Organization

Categories	% Total	# Total
Total Number of Students	100%	3622
American Indian/Alaska Native	0.18%	7
Asian	4.04%	146
Black	11.94%	433
Hawaiian/Pacific Islander	0.65%	23
Hispanic	8.95%	324
Multi-Race	4.24%	153
White	69.90%	2532
Female	49.12%	1779
Male	50.88%	1843
Free or Reduced Lunch	23.59%	854
Limited English Proficient	1.99%	72
Special Education	9.41%	341

Notes. Percentage (%) Total and Number (#) Total

Using Bolman and Deal's (2013) structural framework, the 1E Organization had one principal, an assistant principal, two counselors, one nurse, one social worker, and 33 teachers. The teacher breakdown at 1E had nine math, five English, five social studies, four science, four special education, two business development, one English language learnings, one art, one foreign language, and one physical education, which were represented in Figure 1 (Website from 1E Organization, 2019). Prerequisites for future students to attend 1E. Students must be enrolled in one of the two sending high schools. The selection process required future students to fill out application paperwork (Website from 1E Organization, 2019).

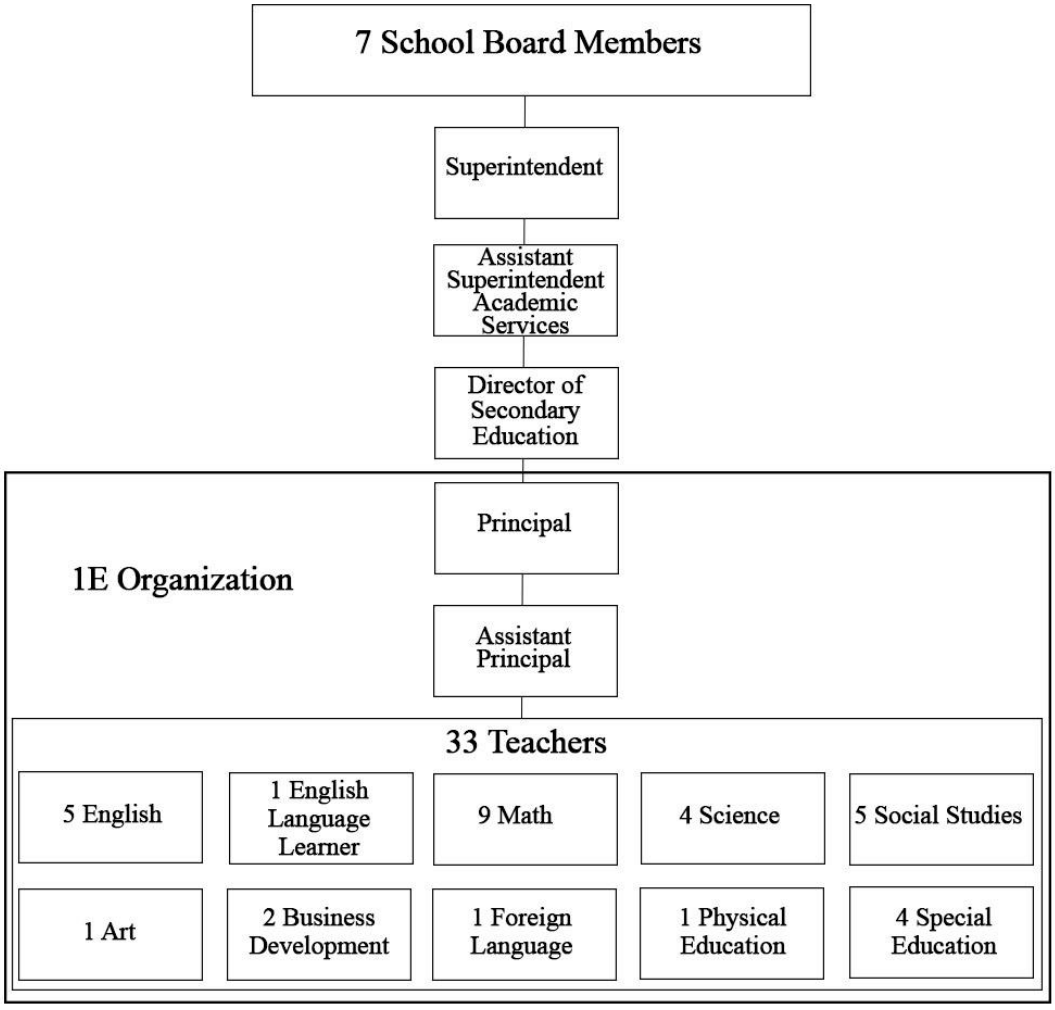


Figure 1. Organizational chart of 1E Organization. Organizational chart of Bolman and Deals (2013) structural framework from 1E organization ascending to school board. Teacher boxes represent tile certification in subject. Assistant Principal and Principal are titles of leadership positions (Website from 1E Organization, 2019).

2E Organization

2E Organization (pseudonym) was established in 2016. The organization's students came from two high schools in one school district. According to the Department of Elementary and Secondary Education (2018), the combined two sending high schools' demographics were Table 2.

Table 2

Student Demographics of Sending Schools to 2E Organization

Categories	% Total	# Total
Total Number of Students	100%	3708
American Indian/Alaska Native	0.50%	19
Asian	3.15%	117
Black	6.30%	234
Hawaiian/Pacific Islander	0.30%	11
Hispanic	6.75%	250
Multi-Race	1.90%	70
White	81.00%	3004
Female	49.29%	1828
Male	50.71%	1880
Free or Reduced Lunch	15.96%	592
Limited English Proficient	0.65%	24
Special Education	9.15%	339

Notes. Percentage (%) Total and Number (#) Total

Using Bolman and Deal's (2013) structural framework, the 2E organization included a director, district safety dispatcher, In-School Suspension (ISS) supervisor, counselor, social worker, interventionist, and eight teachers. Teachers in the organization did not teach specific content courses but were certified in various educational backgrounds. The breakdown was two math, two physical education, one English, one technology, one social studies, and one special education represented in Figure 2 (Website from 2E Organization, 2019). The 2E organization was an alternative school and served as a last option for many of the community's high school students who have yet to find their passion, voice, and/or continued academic success (Website from 2E Organization, 2019).

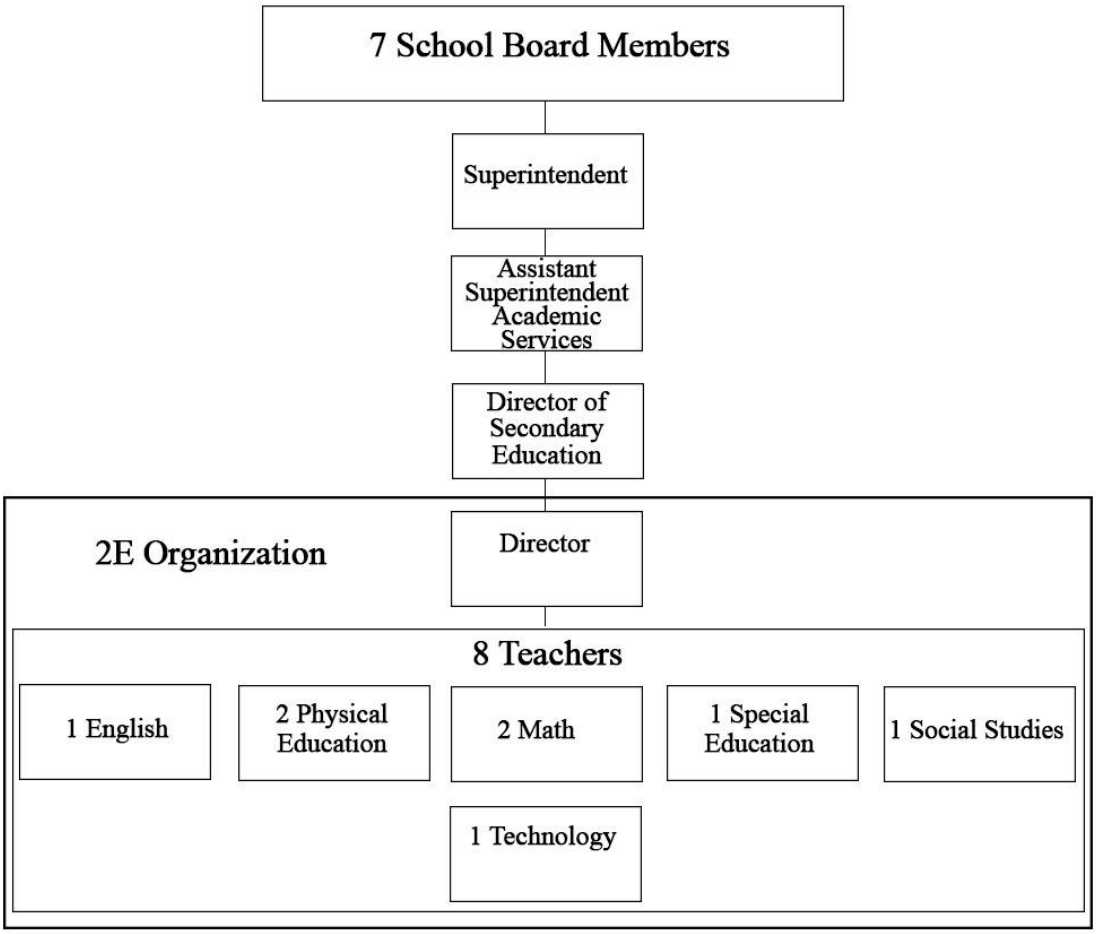


Figure 2. Organizational chart of 2E Organization. Organizational chart of Bolman and Deals (2013) structural framework from 1E organization ascending to school board. Teacher boxes represent tile certification in subject. Director is title of leadership positions (Website from 2E Organization, 2019).

3E Organization

3E Organization (pseudonym) was established in 1980. The organization's students came from 12 high schools in seven school districts. According to the Missouri Department of Elementary and Secondary Education (2018), the demographic of the combined 12 sending high schools were represente4d in Table 3.

Table 3

Student Demographics of Sending Schools to 3E Organization

Categories	% Total	# Total
Total Number of Students	100%	14896
American Indian/Alaska Native	0.33%	50
Asian	3.36%	500
Black	9.06%	1350
Hawaiian/Pacific Islander	0.51%	76
Hispanic	9.15%	1363
Multi-Race	4.79%	714
White	72.69%	10827
Female	48.86%	7278
Male	51.14%	7618
Free or Reduced Lunch	24.65%	3672
Limited English Proficient	1.99%	296
Special Education	9.00%	1340

Notes. Percentage (%) Total and Number (#) Total

Using Bolman and Deal's (2013) structural framework, the 2E organization included a director, assistant director, student services coordinator, and 15 teachers. The teacher analysis was the following: Agricultural Sciences, Aviation Technology, Construction Technology, Culinary Arts, Diesel Technology, two Health Sciences, Heating/Cooling & Climate Control, Industrial Welding, IT Professionals, Law Enforcement/CSI, Production Technologies, Teaching Professions, Integrated English, and Integrated Math. The structural framework for this organization was Figure 3 (Website from 3E Organization, 2019). Prerequisites were that future students (a) must have been enrolled in one of the 12 sending high schools, (b) a junior or senior, and (c) must had transportation to internships. The selection process required future students to fill out applications on-line, and a statement answering the following prompt, “Describe your interest in this program and career goal” (Website from 3E Organization, 2019). Within the statement, points included the following : (a) correct grammar and

punctuation, (b) what the future students were currently doing related to this career pathway, (c) list of specific career objectives, and (d) what is the future student interested in learning, in this class, that will help them reach their career goal? (Website from 3E Organization, 2019).

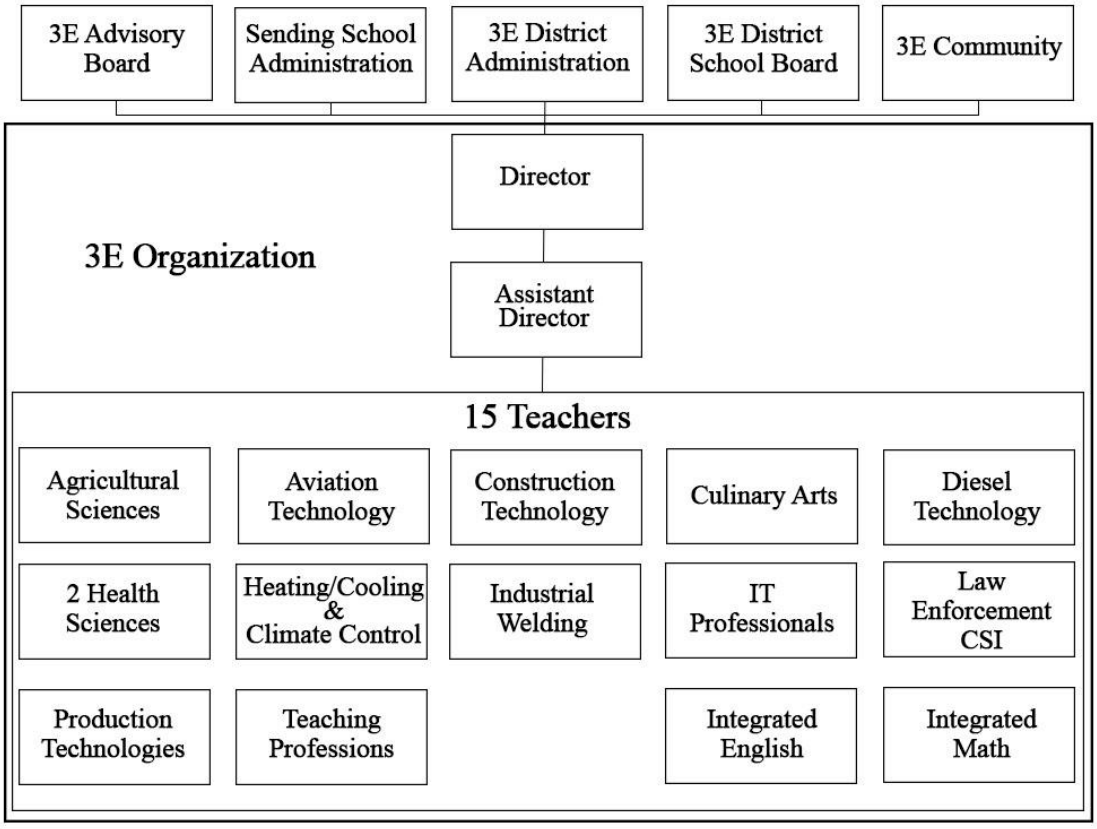


Figure 3. Organizational chart of 3E Organization. Organizational chart of Bolman and Deals (2013) structural framework from 1E organization ascending to school board. Teacher boxes represent tile certification in subject. Assistant Director and Director are titles of leadership positions (Website from 3E Organization, 2019).

.

Implications for Research in the Practitioner Setting

Educational institutions began to shift curriculum and pedagogy away from a transmission approach to a more constructivist approach almost four decades ago (Van Aalst, 2009). The ALT was a theory to achieve this goal (De Bruijn & Leeman, 2011). Due to a lack of research on the most promising practices of ALT pedagogy at the

secondary level, the pedagogical practices of ALT needed to be researched and to be established.

Lombardi (2007), Nicholl, Flutter, Hosking and Clarkson (2013), Parker et al. (2013), Pearce (2016), Reeves, Herrington, and Oliver (2002) and Snape and Fox-Turnbull (2013) supported Herrington et al.'s (2009) Nine Characteristics of Authentic Learning Environment from their research of best ALT practices of adult learners. This study established if any of the nine characteristics were applicable at the secondary level and revealed new ALT tenets for goal achievement. Additionally, this study established a constant comparative vocabulary with the three secondary ALT organizations studied to collaborate on their most promising practices (Merriam & Tisdell, 2016). This study also discovered pedagogies which could have been implemented by school districts in future ALT programs wanting to use ALT in their curricula.

Summary

Three secondary ALT organizations were studied using the same qualitative data collection tools: on-line document analysis, an interview of the head administrator, and a focus group of teachers who implement the ALT pedagogy in their class (Merriam & Tisdell, 2016). Before the study began, the organizations were compared by (a) the year they were established, (b) their sending school demographics, (c) Bolman and Deal's (2013) structural framework, (d) student prerequisites to apply for the program, and (e) selection process. By analyzing the data collection and focusing on the most promising practices of secondary ALT organizations, findings were available to school boards, school district leadership, building head administrators, and teachers who could have helped feature the most promising secondary ALT programs. The research is available at

district, state, and possibly national level presentations. The researcher's goal was to provide secondary ALT organizations a better understanding of most promising practices to achieve ALT program goals to better aid student success.

SECTION THREE

SCHOLARLY REVIEW

Creation of Authentic Learning Theory

The idea of learning through authentic experiences was not a new concept. References to real-world learning go back to as early as the 550's BC when Confucius said, "I hear and I forget, I see and I remember, I do and I understand" (Zhao & Kuh, 2004, p. 3). Confucius words meant different ways of learning created different results, but also doing tasks provided understanding for learners. In the early 300's BC, Aristotle claimed, "Using the language of knowledge, even at the crucial moment, is no proof that it is present" (Tessitore, 1996, p. 56). This statement insinuated until people applied theory, they did not fully understand it. For thousands of years, apprenticeships represented this theory (Collins, 1991). An apprenticeship was a type of occupational training where adolescence entered agreements to work for an established craftsperson or merchant for a designated period, typically for years, to learn a craft or trade (Wallis, 2007). In England, non-agricultural apprenticeships comprised of between 7.5 to 10% of the workforce into the 18th century (Wallis, 2007). Formal U.S. public education has not been based on authentic learning (Hyde, 2012); it came from the Prussian Model of education (Hyde, 2012). The Prussian Model was described as an assembly line to create human capital for the workforce (Watters, 2015). The goal was to intellectually condition students for obedience, subordination, and collective life ideals (Hyde, 2012). The Model fostered obedient workers, soldiers, civil servants, and clerks (Hyde, 2012). The Prussian Model caused criticism around the turn of the 20th century, due to a lack of connection between the formal abstract ideas and the real world (Roelofs & Terwel, 1999).

In the first half of the 20th century Roelofs and Terwel (1999) explained, “to remove this artificial barrier, educational reformers, such as John Dewey in the US, Ovide Decroly in Belgium, Peter Petersen Germany, and Hans Freudenthal in The Netherlands, conceived a learning processes based on the personal experiences of the students” (p. 202). These reformers wanted education to create new subject-matter with the students present instead of being given to them in a process called re-invention (Roelofs & Terwel, 1999). Re-invention pedagogy functioned from the bottom-up, where the real world presented lifelike and instantly applicable information at the students’ levels instead of lessons coming from teachers or from the top-down (Roelofs & Terwel, 1999). In many researchers' opinions, ALT allowed people in the real world to create information at the students’ levels through their experiences (Herrington et al., 2009, Newwman & Wehlage, 1993). Formalization of ALT did not emerge until the second half of the 20th century, after the introduction of theories like constructivism, the sociocultural theory, the zone of proximal development, and the situated learning theory (Lasry, 2006).

Constructivism

As Ferguson (2007) explained, “Constructivism provided a basis for understanding how people incorporated new knowledge into existing knowledge and then make sense of that knowledge” (p. 27). Socrates, who lived from 470 BC to 399 BC, has not been typically associated with the creation of constructivism, but researchers, Ferguson (2007) and Murphy (1997), both gave his epistemologies credit for recognizing that learners built upon their knowledge. Most people have given credit to Piaget’s theory on cognitive development as the beginning of constructivism (DeVries, 2000). Piaget’s

cognitive development theory focused on two major tenets, which were “the process of coming to know and the stages we move through as we gradually acquire this ability” (Huitt & Hummel, 2003, p. 1). Piaget depicted two processes used by humans to understand knowledge, assimilation, and accommodation (Huitt & Hummel, 2003). Assimilation was changing the environment to fit into a preconstructed cognitive structure (Huitt & Hummel, 2003). Accommodation was changing a preconstructed cognitive structure to accept something from the environment (Huitt & Hummel, 2003). Piaget believed stimulus providing the knowledge was only a stimulus if the person took an active role in allowing the stimulus to create knowledge (DeVries, 2000). Piaget claimed knowledge was attained through engaged learner participation of four stages (Zualkerman, 2006). Piaget's four stages of Cognitive Development were the following: (a) the sensorimotor stage (infancy), (b) the preoperational stage (early childhood), (c) the concrete operational stage (early adolescence), and (d) the formal operational stage (adolescence through adulthood) (Huitt & Hummel, 2003). Each stage expanded upon the knowledge of the previous stage with ideas gradually getting more specific, providing a more definitive understanding of the knowledge (Huitt & Hummel, 2003). Piaget also introduced the concept of spontaneous concepts, which meant knowledge grew from a person's own experiences (Britton, 1987). Vygotsky, who lived from 1896-1934, expanded on the idea of Piaget's cognitive development, furthering the idea of constructivism (Hall, 2007). However, Vygotsky did not agree with all of Piaget’s theories (DeVries, 2000).

Sociocultural Theory

Vygotsky agreed with Piaget's theories in the notion that social factors played a role in development (DeVries, 2000). Piaget sometimes did not get credit for emphasizing social factors, because much of his research was conducted with individual learners in labs (DeVries, 2000). Vygotsky, on the other hand, put social factors as most important in development, which led to him creating the sociocultural theory (Wornyo et al., 2018). Sociocultural theory pointed to the idea that learning developed within a social environment (Hall, 2007). Vygotsky's sociocultural theory focused on the spoken and written language shared between the learners and their environments to build better understanding (Quigley, 2014).

Zone of Proximal Development

Vygotsky's theory differed from Piaget's well-defined stages of development and instead designed the Zone of Proximal Development (ZPD) (DeVries, 2000). According to Vygotsky, there were three zones of the ZPD (Hall, 2007). The first zone was what the learner could have done without any assistance (Hall, 2007). The second zone, or the ZPD, was what the learner could have done with assistance, guidance, or encouragement from a group or someone knowledgeable (Hall, 2007). The third zone was what the learner could not have done even with assistance (Hall, 2007). When students were in the ZPD, they relied on what they previously knew, and they were building knowledge and skills through the sociocultural theory (Britton, 1987). In addition to the ZPD, Vygotsky added to Piaget's theory of spontaneous concepts with non-spontaneous concepts (Ferreira, 2014). Non-spontaneous concepts were ideas presented to the subject, and the

subject had none, or little, knowledge of the ideas (Ferreira, 2014). Time was needed for the idea to embed in the subjects' experiences and knowledgebases (Ferreira, 2014).

Another area in which Vygotsky and Piaget differed was in the role of the stimulus in the learning process (DeVries, 2000). Vygotsky, an empiricist, believed all stimuli influenced whether the subject actively intended it to be a stimulus (DeVries, 2000). Vygotsky's theory of everything being a possible stimulus emphasized the learners social and physical environments and the contexts of the environments (Roelofs & Terwel, 1999). Realistic situations caused participants to learn the knowledge under the same conditions that the knowledge needed to be recalled, thus making it easier to recall the knowledge when needed (Roelofs & Terwel, 1999)

Situated Learning Theory

Lave and Wenger, (1991) agreed with the importance of the situations and created the situational learning theory (SLT). The SLT was the idea a subject gained more knowledge learning an idea or concept in an authentic environment relating to the topic instead of an abstract classroom setting, which was in short, learning knowledge in the context how it was useful in real life (Roelofs & Terwel, 1999). Lave and Wenger (1991) were the first to present SLT, but many attributed its discovery to Brown, Collins, and Duguid (1989), as they were the first researchers to create a model for classroom practice (Herrington & Oliver, 1995). Lave and Wenger (1991) emphasized learning with the group by first observing authentic practice followed by gradually moving into the role of functioning agent. Brown et al. (1989) used SLT to create Cognitive Apprenticeship. Cognitive Apprenticeship used authentic practices, authentic activities, and social

interactions in similar ways, which were successful in traditional apprenticeships (Brown et al., 1989).

Stein (1998) claimed there were four premises to situated learning: (a) Learning was grounded in authentic everyday situations, (b) Knowledge was acquired in situations and was transferred only to similar situations, (c) Learning happened through social ways of thinking, perceiving, problem-solving, interacting with procedural knowledge, and (d) Instruction was conducted in a complex social environment. Situated learning, and the understanding that all aspects of an educational environment influenced the understanding of knowledge, led to ALT (Lasry, 2006).

Authentic Learning Theory

The ALT has been given many definitions. Newmann, King, and Carmichael (2007), wrote of ALT as, "Using the construction of knowledge through a process of disciplined inquiry which has value beyond the purposes of certifying school competencies" (p. 3). Newmann et al.'s (2007) lack of support for learning beyond the school competencies was supported by Koksal (2019). Koksal (2019) wrote, "The authentic learning approach entails that students are indirectly exposed to the living values in an authentic environment" (p. 1). Lombardi, (2007) added to the importance of authenticity by emphasizing inclusivity of varying concepts into ALT. Authentic learning "brings into play multiple disciplines, multiple perspectives, ways of working, habits of mind, and community" (Lombardi, 2007, p. 3). Rule (2006) suggested ALT was "Real-world problems that engage learners in the work of professionals; inquiry activities that practice thinking skills and metacognition; discourse among a community of

learners; and student empowerment through choice" (p. 1). What most researchers agreed on was that ALT needed to be as close to as real life as possible (Koksal, 2019).

The ALT also had many varying opinions on the best methods of implementation (Herrington et al. 2009; Newmann & Wehlage, 1993). After reviewing many frameworks of ALT implementation, Herrington, et al.'s (2009) Nine Characteristics to Achieve Authentic Learning Environments were used in this study. The nine characteristics were: (a) real world relevance, (b) authentic activates, (c) expert performance and modelling, (d) multiple roles and perspectives, (e) collaborative construction and knowledge, (f) reflection for enabling abstractions, (g) articulations for tacit knowledge to be explicit, (h) coaching and scaffolding by teacher, and (i) integrated assessment of learning in tasks. These nine characteristics were also noted in other studies (Koksal, 2019; Lasry, 2006; Lombardi, 2007; Luo et al., 2017; Nicholl et al., 2013; Snape & Fox-Turnbull, 2013, Teras & Kartoglu, 2017; Wornyo et al., 2018).

Nine Goals to Achieve Authentic Learning Environments

The tenets or goals that were used in this study were the nine tenets recommended by Herrington et al. (2009): Nine Characteristics to Achieve Authentic Learning Environments.

Real-World Relevance

Class activities matched the real-world tasks of professionals in practice as nearly as possible rather than decontextualized or classroom-based tasks (Herrington et al., 2009). This idea was supported by Brown et al. (1989) with their research on the situated learning theory which claimed "Knowledge is not independent but rather fundamentally "situated" being in part a product of the activity, context, and culture in which it is

developed" (p. 1). This meant the environment, complexity, and resources for the problem all should have reflected the real world (Brown et al., 1989).

Authentic Activities

In authentic activities, the class activities were ill-defined, so students had to find the problems, to explore topics in-depth, to integrate knowledge from multiple subject areas, to decide which material was relevant or irrelevant, and then to solve the problem (Herrington et al., 2009). The emphasis of authentic activities was encouraged by Bransford, Vye, Kinzer, and Risko (1990) with their research of anchored instruction theory. Anchored instruction theory was to merge content and process by placing learning withing meaningful context (Bransford et al., 1990).

Expert Performance and Modeling

With this objective, students were able to observe experts performing or modeling tasks in real situations before students attempted the task (Herrington et al., 2009). This was similar to the apprenticeship system (Wallis, 2007). It allowed the students to share narrative stories and access to the social periphery (Brown et al., 1989). This was supported by Lave and Wenger's (1991) research of SLT.

Multiple Roles and Perspectives

This characteristic embodied the pedagogical notion that participants could have researched multiple ideas, roles, and perspectives (Herrington et al., 2009). They could have used different resources, people, and media to gather diverse opinions and points of view (Herrington et al., 2009). The Cognition and Technology Group endorsed this at Vanderbilt (1990) with their research on situated cognition using multiple views to examine *Young Sherlock Holmes*.

Collaborative Construction of Knowledge

Students addressed tasks as two or more people rather than as individuals, and the entire group was incentivized to achieve (Herrington et al., 2009). This caused students to hypothesize then to suggest solutions (Herrington et al., 2009). This was promoted by Slavin (1980) and their research on cooperative learning. Cooperative learning was defined as when students worked in small groups and received feedback based on group performance (Slavin, 1980).

Reflection for Enabling Abstractions

This characteristic identified that participants of authentic learning experiences had the opportunities to reflect on what they learned, how they compared to other learners, and how they compared to experts in varying stages of accomplishment (Herrington et al., 2009). This was supported by Boud, Keogh, and Walker's (2013) research on turning experiences into knowledge using reflection. Bound et al. (2013) claimed the learners must reflect on what they thought, felt, did, and concluded immediately after their experiences (p. 33). This allowed students to have a deeper understanding of their experiences (Bound et al., 2013).

Articulation for Tacit Knowledge to be Explicit

Within this characteristic, students had the opportunity to converse with members of the group to facilitate social rather than individual understanding and allowed for presentations or debates to implement description and defense of knowledge (DeVries, 2000). This was endorsed by Vygotsky's work on sociocultural theory and the emphasis on speech profoundly influencing the learning process (DeVries, 2000). Vygotsky

believed speech was not merely for expression of knowledge but also helped knowledge to find reality and form (Herrington, 1997).

Coaching and Scaffolding by Teacher

Within this characteristic, the teacher with student, provided coaching at critical times when students were out of the ZPD (Herrington et al., 2009). During scaffolding the teachers were there to clarify issues, to keep the students on the right track, and provide support at the precise time the students needed it (Herrington et al., 2009). The teacher gave just enough assistance to take them to the next stage of the process (Herrington et al., 2009). This was supported by Vygotsky's ZPD (DeVries, 2000), which caused students to stay between the zone of actual development and potential development (Herrington et al., 2009).

Integrated Assessment of Learning in Tasks

Under this characteristic, assessments were as close to real-life assessments as possible (Herrington et al., 2009). Through the process, the assessments were informal, continuous, and seamlessly integrated within the activity (Herrington et al., 2009). There were multiple learning indicators as students fulfilled tasks with appropriate criteria for varied expectations of the finished task (Herrington et al. 2009). This was promoted by Young (1993) and the research on assigning situated learning. Young (1993) claimed assessments should be continuous and ongoing and not add-ons as separate stages of a linear process.

Nine Characteristics Used in Other Studies

Other researchers have referenced or even based their research of ALT on Herrington et al. (2009) Nine Characteristics to Achieve Authentic Learning

Environments. Koksal (2019) used the nine characteristics to assess authentic learning's influence on the students acquiring values with knowledge. The nine characteristics were used as a foundation to ensure the learning was authentic. Teras and Kartoglu (2017) used the nine characteristics as a foundation to research an international on-line professional development programs in vaccine management offered by the World Health Organization. The goal of the study was to see which of the nine characteristics were most and least beneficial in administering on-line professional development (Teras and Kartoglu, 2017). Wornyo et al. (2018) used the nine characteristics to research how students responded to authentic activities and tasks in a literacy classroom and what the students' perceptions were of authentic learning.

Other Theories of Authentic Learning

Along with Herrington et al. (2009), other researchers have researched ALT and formed their own opinions on the best way to achieve authentic learning. Through this study, one of the most referenced researchers' works, aside from Herrington, was Newmann (Brkich, 2014; Brouse & Basch, 2004; Knobloch, 2003; Maina, 2004; Roelofs & Terwel, 1999; Rule, 2006). Herrington and Newman were referenced in the same study multiple times in regards to how to achieve authentic learning (Gulikers, Bastiaens, & Martens, 2005; Kaider et al., 2017; Karakas-Özür & Duman, 2019; Lasry, 2006; Lock & Duggleby, 2017; Nicholl et al., 2013; Snape, Fox Turnbull, 2013).

Newman believed the best way to achieve authentic learning was to follow five standards: (a) higher-order thinking, (b) substantive conversation, (c) in-depth knowledge, (d) connections to the world beyond the classroom, (d) social support for student achievement (Newmann & Wehlage, 1993).

Maina (2004) and Rule (2006) identified three tenets: (a) activities mimic the real world, (b) the learner is at the center of instruction, and (c) learning takes place in meaningful situations that are extensions of the learning world. Driscoll (1994) and Knobloch (2003) agreed with Maina (2004) and Rule (2006) that authentic learning was student-centered and reflected the real world, but believed learning through social negotiation, multiple representations of the content, and the student understood the content is constructed.

Herrington et al.'s (2009) Nine Characteristics of Authentic Learning Environment emcompassed Newmann and Wehlage (1993) five standards, Maina (2004) and Rule's (2006) three tenets, and other theories of ALT to exhaust as many options as possible in recognizing the best practices of authentic learning for this study.

Summary

The concept of authentic learning was not new a new concept. It has had underpinnings in learning for over 5,000 years (Har, 2013). The comprehension of authentic learning was difficult without the foundation of authentic learning being more defined (Herrington, Reeves, & Oliver, 2006). Over the last 40 years, with the formal development of theories, such as Constructivism, Sociocultural, Zone of Proximal Development, and Situated Learning, the foundation of ALT was more ambiguous, allowing researchers the opportunity to analyze ALT more in-depth. The research has shown positive results in knowledge comprehension and demonstration in adult collegiate, and professional settings. However, further research was needed to address the gap in knowledge for best ALT practices at the adult and high school levels. This research was critical for organizations looking to utilize ALT in a high school setting. If

research supported the implementation of Herrington et al.'s (2009) Nine Characteristics to Achieve Authentic Learning Environments or discovered new characteristics being utilized at the high school level, high school authentic learning organizations could have changed their pedagogies.

SECTION FOUR

CONTRIBUTION TO PRACTICE

Plan for Dissemination of Practitioner Contribution

Who: Leadership of the organizations that participated in the study.

When: August of 2020

How: Through a presentation.

Type of Document

The information will be disseminated via an oral presentation to the head administrators who participated in the study. A PowerPoint will be used in the presentation.

The rationale for this Contribution Type

The presentation of Authentic Learning Theory (ALT) practices gives the leadership of the participating ALT organizations insight to ALT participated used by other ALT high school organizations. The presentation provides insight into the history of ALT, the design of the study, and what the organizations used for most promising practices of ALT. This will allow leadership the ability to compare and contrast best practices with other ALT organizations. This will equip the leaders with the knowledge to provide any possible professional development to better their organization's ALT pedagogies.

Practitioner Document

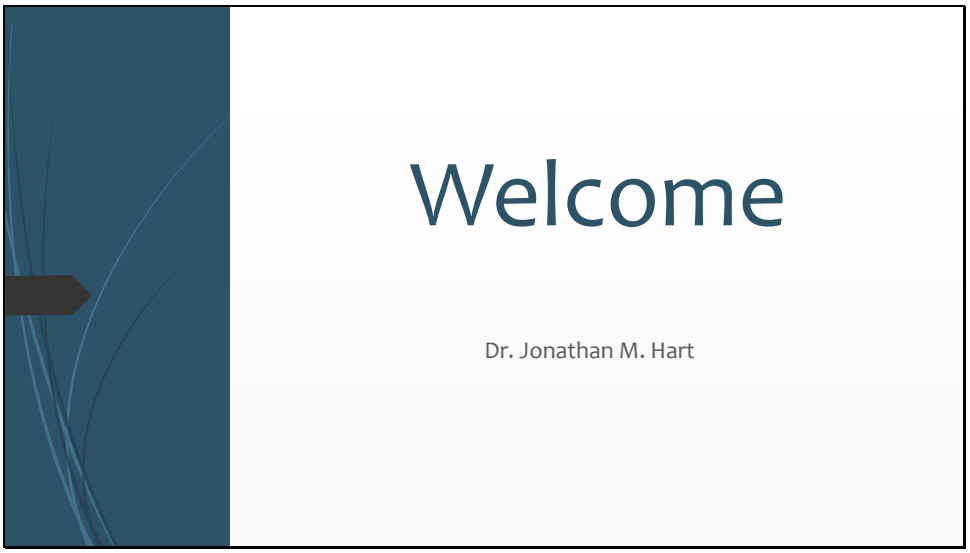
STAKEHOLDERS PERCEPTIONS OF ORGANIZATIONAL GOAL ATTAINMENT AT THE SECONDARY SCHOOL LEVEL THROUGH THE LENS OF AUTHENTIC LEARNING THEORY

Executive Summary for Presentation

Head Administrator of organizations who participated in study

By Jonathan M. Hart

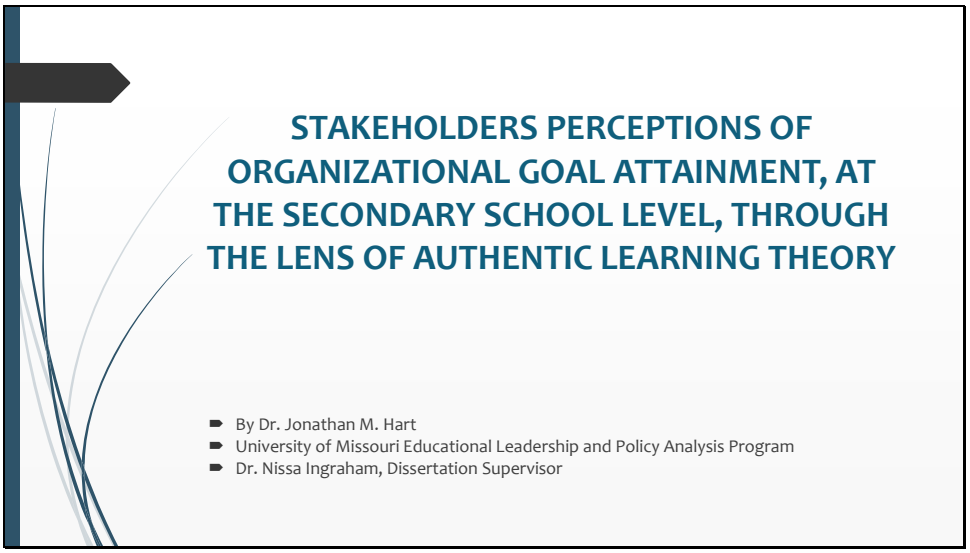
Slide 1



Welcome
Introduction

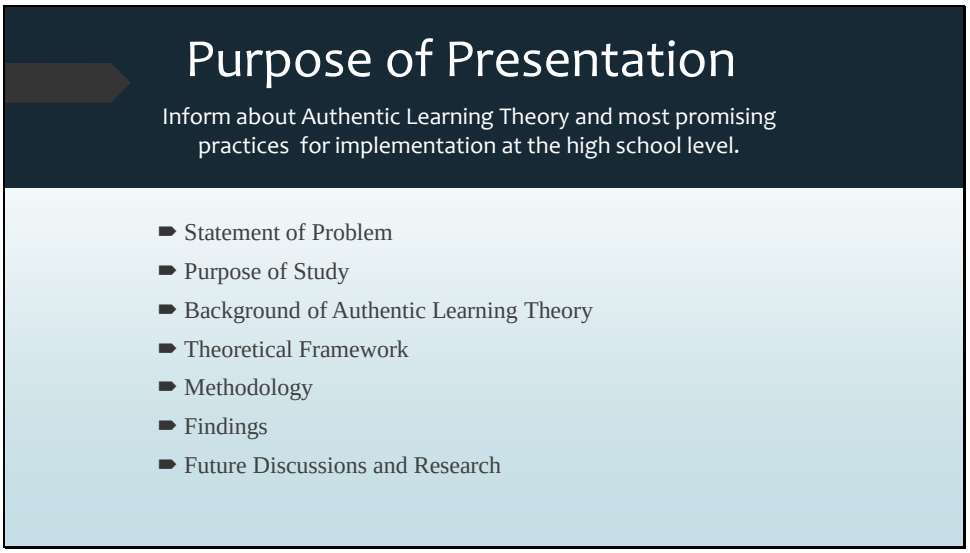
* Dr. Jonathan M. Hart
* Background in education
* Substitute – four years
* Art Teacher – traditional art four years
* Art Teacher – shift to digital for preparation post high school “how are we preparing them”?
* Authentic Learning Program NCAPS – 6 years
* Why passion for Authentic Learning?

Slide 2



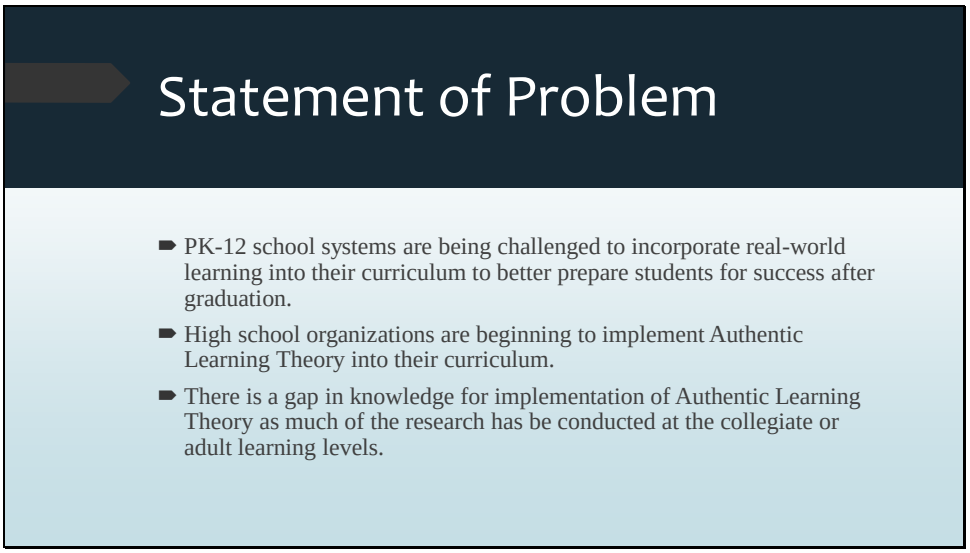
Introduction of study

Slide 3



Explain what the goals are of the presentation

Slide 4

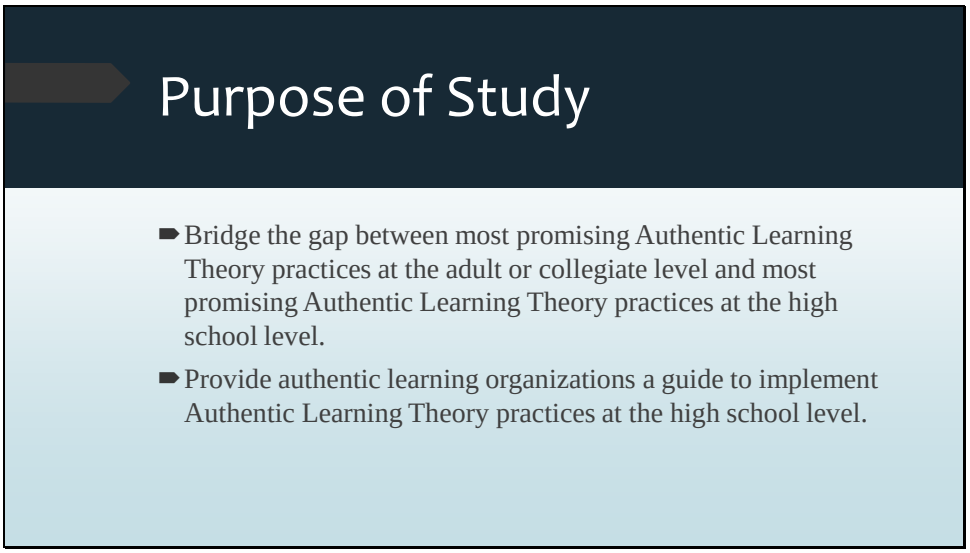


Schools are being challenged to evolved.

Some school districts are implementing entire programs dedicated to Authentic Learning Theory.

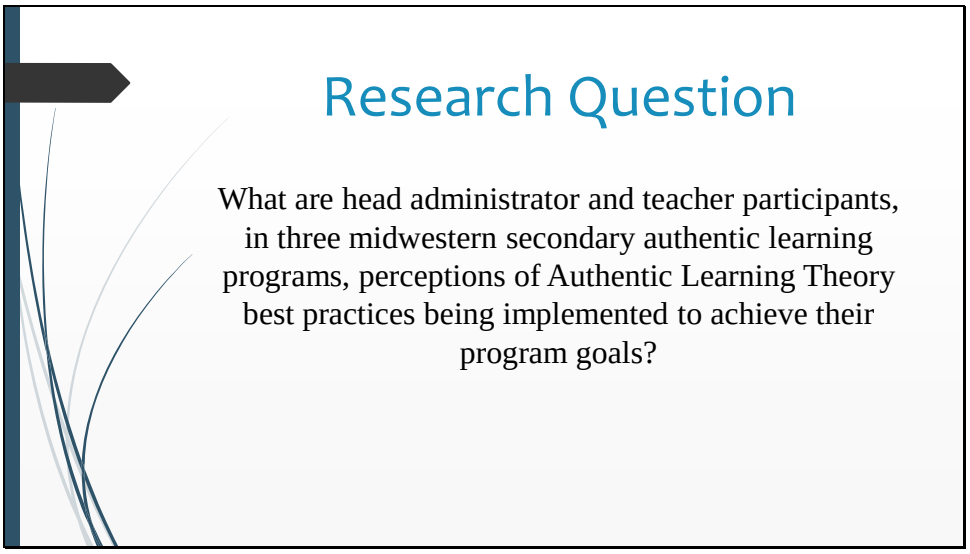
ALT has been for adults. Research has been done for adults but not much for high school aged.

Slide 5



Wanted to bridge the gap between best practices of ALT for adults and best practices of ALT for high school aged students.
Find what practices translate from adult to secondary level and what new practices are being utilized at the secondary level
Provide steps for high school organizations to implement ALT.

Slide 6



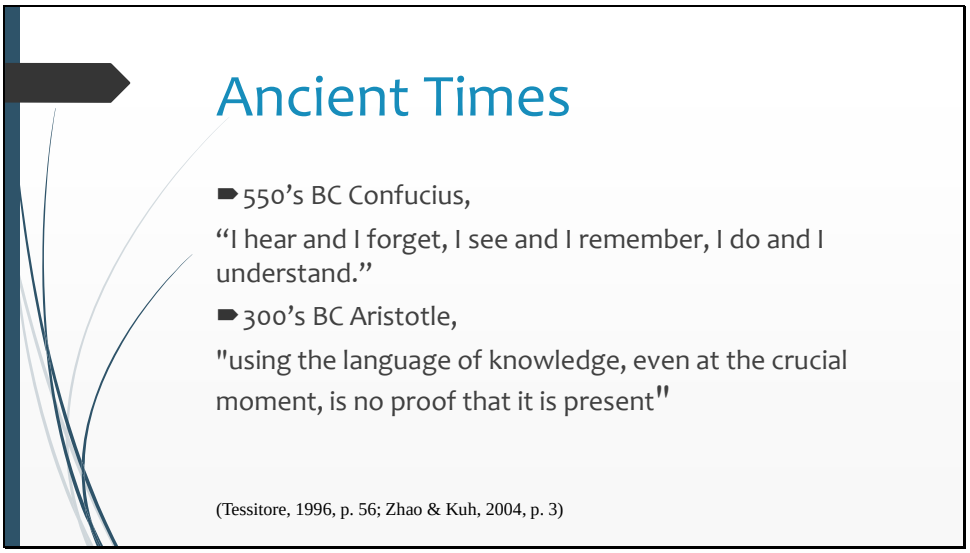
Explain research question.
Chose these perspectives figured they would provide best insight to most promising practices of ALT at high school level.

Slide 7

This is especially important to give context to

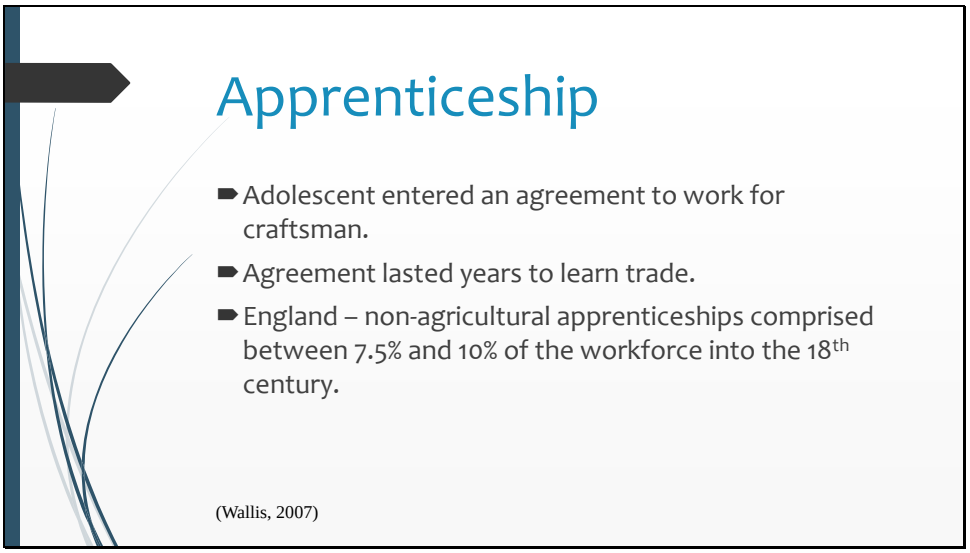
- How the public education system has gotten to where it is now.
- How Authentic Learning Theory as evolved to current times and why parts of authentic learning are important.

Slide 8



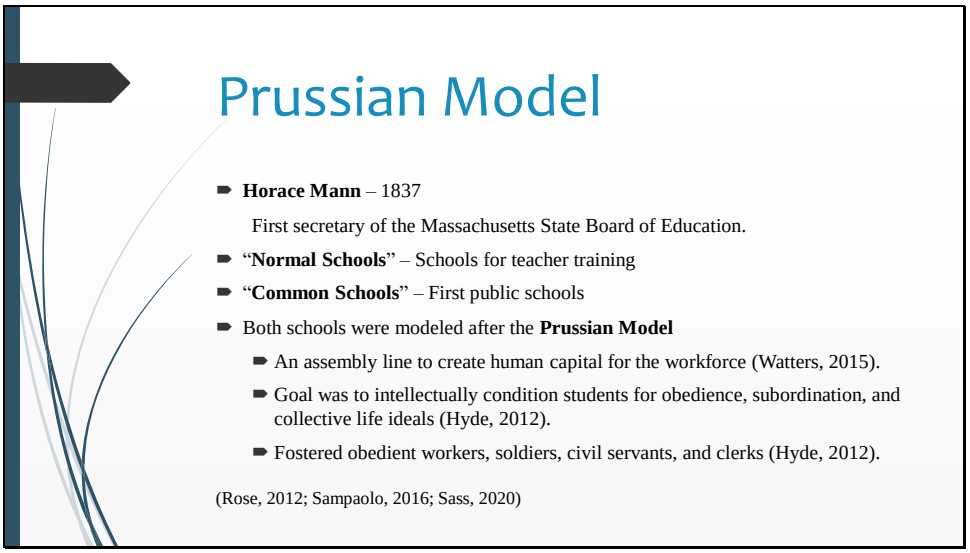
ALT is not new. The concept of learning through authentic activities is the oldest form of education.

Slide 9



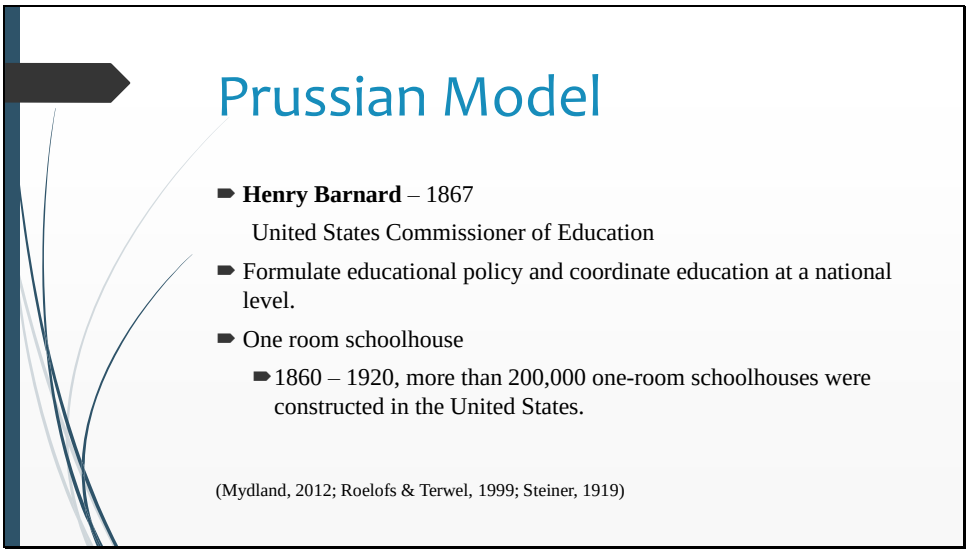
For thousands of years, apprenticeships use this theory (Collins, 1991). Apprenticeships were ALT. Learning from an expert in trade.

Slide 10



This is how the education system as we know it was formed. Started in Massachusetts

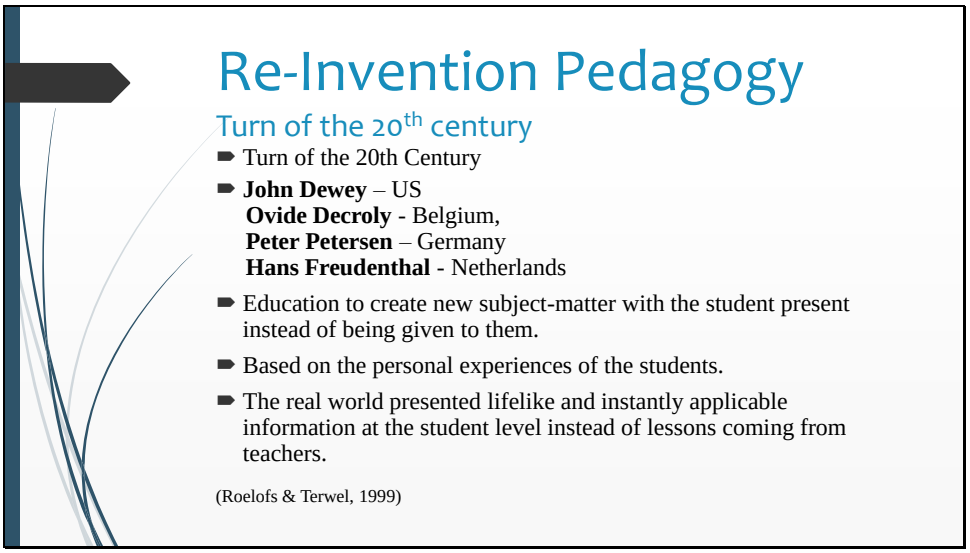
Slide 11



The Prussian model went to a national level. Represented by one room school houses.

In a one-room schoolhouse, one female teacher taught all the children gathered, no matter the age. Teachers would use a teacher-centered transmission approach (Breunig, 2017).

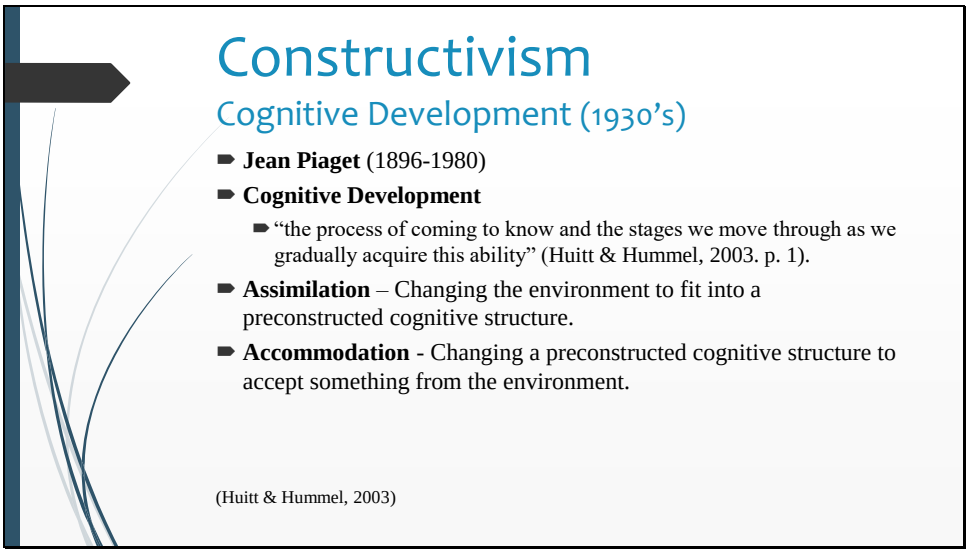
Slide 12



The Prussian Model caused **criticism, around the turn of the 20th century, due to a lack of connection between the formal abstract ideas and the real world** (Roelofs & Terwel, 1999).

Formalization of ALT did not emerge until the **second half of the twentieth century after the introduction of theories like constructivism, sociocultural theory, the zone of proximal development, and situated learning theory** (Anderson, Reder, & Simon, 1996; Roelofs & Terwel, 1999; Snape & Fox-Turnbull, 2013).

Slide 13



Socrates (470bc-399bc) is not typically associated with the creation of constructivism though Ferguson (2007) and Murphy (1997) both give his epistemologies credit for recognizing **learners building upon their knowledge**.

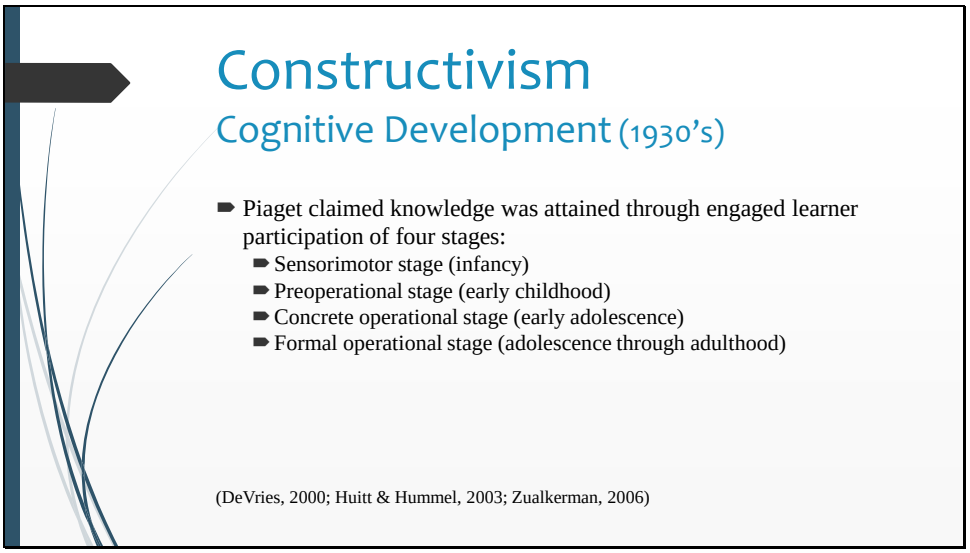
Many claim Piaget is the initiator of constructivism

Assimilation – adding to scheme – accommodation is changing, splitting, adding to scheme

Assimilation – knowing a German Shepperd is a dog. Seeing a poodle calling it a dog.

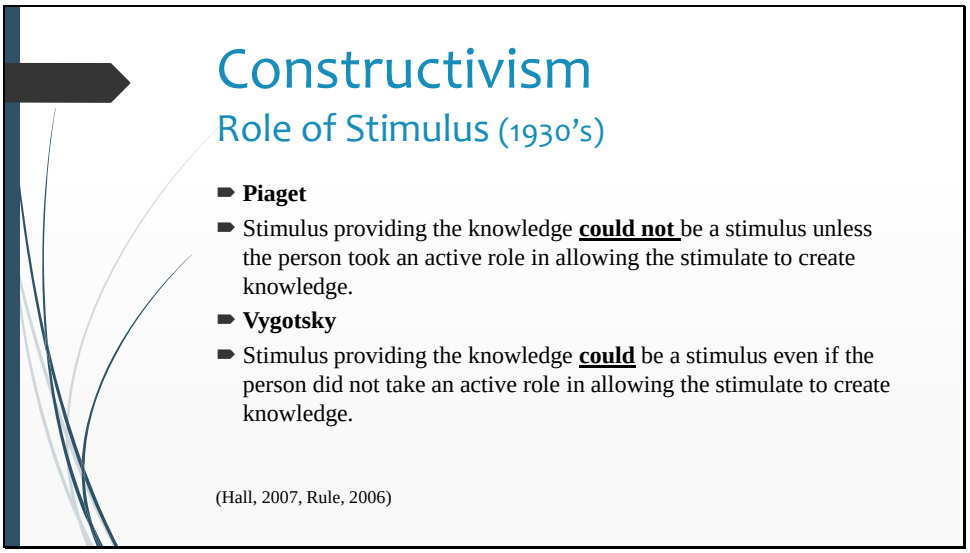
Accommodation – seeing a cat – Dog (four legs furry) explaining the difference between a dog and cat

Slide 14



Piaget's classic cognitive development

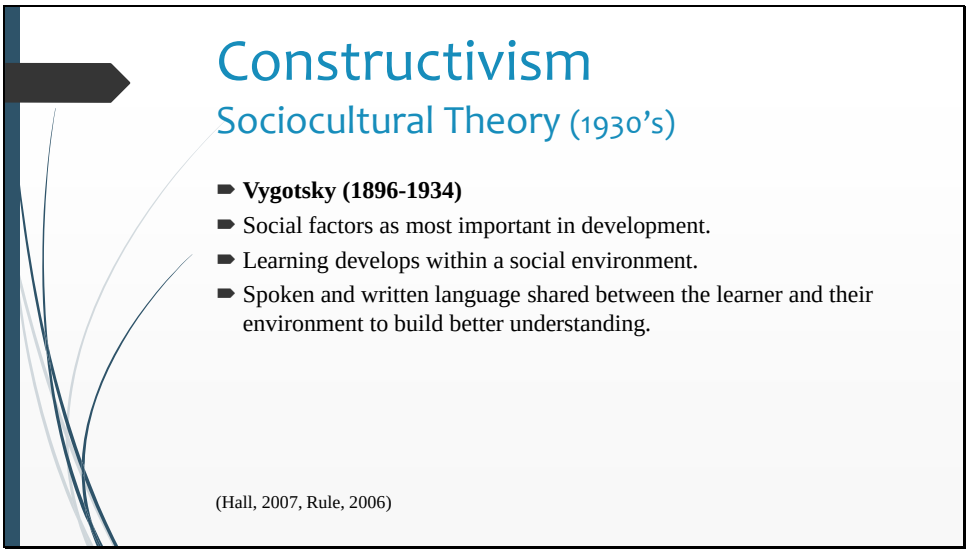
Slide 15



Piaget - The learner had to want to learn.
Vygotsky – Everything around was a stimulus weather the learner wanted it or not.

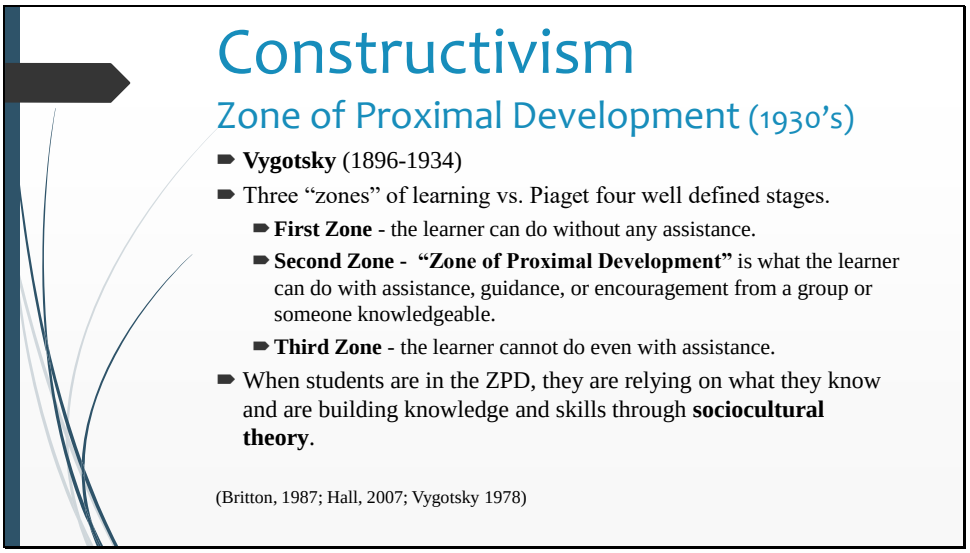
Being aware students are learning through communication with experts, peers, mentors.

Slide 16



Piaget also believed in the implication of social interaction, but his research was done through isolation.
Asking questions, verbally explaining "This is how you do this"
Presenting ideas to peers, mentors, groups of people for knowledge feedback
Learning from others.

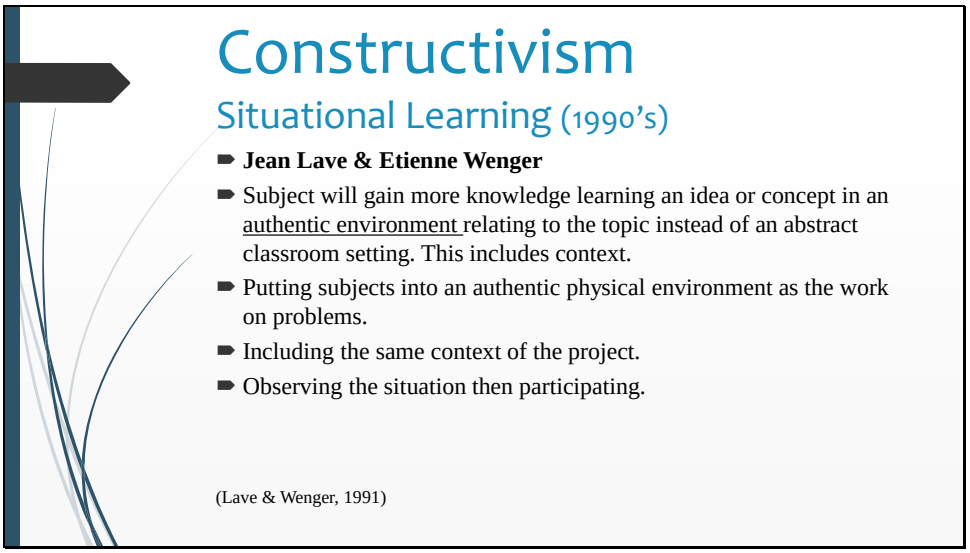
Slide 17



Piaget claimed age played a role in the structure of developing knowledge.
Middle schooler can be more knowledgeable than an adult about a topic depending on the topic

Zone of Proximal Development – is where you want students to be during authentic learning.
Always moving forward. A little uncomfortable.
Know some of the ideas but not all to progress.

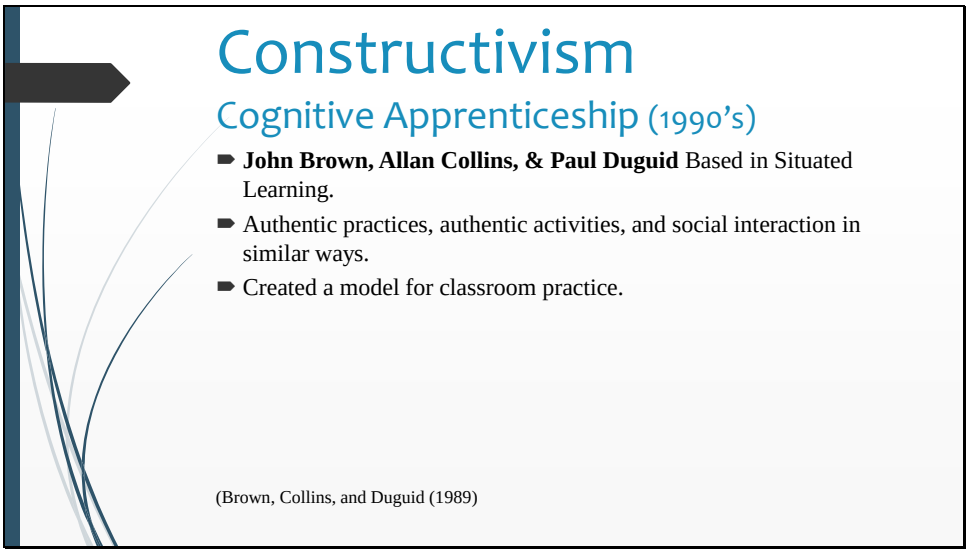
Slide 18



Physical environment (fieldtrips, site visits)

Contextual – same pressures as real life. No late work. No excuses.
Authentic expectations.
Authentic deadlines.
Authentic feedback
Authentic consequences.

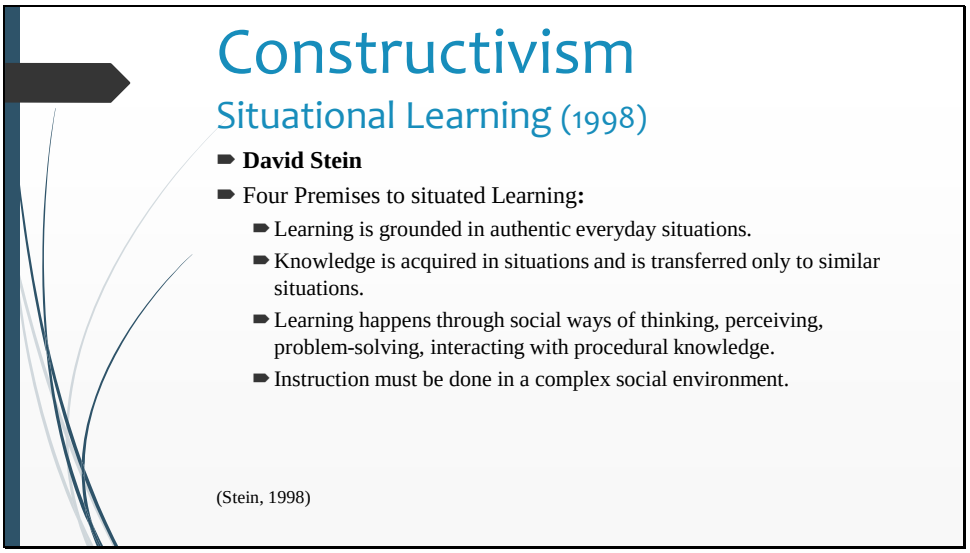
Slide 19



Physical environment (fieldtrips, site visits)

Contextual – same pressures as real life. No late work. No excuses. Authentic feedback Authentic consequences.
More formalized than situational learning
Like apprenticeship from the 18th century just formalized.

Slide 20

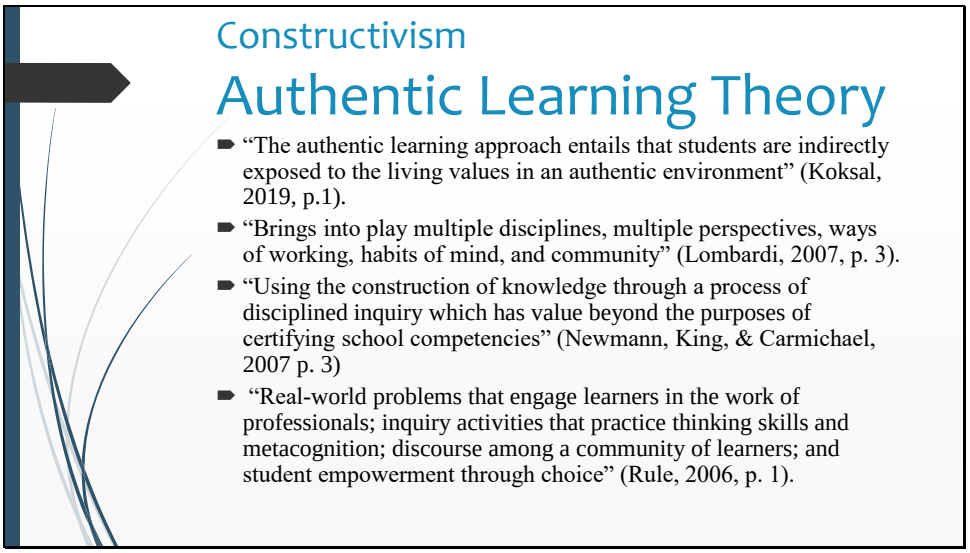


David Stein – sums up Situational Learning in four

Authentic situations
Learned in authentic situations and used in authentic situation
Must have interactions with others
Instructions are authentic – not diluted

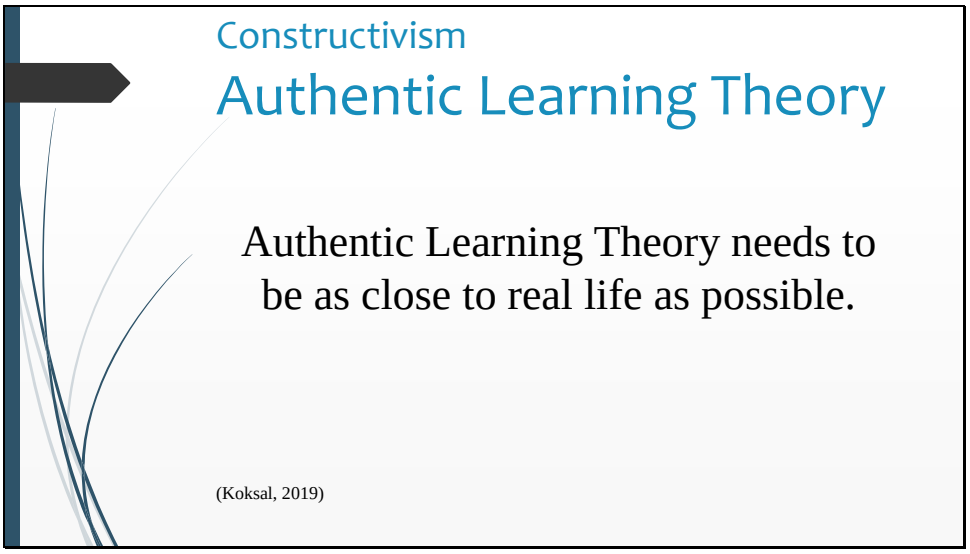
Situated learning and the understanding that all aspects of an educational environment can influence the understanding of knowledge led to Authentic Learning Theory (ALT).

Slide 21



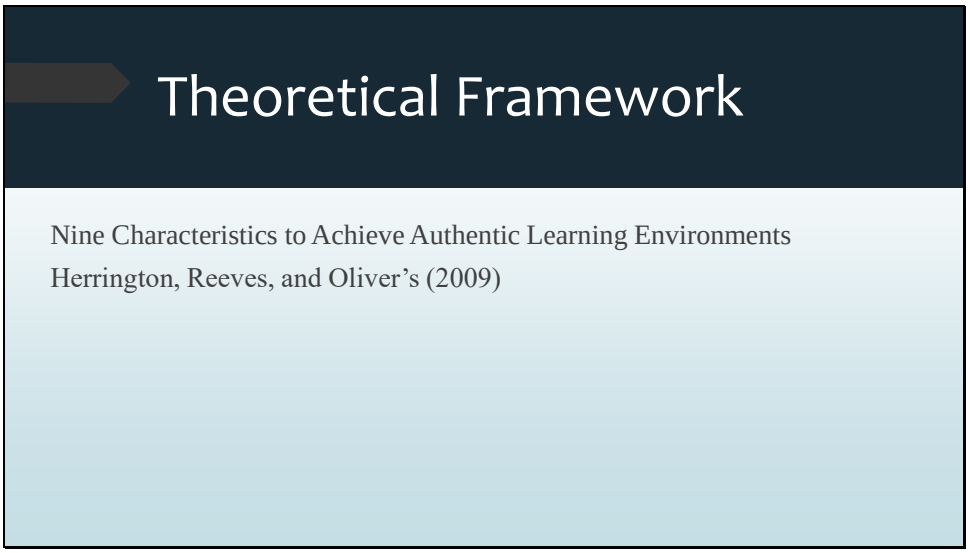
Completely exposed to the environment
Not just one subject but all that apply to the situation
Causing the students to ask questions for answers along the way for conclusion
The projects are authentic in complexity from real professionals
Students choose they path to solve

Slide 22



The consensus though there may be varying opinions there is one cornerstone which everyone agrees.

Slide 23



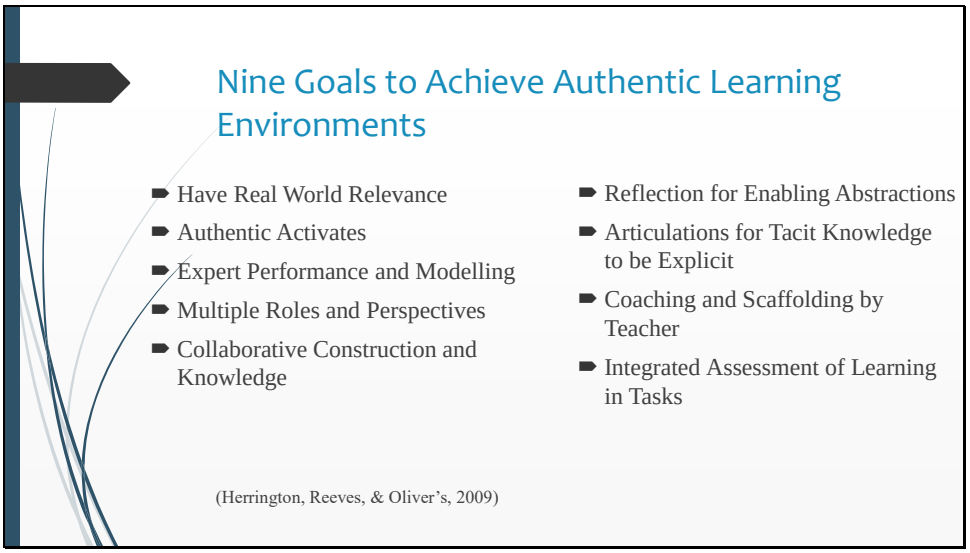
There nine characteristics were used to as a baseline to see what authentic learning practices were being utilized at the high school level.

Like a net or filter to see what practices were already being used at adult level.

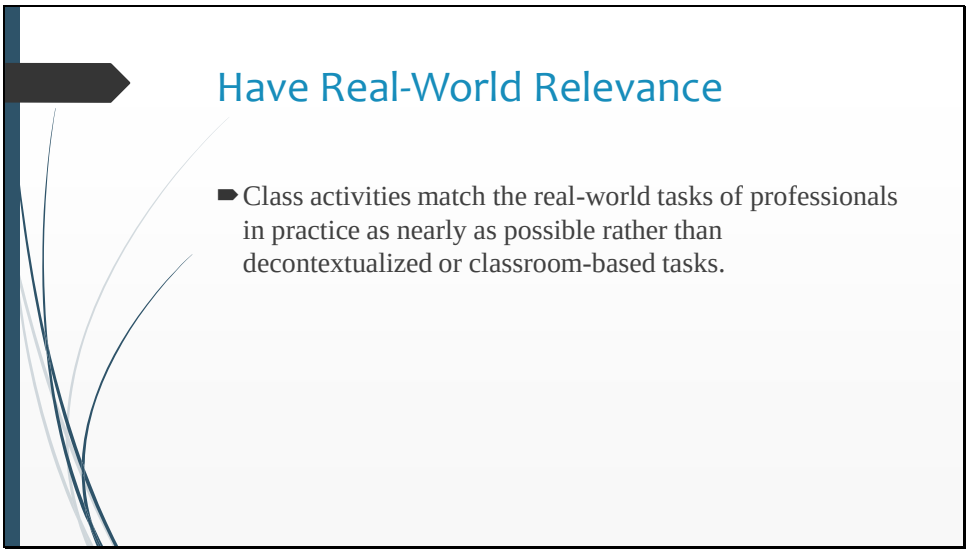
What didn't' get caught in the net were the practices unique to high school authentic learning programs being researched.

Other researchers, such as Newmann & Wehlage 1993, Maina 2004, and Rule 2006 were considered for tenants of ATL, but Herrintons was used because it was more robust allowing more tenants to be recognized.

Slide 24


Nine Goals to Achieve Authentic Learning Environments
Have Real World Relevance
Authentic Activates
Expert Performance and Modelling
Multiple Roles and Perspectives
Collaborative Construction and Knowledge
Reflection for Enabling Abstractions
Articulations for Tacit Knowledge to be Explicit
Coaching and Scaffolding by Teacher
Integrated Assessment of Learning in Tasks
(Herrington, Reeves, & Oliver's, 2009)

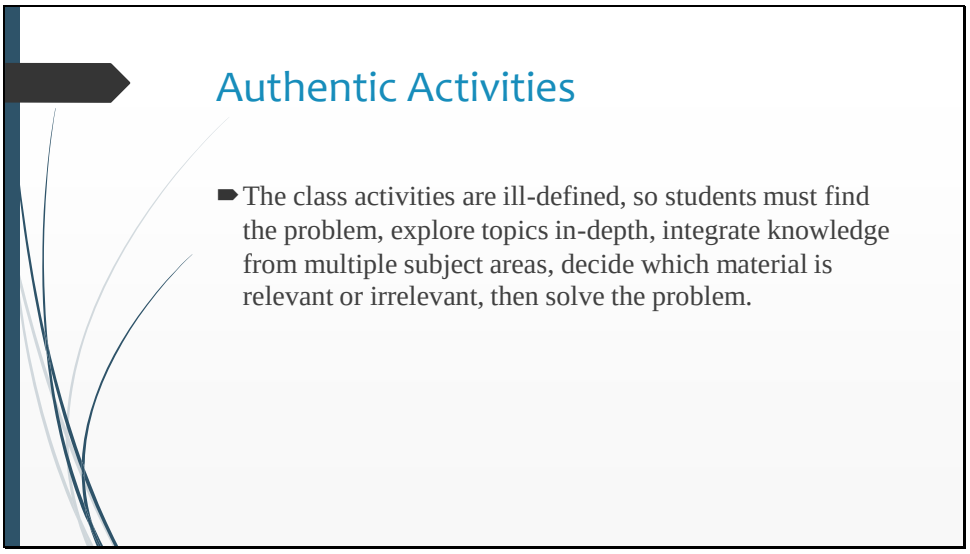
Slide 25



Brown, Collins, and Duguid (1989) – cognitive apprenticeship

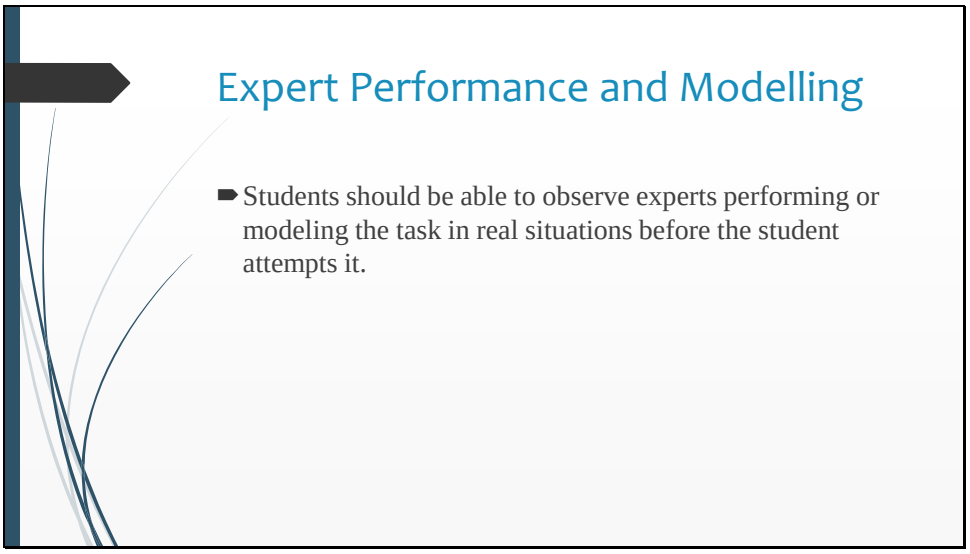
Must answer "**why am I learning this?"**
They must see what they are learning is **not an abstract idea but applicable**.

Slide 26



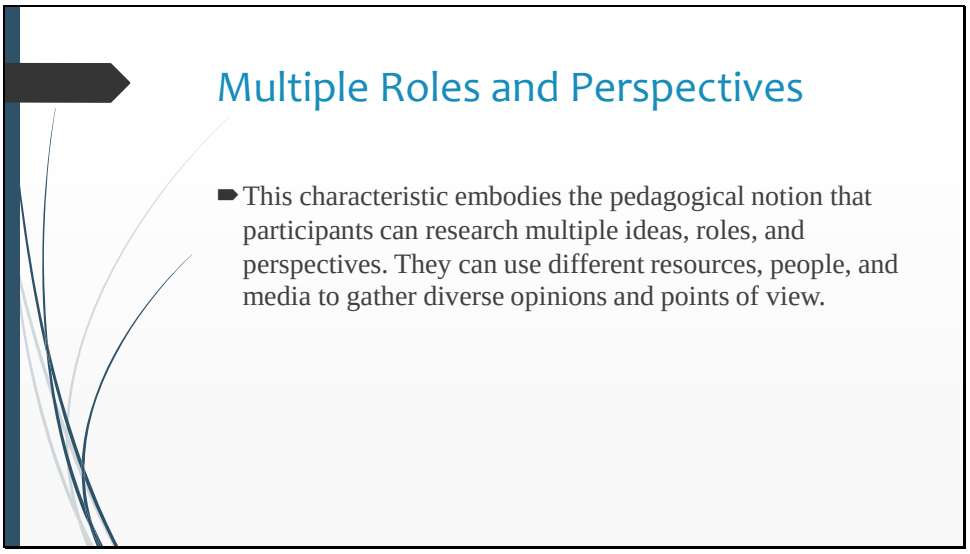
Lave and Wenger (1991) – Situated Learning
Not just the problem/project but ideally the **environment, pressures from outside and authentic feedback**.

Slide 27



Lave and Wenger (1991) – Situational learning. Being able to see what others are doing
Vygotsky – Sociocultural Theory – learning from others

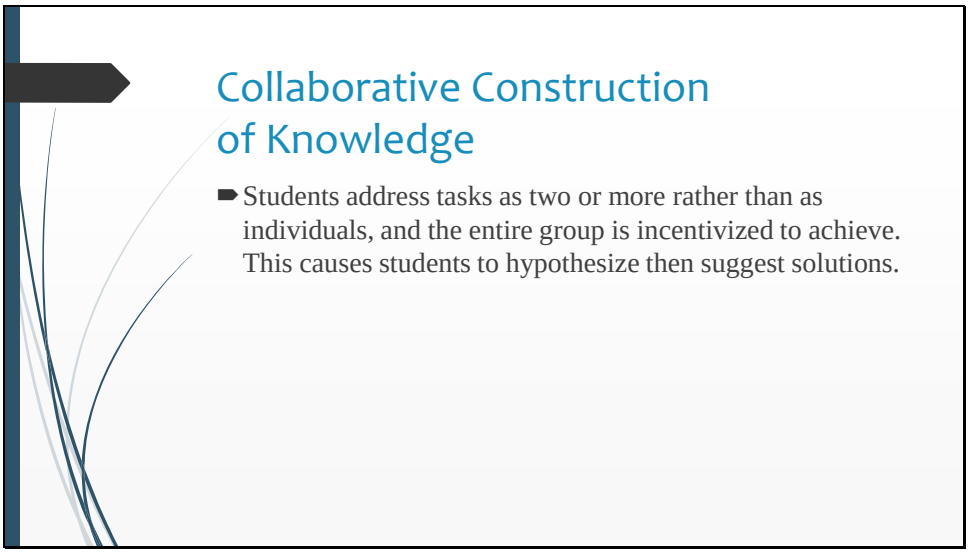
Slide 28



at Vanderbilt (1990) with their research on situated cognition using multiple views to examine Young Sherlock Holms.

When there is a problem or project, allowing the students to come up with their own answers after using their resources.
Teaching them how to **use their resources** and **deciding which resources are valid**.
Forming multiple ways to solve the problem and deciding what is the best way.

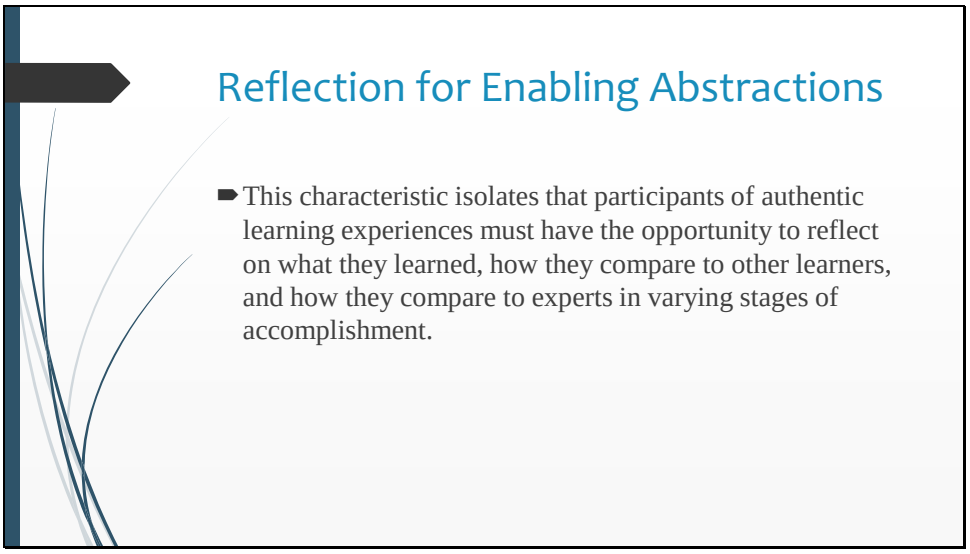
Slide 29



Vygotsky – Sociocultural theory using the people around you to share ideas, thoughts, theories and receiving feedback.

Learn through connection and conversation.

Slide 30



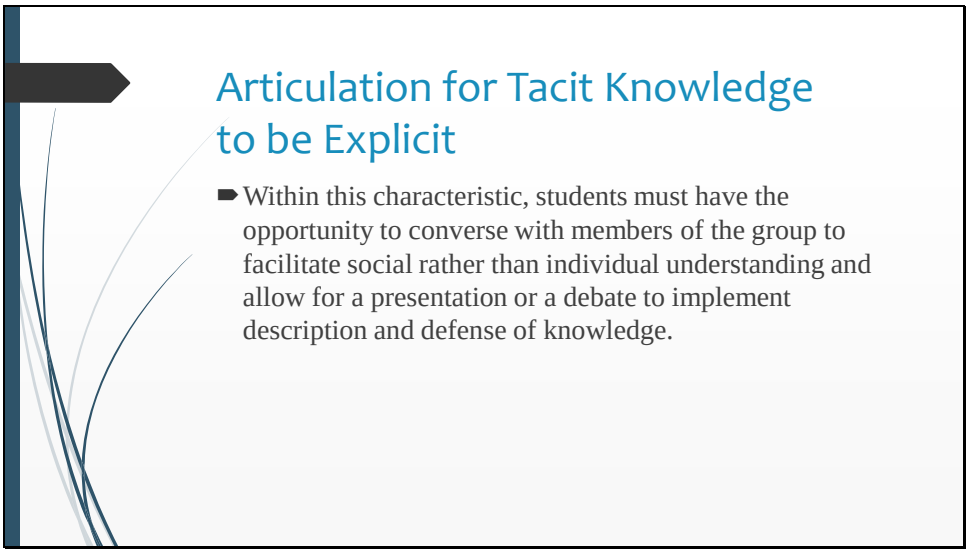
Boud, Keogh, and Walker's (2013) research on turning experiences into knowledge using reflection.

Honest reflection of process and conclusion.

What did they learn?
How did they learn it?
Problems they had?
How they solved it?

where they ended up compared to others.

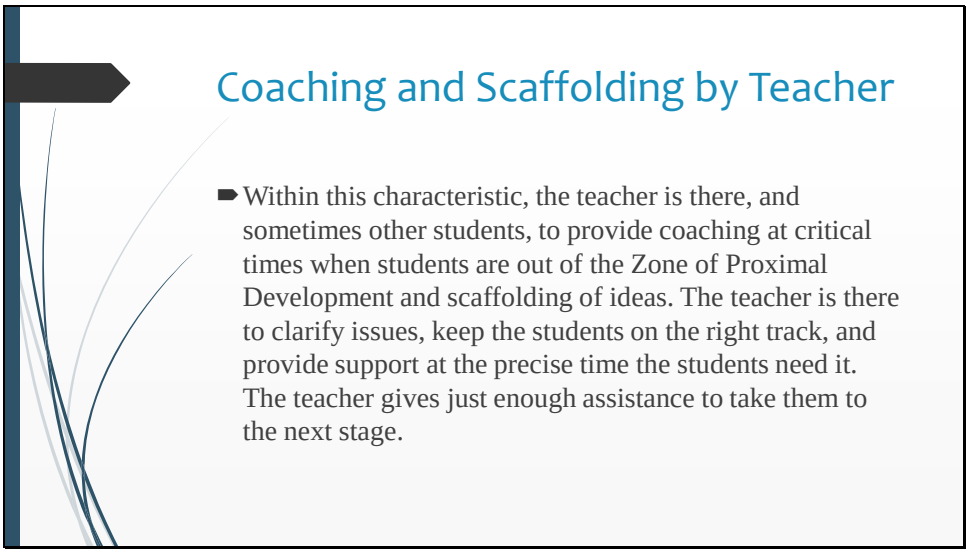
Slide 31



Sociocultural Theory – Vygotsky

Opportunity to bounce ideas off peers and other members to build group understanding. Presentation or debate to share knowledge.

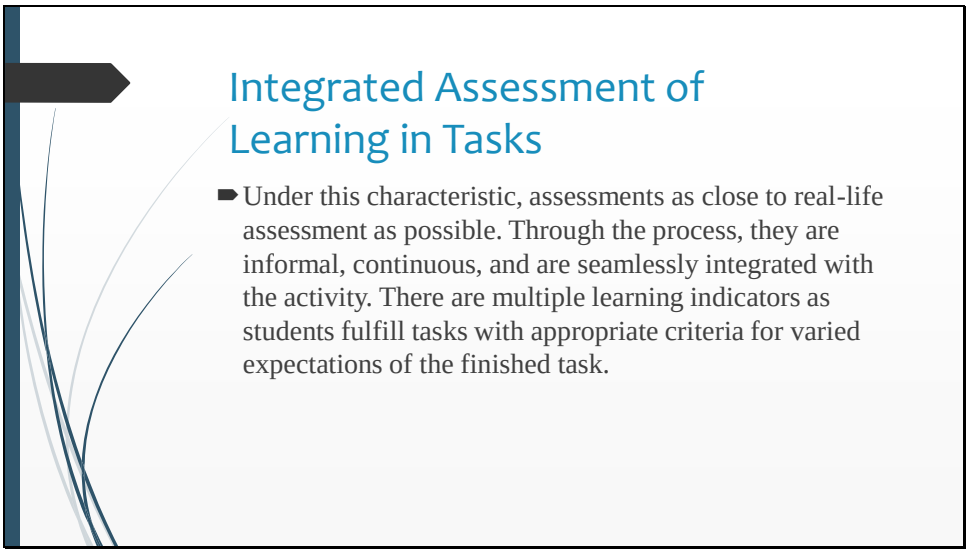
Slide 32



Zone of proximal development - Vygotsky

Gentle nudge. Not giving them the answer. Helping them in the process of discovery/learning.
Socratic Method.

Slide 33



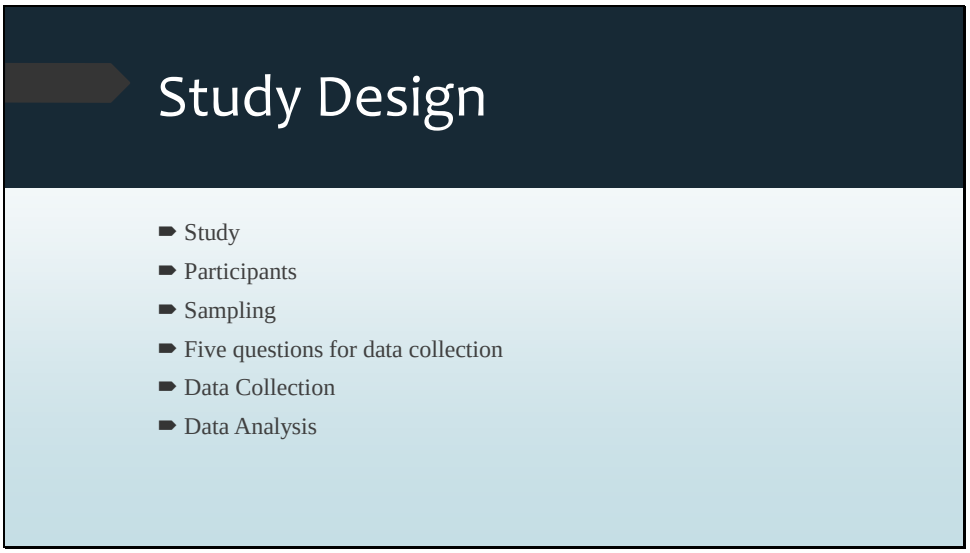
Young (1993) and their research on assigning situated learning. Young (1993) claims that assessment should be continuous and ongoing and not an add-on as a separate stage of a linear process.

Informal/formal summative/formative authentic assessments.

Like a coach. If a player is messing up, you don't wait till after the game to tell them what they've done wrong.

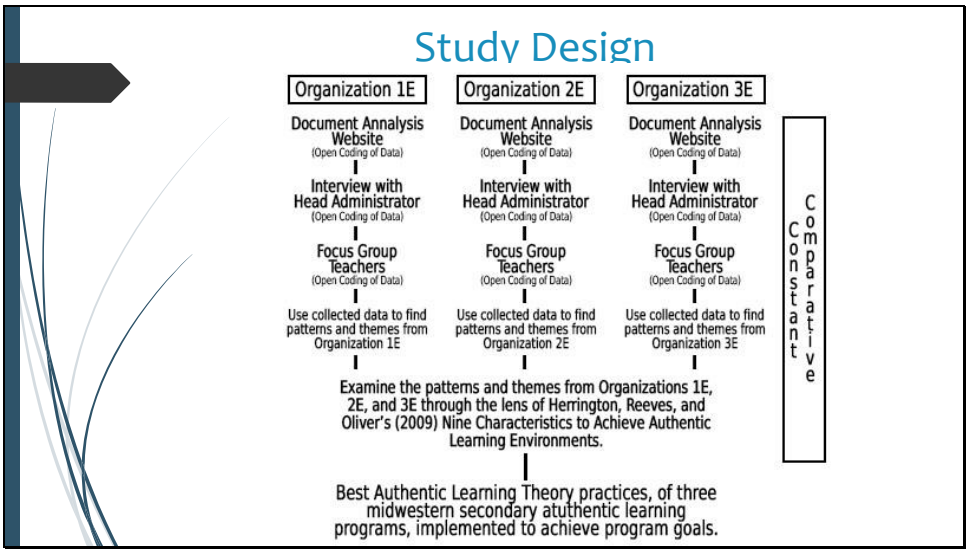
Constantly molding

Slide 34



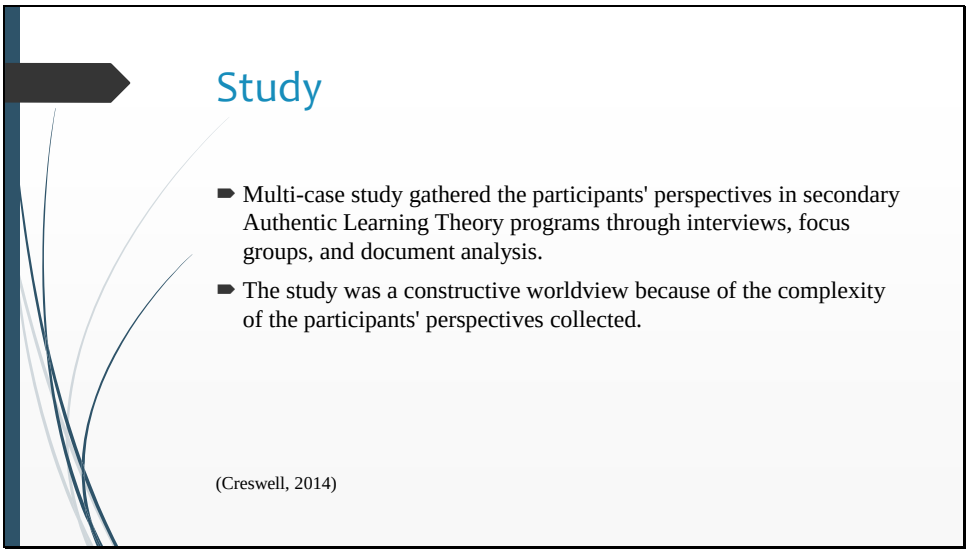
Quick overview of study

Slide 35

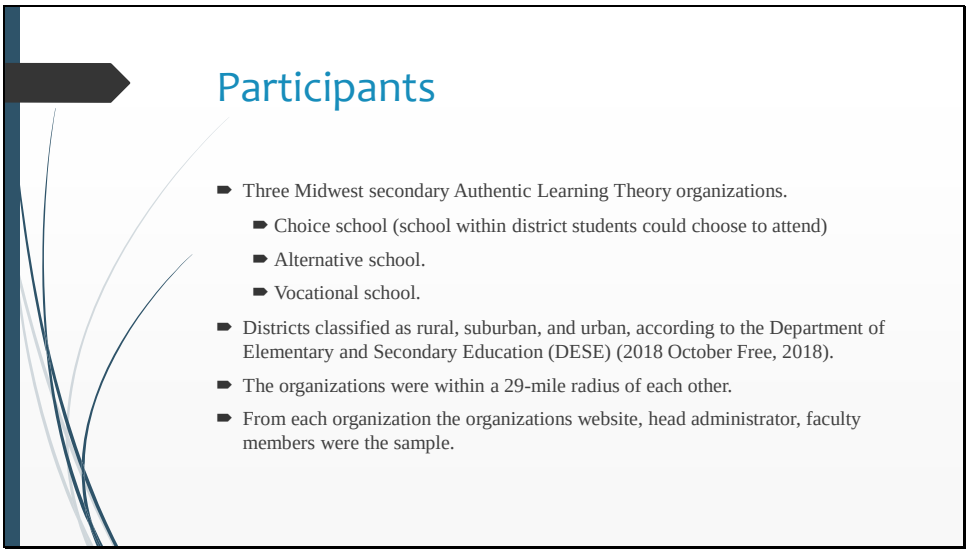


Outline of study.
Briefly describe

Slide 36


Study
Multi-case study gathered the participants' perspectives in secondary Authentic Learning Theory programs through interviews, focus groups, and document analysis.
The study was a constructive worldview because of the complexity of the participants' perspectives collected.
(Creswell, 2014)

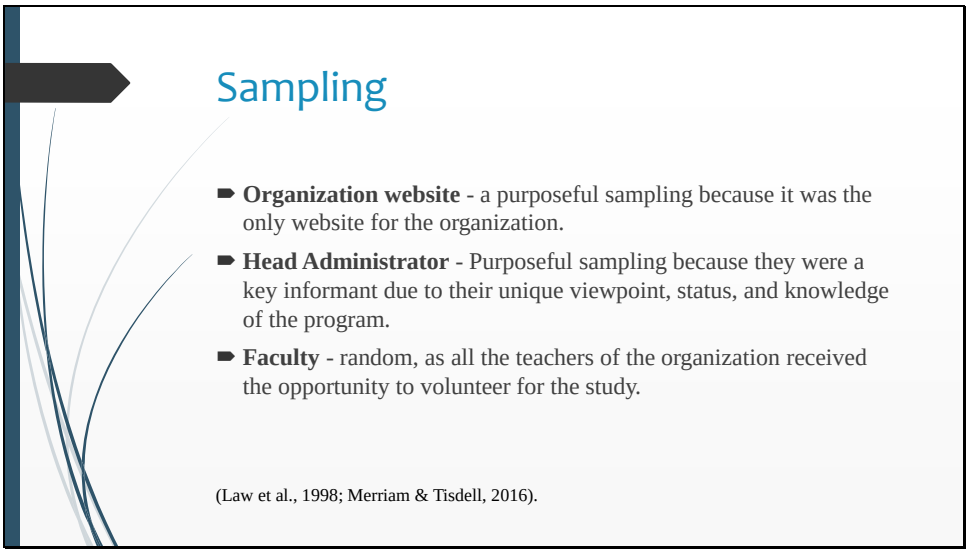
Slide 37



Three Midwest secondary ALT organizations
The three organizations refer to themselves as…

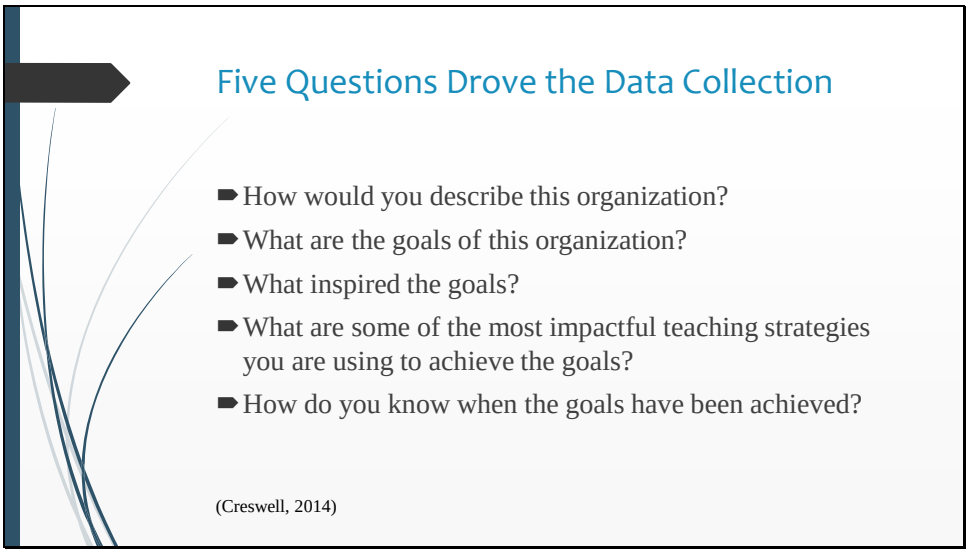
Rural and suburban

Slide 38



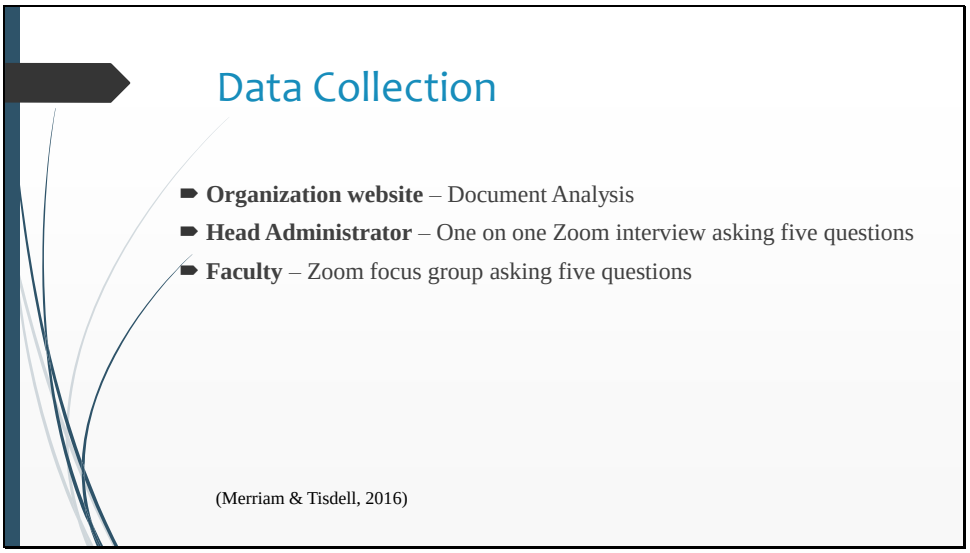
Sample on-line document (websites) head administrator interview, teacher focus group

Slide 39



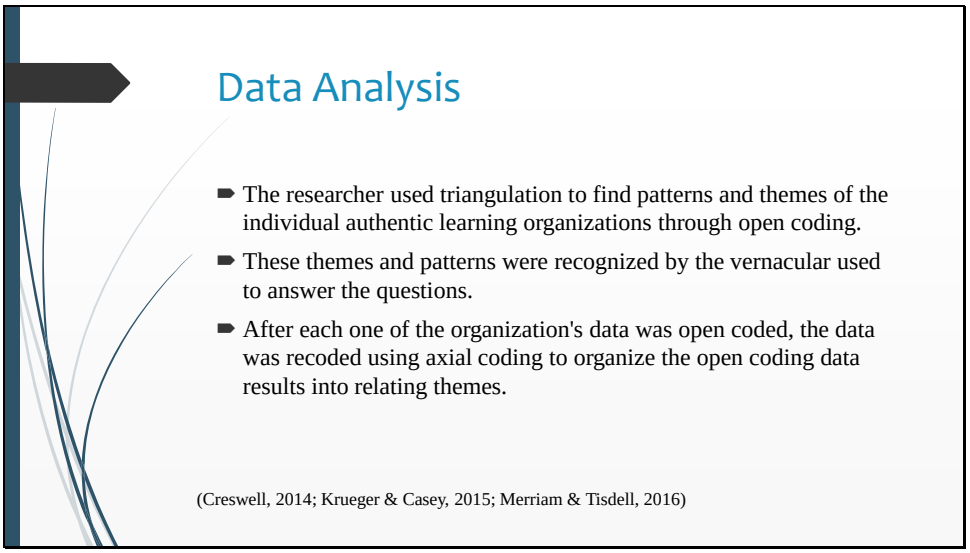
Questions were open-ended to permit a free response and avoid bias (Creswell, 2014) These five questions are what was used to mind the data.

Slide 40



Interviews and focus groups were transcribed verbatim using an on-line transcription service, so accurate coding could take place.

Slide 41



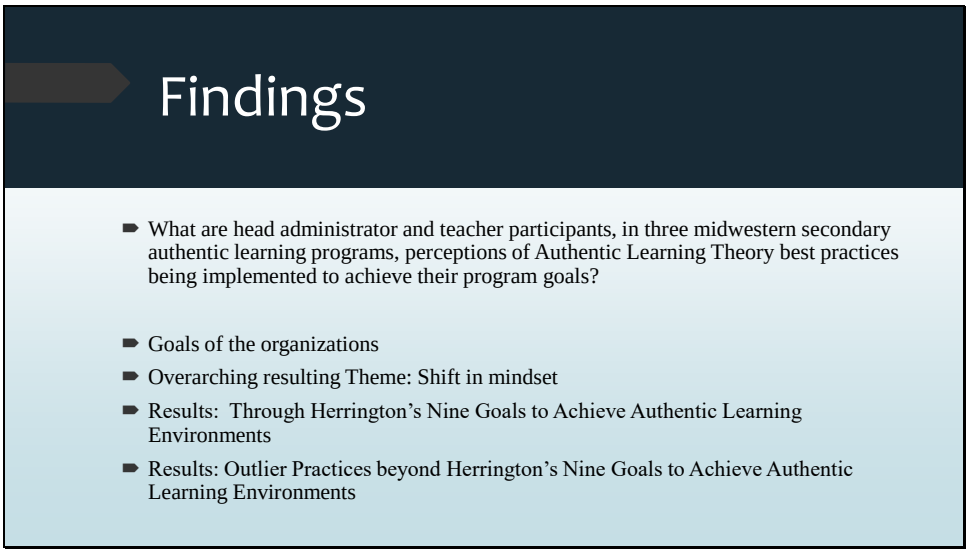
Constant comparison was used to refine data collection with each focus group and interview

As the data was being analyzed, looking for themes that alighted with Herrington's nine goals was the baseline, but also looking for any other overarching themes or practices that were being used.

Triangulation - Triangulation refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena

Triangulation also has been viewed as a qualitative research strategy to test validity through the convergence of information from different sources.

Slide 42



Four sections
Goals of the organizations

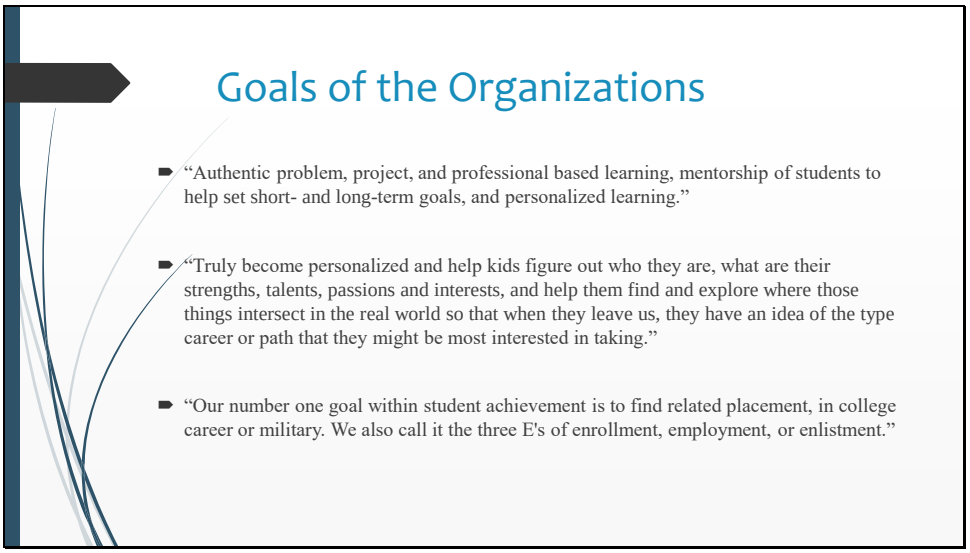
Overarching themes that were revealed

Herrington's Nine –explain how they met the nine in their unique way.

Outliers to the Herrington's Nine - The nine caught some practices used but there were six others that were revealed

Before I go to the next slide stop and think about a traditional classroom, the physical space, the curriculum, the assessment, the teacher's role, the student's role. Now move it to the side and start with a blank sheet. As start with the a what if and not with an it can't, because it can.

Slide 43

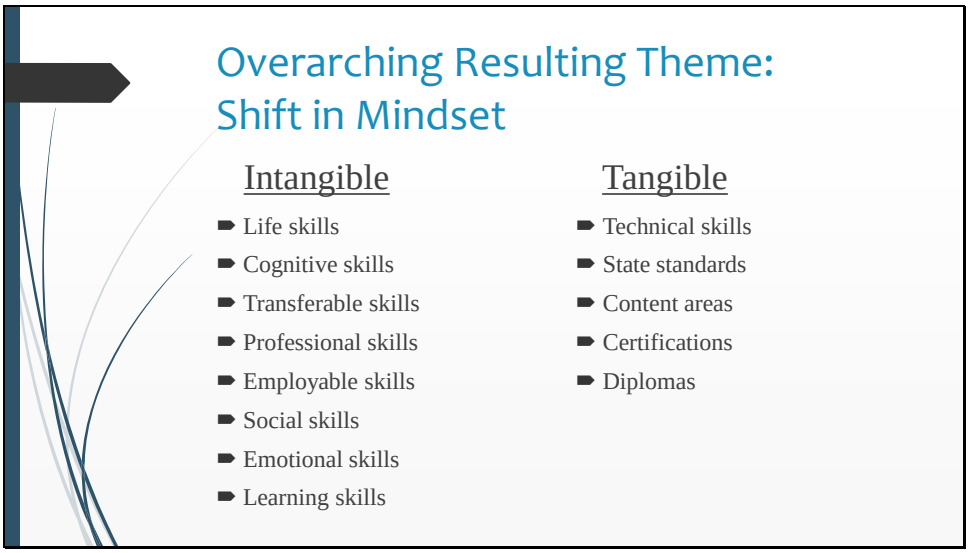


Authentic projects, mentorship in helping students makes goals/plan.

Students finding out who they are, their passion, and what type of career path is best for them

Related placement in college, career, or military.

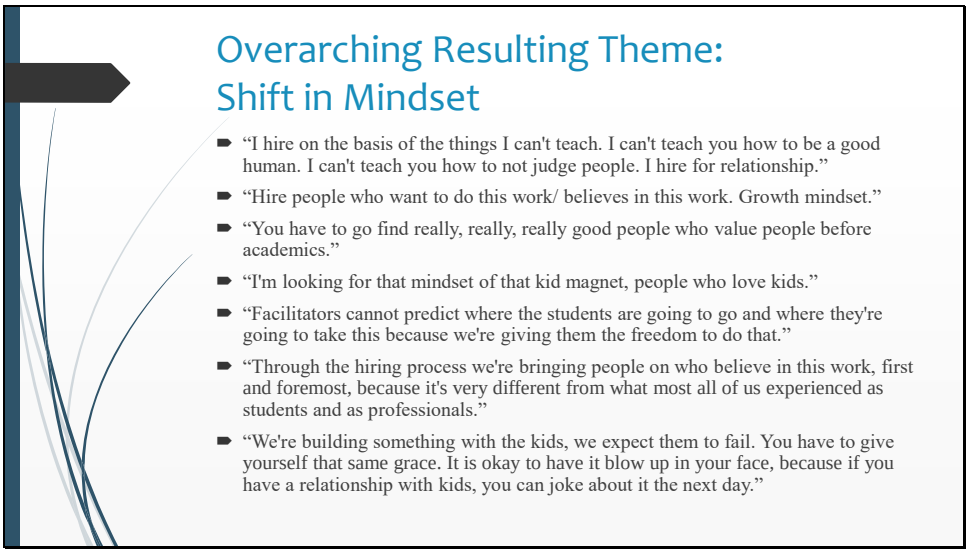
Slide 44



Every program goes beyond the tangible
They are focusing on the tangible along with the intangible
Here in a second, I'm going to talk about how they are teaching and assessing the intangible.
This leads to…

Ashok (2014) claimed everyone must develop a new mindset but especially teachers shifted in mindset toward "flexible, growth oriented, learning mindset, and an epigenetic approach" (p. 34). Bethge (2018) emphasized the importance of teachers' shifts in mindsets in facilitating students' recognition of their intelligence and how to expand their mindsets.

Slide 45

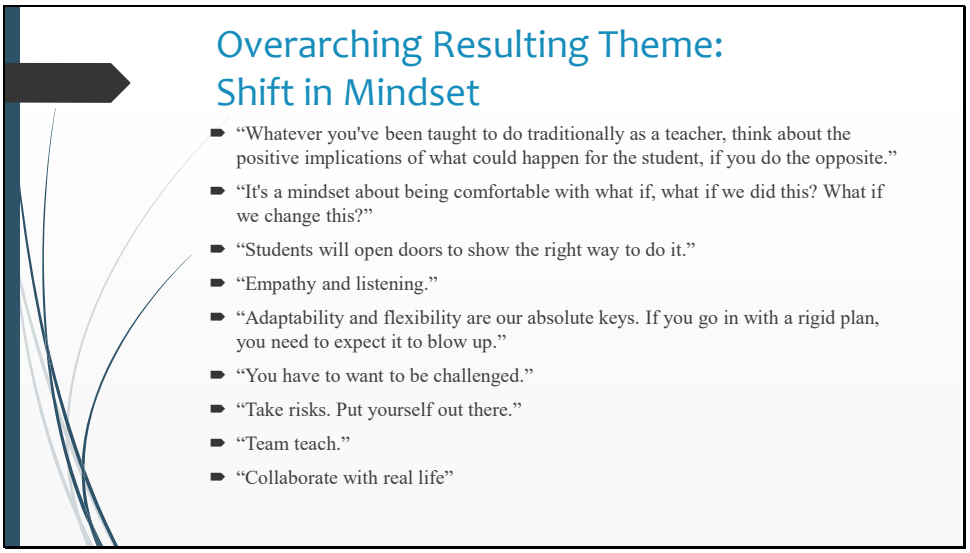


Every interview and every focus group said the importance of the shift in mindset
The findings show the mindset is different. The role is different.

I was corrected when I called them teacher - collaborator, instructor, facilitator, mentor, no one called themselves a teacher.
I can relate to that. I work in authentic learning and when someone calls me a teacher I say "well its more than that"

From what I have found the teacher has to completely shift their thinking. They are no longer the deity of the class.
Their role is no longer dragging students towards the knowledge but inspiring students to get it.

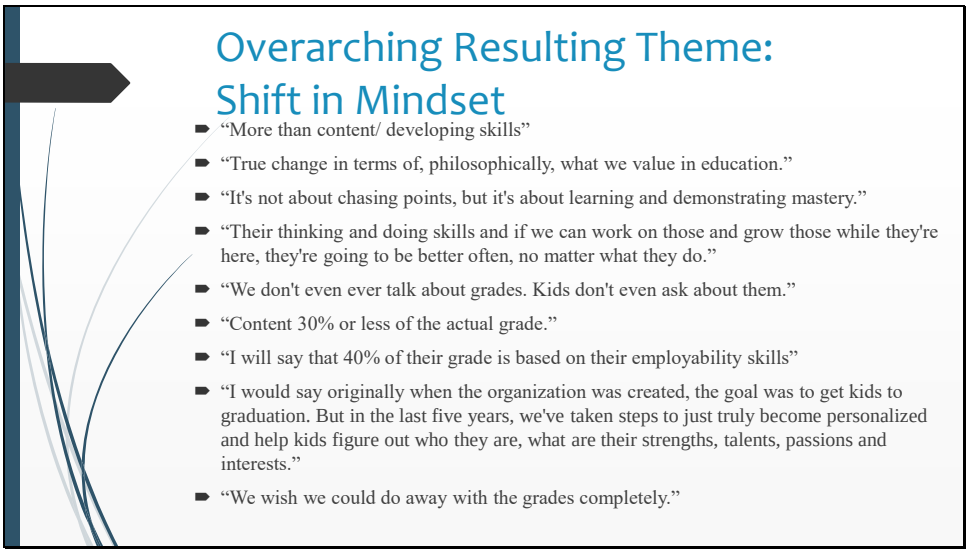
Slide 46



The teacher has to be willing to be humble and vulnerable.
The teacher takes a backseat to the students.
Once again, it's not the teacher giving knowledge for assessment, it's the teacher helping the student find the knowledge.

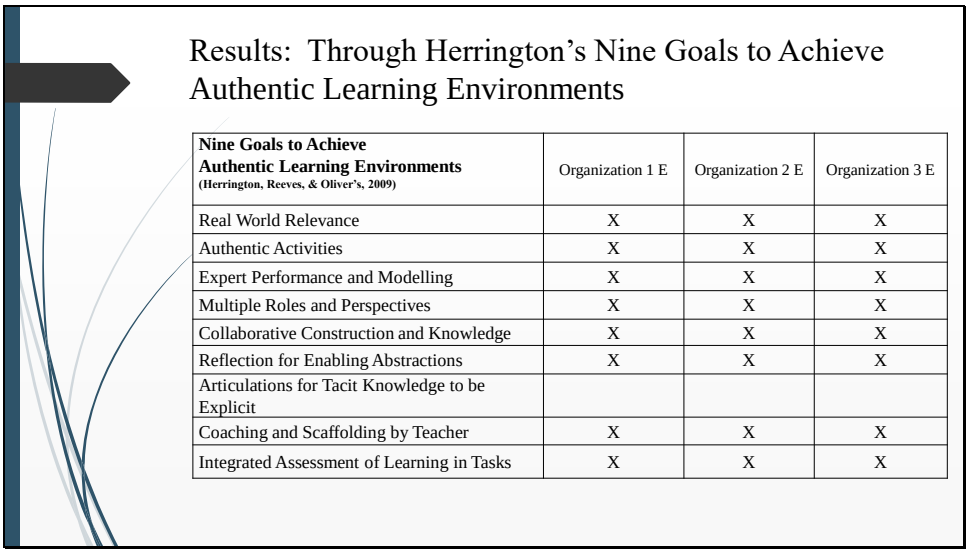
One teacher went so far to email after the focus group to explain issues teachers have. "The teachers ultimately put on the brakes because they felt uncomfortable NOT KNOWING ALL THE ANSWERS AHEAD OF TIME. They felt uncomfortable with the learning process of making mistakes and trying something new. Also some teachers did not like the noise level increase when the students were having productive conversations. Those teachers felt out of control and put on the brakes".

Slide 47



Shift in priority of grades
This follows the idea of preparation beyond high school.
The ability to not only survive but be successful post high school.
The intangible skills are flexible to whatever path the student decides to take.
In all classes the intangible skills were worth as much if not more than the content grade.

Slide 48

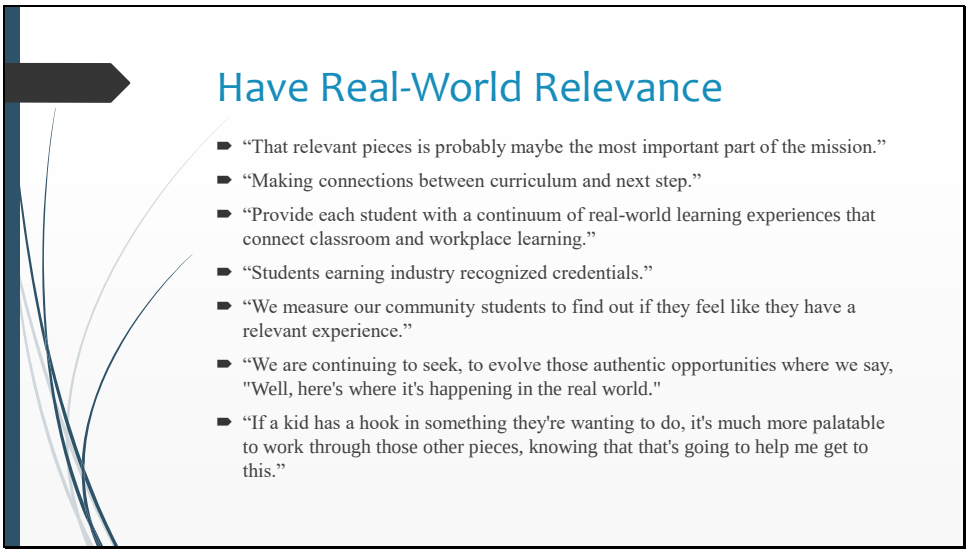


Results: Through Herrington's Nine Goals to Achieve Authentic Learning Environments

Nine Goals to Achieve Authentic Learning Environments (Herrington, Reeves, & Oliver's, 2009)	Organization 1 E	Organization 2 E	Organization 3 E
Real World Relevance	X	X	X
Authentic Activities	X	X	X
Expert Performance and Modelling	X	X	X
Multiple Roles and Perspectives	X	X	X
Collaborative Construction and Knowledge	X	X	X
Reflection for Enabling Abstractions	X	X	X
Articulations for Tacit Knowledge to be Explicit			
Coaching and Scaffolding by Teacher	X	X	X
Integrated Assessment of Learning in Tasks	X	X	X

As we look at the Nine Goals to Achieve Authentic Learning Environments, we see all the organizations checked the boxes except for one. I'll give examples of how they met 8 of them and why they didn't meet the one.

Slide 49



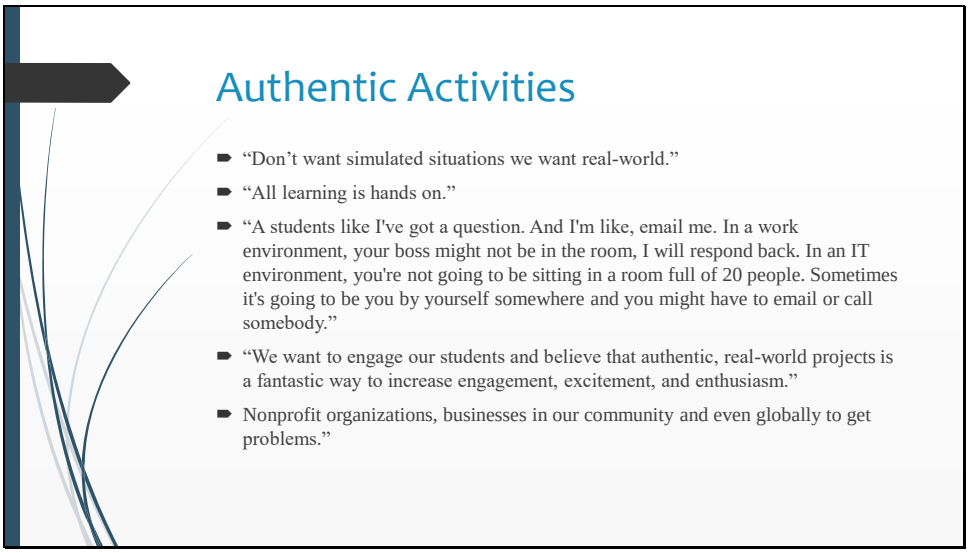
Project, problem, professional based learning,

The organizations introduce some type of content, technique, by either the teacher, expert from the field, or student self discovery. Then a "real world problems" is introduced for the students to solve.
Some students not only pick their own content put also create their own problems to solve.

The students see how the content being learned relates to the real world. It's answering the questions "why am I learning this?"

It also creates motivation as the students know the information being provided

Slide 50



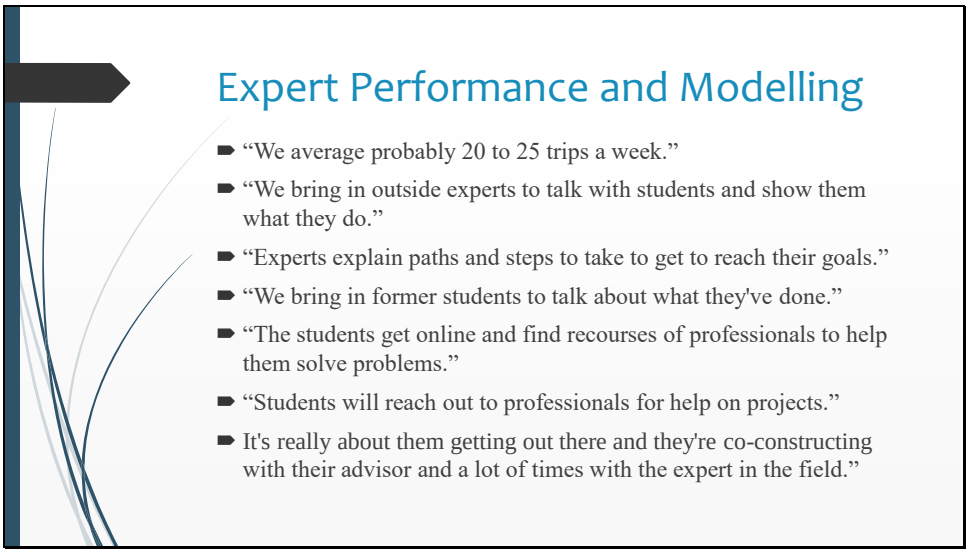
The activates are as close to "real world" as possible.
Restraints like money and room are a factor for all organizations.

simulated workplace – is a term coined by the vocational school. All schools have tried to create an environment that is more authentic to the learning process.
One doesn't have doors another doesn't have walls. (It's an open facility with area the students work it. Similar to a coffee shop) Another doesn't have bells at all. The students can work on their learning goals and projects goals at their own pace. Pace monitored and held accountable by the teacher.

One has created a management structure amongst the students where they have responsibilities that mirror the profession they are learning about.

The expectations are like the real world.
Real world professionals are brought in to listen to presentations at the conclusion of the project.
Professionalism, employability are used.

Slide 51



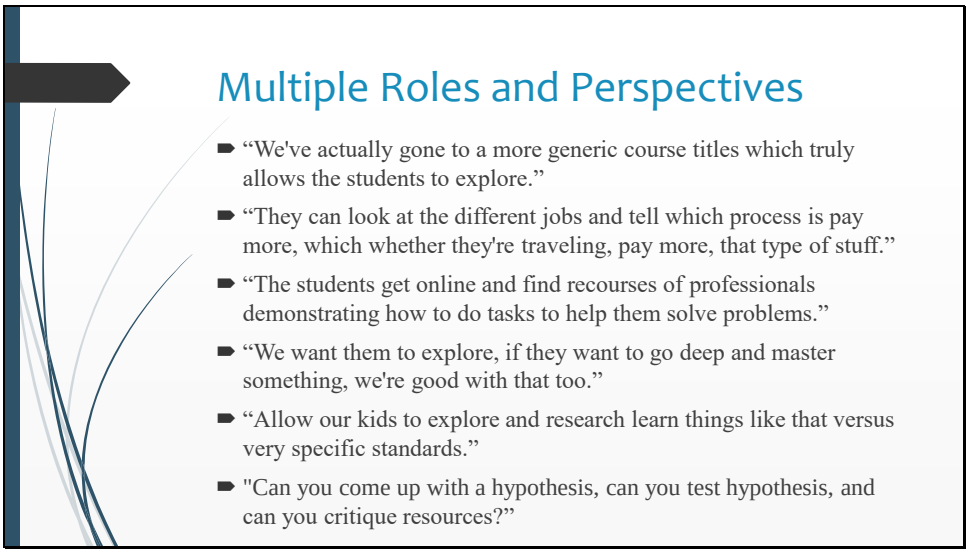
All the organizations either bring in the community or go out to the community,

Students are also tasks to use recourse to find "experts" in their field for help.

The teachers use the experts to introduce new concepts, ideas, techniques, content.

"The interesting thing is that the vetting of who we work with is very important that they understand our goals."

Slide 52



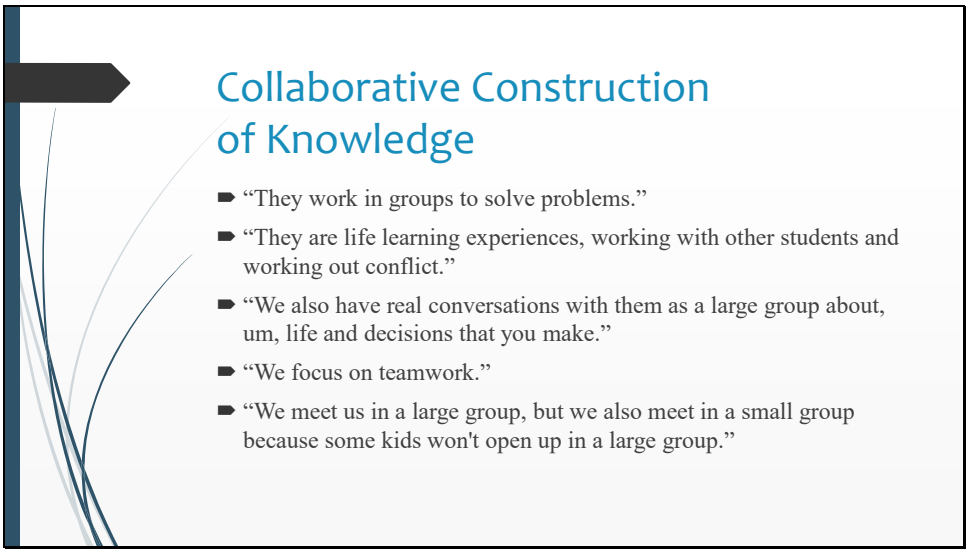
This process occurs all the time in the organizations.

Looking at career paths they use multiple sources on what they need to do/know moving forward.

Students most find the solutions to problems. To do this they rely on multiple sources. They then must learn what sources are the most reliable.

They are being taught how to learn using this model. This is part of the process.

Slide 53



There's evidence of group work but problem

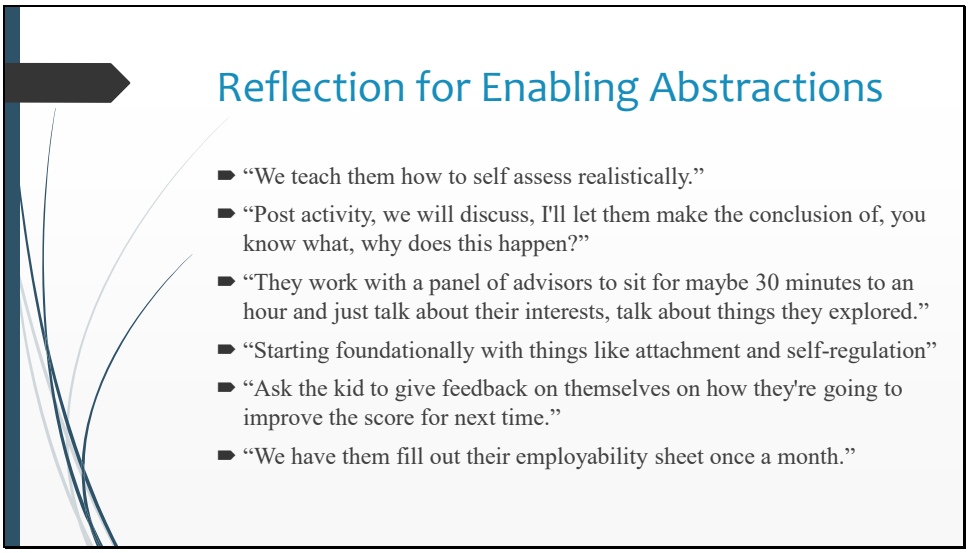
This is different than your normal project work. We all know the stereotype of group. One works, one sits back, others kind of help.
This they work together to solve problems. There aren't check boxes to get a grade the. Because the problems are ill defined, they work together to solve.

Authentic problems for people outside of organization authentic pressures (Lave and Wenger)

Example: Two students want to be a musician studying WWI. What type of music was being made? How did it reflect what was going on? What type of music would you have made? Why? Make music. Process. Reflect on the process. (insert Soft skills)

Example: Business partner is working on getting fresh water to different parts of a third world country. Here are the problems they are facing. Using what tools/content are can you use to solve? what are your suggestions.

Slide 54



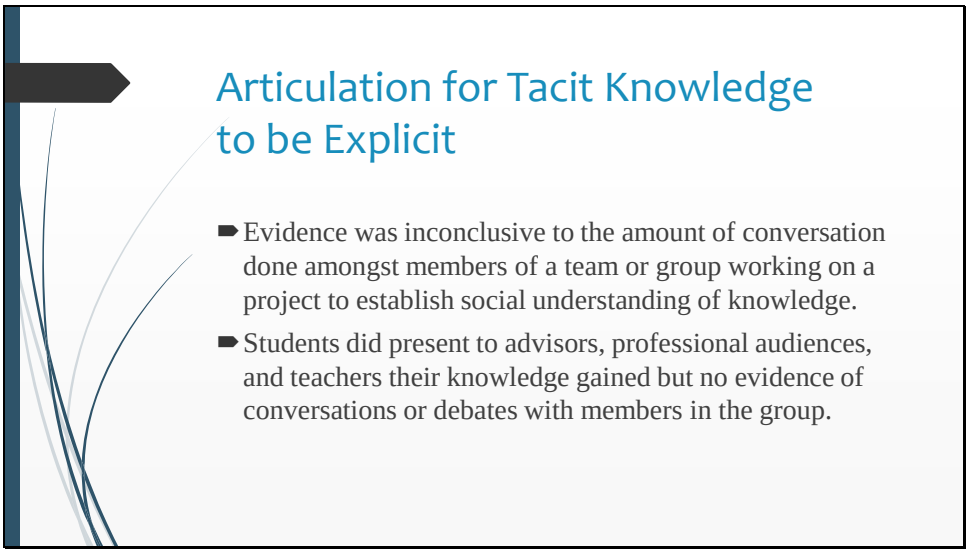
Professional – employee evaluation

All the organizations gave the students the opportunity to self-evaluate and report out.
Give a presentation to a professional.
Talking with a committee of advisors every 6 weeks
Filling out an employability form every month for review with their advisor.

They discuss what they learned, how they learned, what issues they had, how they overcame situations, what they can/want/need to improve.

The students will fill out the employability forms, then the teacher fills it out, then they discuss.

Slide 55

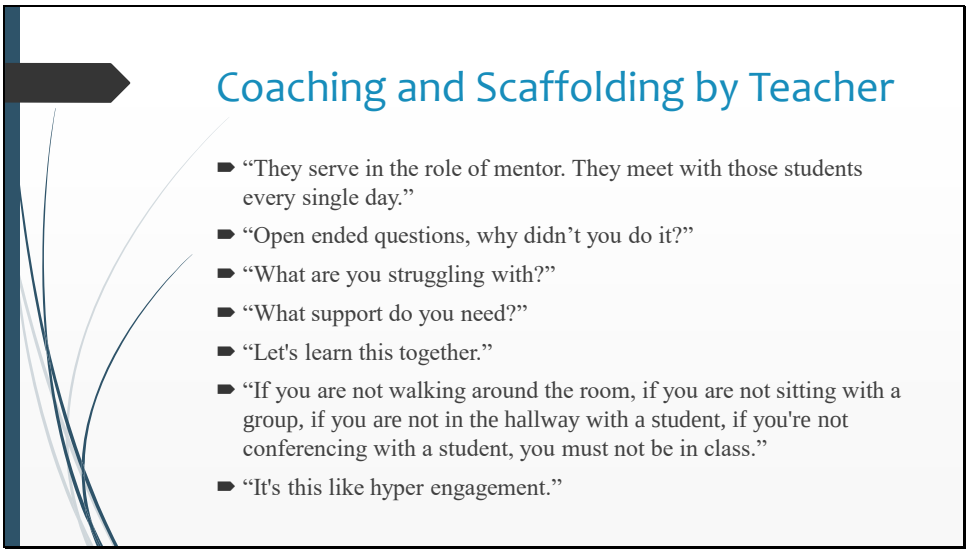


Evidence was inconclusive to the amount of conversation done amongst members of a team or group working on a project to establish social understanding of knowledge as 0% of the participants mentioned it.

Students did present to advisors, professional audiences, and teachers their knowledge gained, but no evidence of conversations or debates with members in their peer group.

However, in future research this is a question that could be asked specifically to find if articulation for tacit knowledge to be explicit was occurring as it is possible the open-ended questions did not lend to this being discovered.

Slide 56

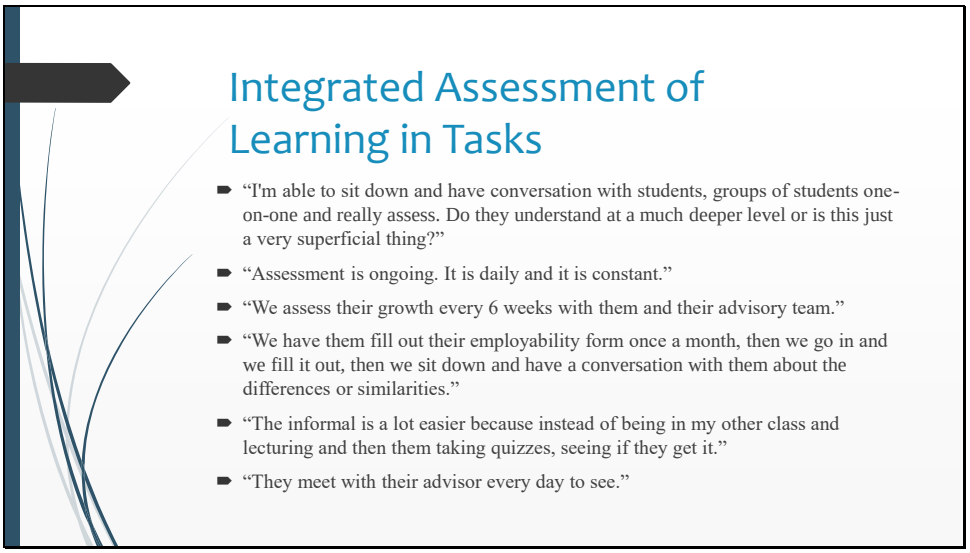


Role of a coach – if a player runs the wrong play, has bad form, you don't wait to the end of the week to correct you

Asking questions to help guide the student. Keeping them in the Zone of Proximal Development.
Because of this guidance as opposed to traditional teaching strategies students can stay in the Zone of Proximal Development longer.

Socratic Seminars'. This is a teacher-directed form of instruction in which questions are used as the sole method of teaching, placing students in the position of having to recognize the limits of their knowledge, and hopefully, motivating them to learn. (Paraskevas & Wickens, 2003)

Slide 57



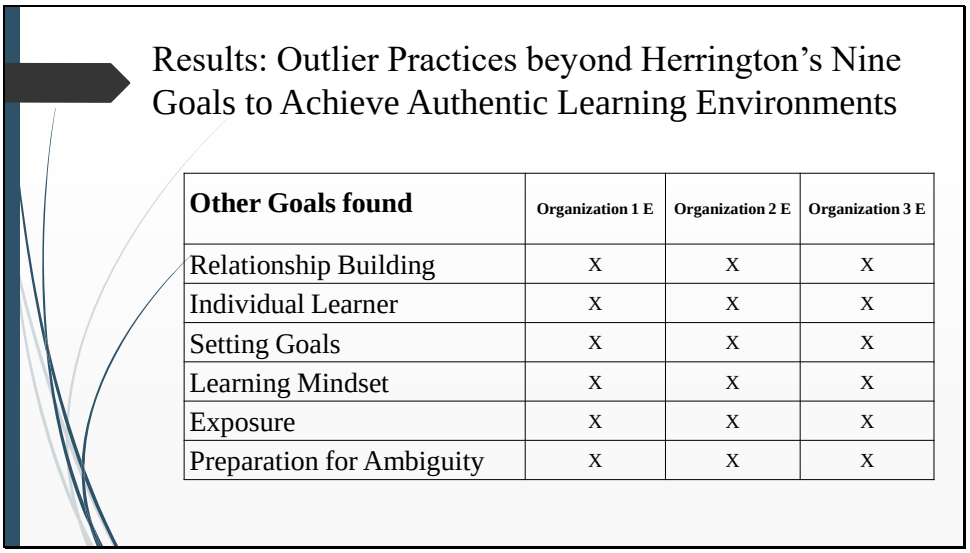
There are multiple assessments occurring.

Formal Summative – at the end of the project the student explains the process, what they learned, how the demonstrated it, what troubles they had, how they solved the problems, how they grew.

Form formative – depending on the organization every 6 weeks, every month, the students are filling out a form of how they perceive themselves doing.

Informal formative – the instructors are interacting with the students every day in some capacity to monitor their growth in the tangibles or intangible.

Slide 58

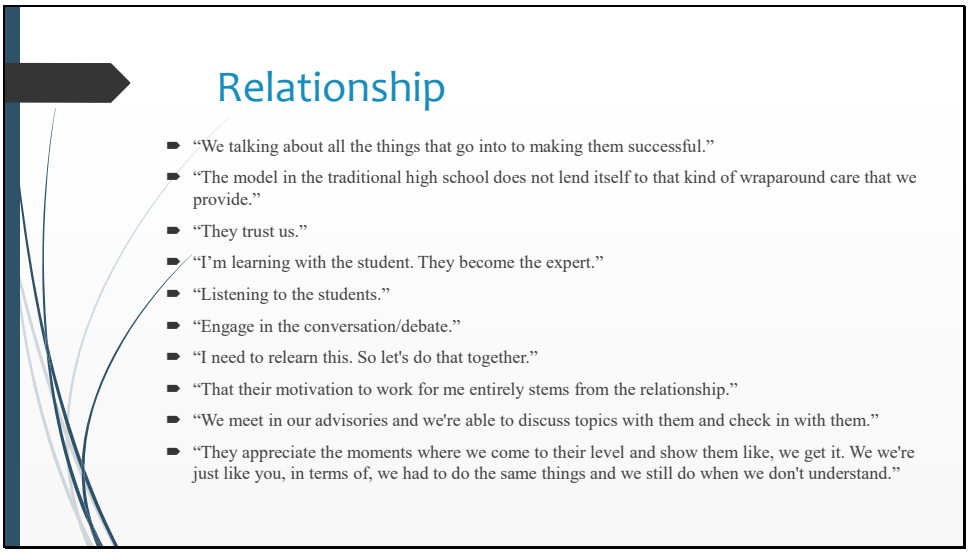


These are the 6 practices that were outliers to Herrington's nine.

In 100% of the interviews and focus groups these six practices were revealed.

They may look very similar to what a traditional high school would say their goals are but these ALT organizations have different definitions and different ways of achieving these practices.

Slide 59



The importance of a teacher student relationship in positive outcomes for the student's in regard to cognitive development, motivation, and sociocultural growth is supported by (Davis, 2003),

Out of the six themes beyond the nine goals, this by far, was the most discussed.
Role of the teacher is different.

Once again the teachers took offense to being called teacher - collaborator, instructor, facilitator, mentor, no one called themselves a teacher.

Relationship is focused on goals of student this cause the relationship to be
Much more personal

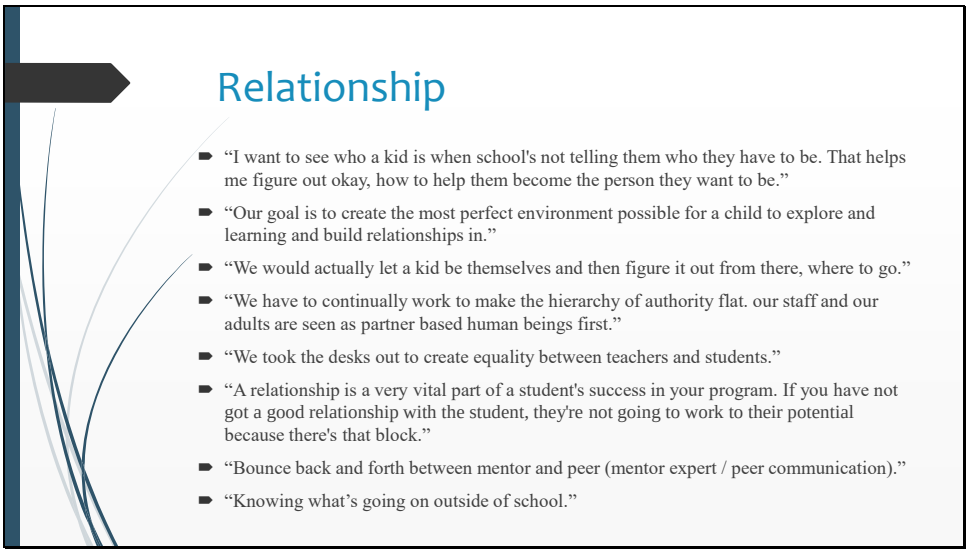
> They know their students. What they like, don't like. Their insecurities, What they are confident about. What is happening outside of school

It is not teacher-centered transmission approach (Breunig, 2017).
In many cases the teacher is learning with the student caused by the student having choice in what/how they learn.

These relationships create trust and create the opportunity to give feedback on not only the tangibles but also the intangibles.

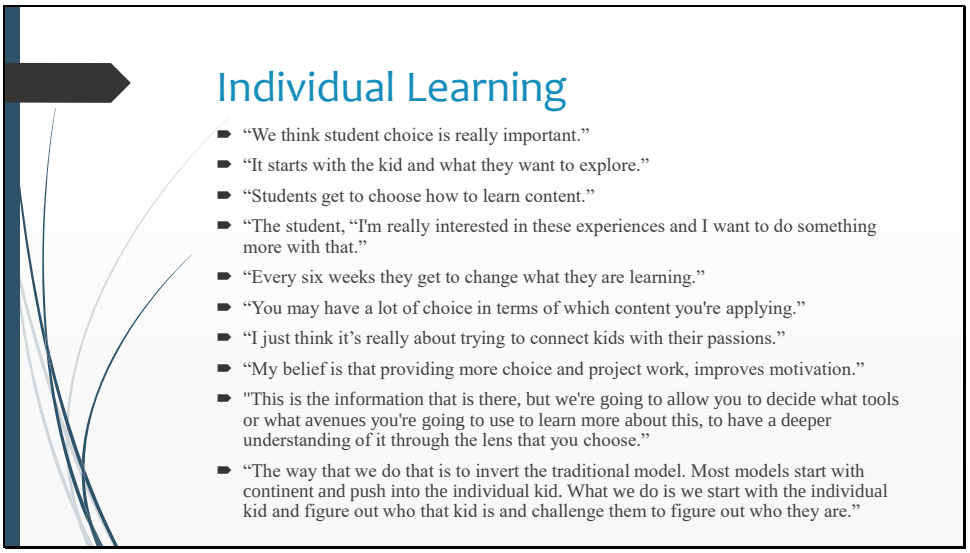
When talking about personal growth and where the student needs improvement the relationship has to be there where the student is willing to take that personal feedback.

Slide 60



we took the desks out to create equality between teachers and students
they focus on being equals.
Their people too learning.
Demonstrating the learning process. Teachers acknowledging their faults. Being human
Stripping the cloak of the smartest in the room.
This humility creates modeling for the students.

Slide 61



providing students with choices among homework tasks effectively enhanced motivational and performance outcomes and that
choice is an important component to creating a classroom environment supportive of autonomy and intrinsic motivation (Patall, Cooper & Wynn, 2010)
Student

Choice means choice of what they learned and how they learned it not school vs. homeschool, private school, etc

Choice – The focus is on the individual learner learning the tangibles and intangibles.

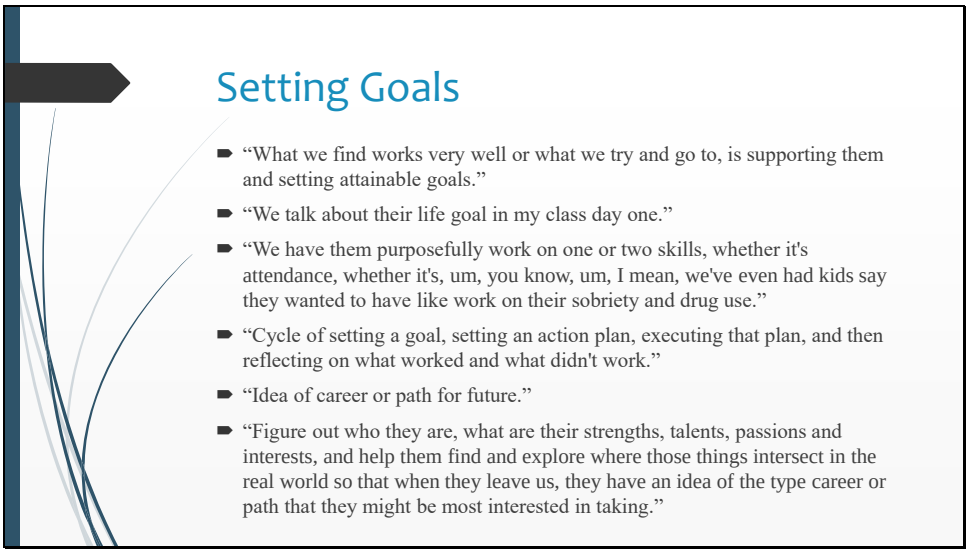
Depending on the organization there are different levels of choice.

- Get the tangibles to learn but choose how to learn them and the intangibles.
- Vocational - Students choose what tangibles they want to learn then taught by a professional. The intangibles are integrated. The students choose how the learn the process in which they learn the tangibles and intangibles
- The students get to choose what tangibles and intangibles they learn and how they learn both.

It's about the growth of the individual student.

Students get to choose what content they learn, how they learn it, what projects they work on, what skills they want to learn, what paths they want to take and though they pick something they can change just about whenever.

Slide 62



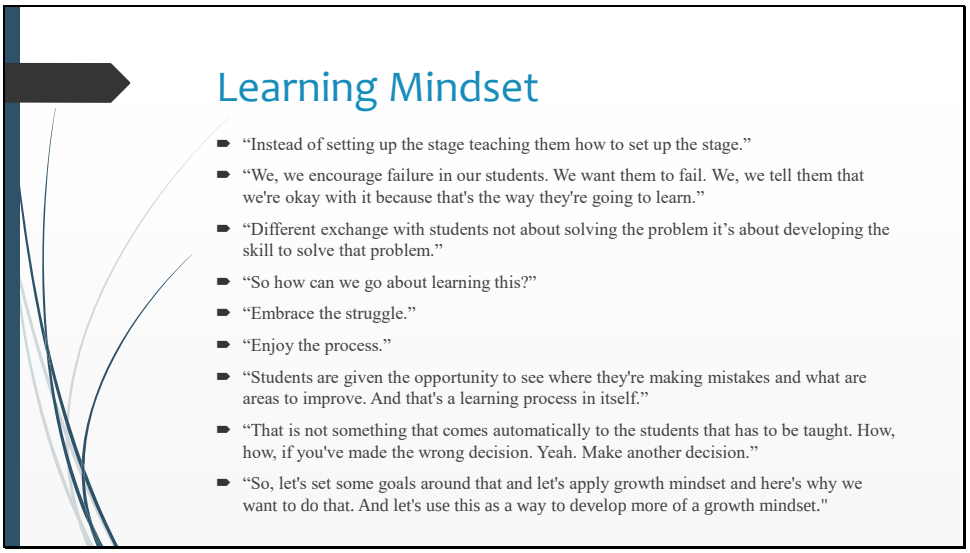
Greene, Miller, Crowson, Duke, Akey (2004) support the importance of student's motivation by understanding classwork is instrumental for future success.

Goals are crucial in the choices of the individual student.
Remember two types of goals tangibles and intangibles.
Both are included in the plan.

Goals = plan
The process of achieving the goals are discussed.
How do you achieve the goals?
What steps do you need to take to achieve them?
What do you need to learn?
Goals for problems, projects – what needs to happen to solve this problem/project?
Goals for day by day, week, month, semester, year, after graduation, 1 year down the road, 5 years down the road.
Constantly setting goals

Goals = assessment – Herrington's consistent assessment
You were supposed to be here, but you are here. Why is that? Here are you struggling?
They use a Likert scale for the students to self assess growth and compare their perspective with their teachers.

Slide 63



The positive impact of a growth mindset for student achievement is supported by Claro, Paunesku, and Dweck, (2016).

As the problems present themselves the teacher is there "Coaching and Scaffolding" but they are helping the student understand and appreciate the process.

The negative stigma of something not working is stripped away.

As the student "Collaborative Construction of Knowledge" to solve the problem the teacher if asking the question to further their discovery.

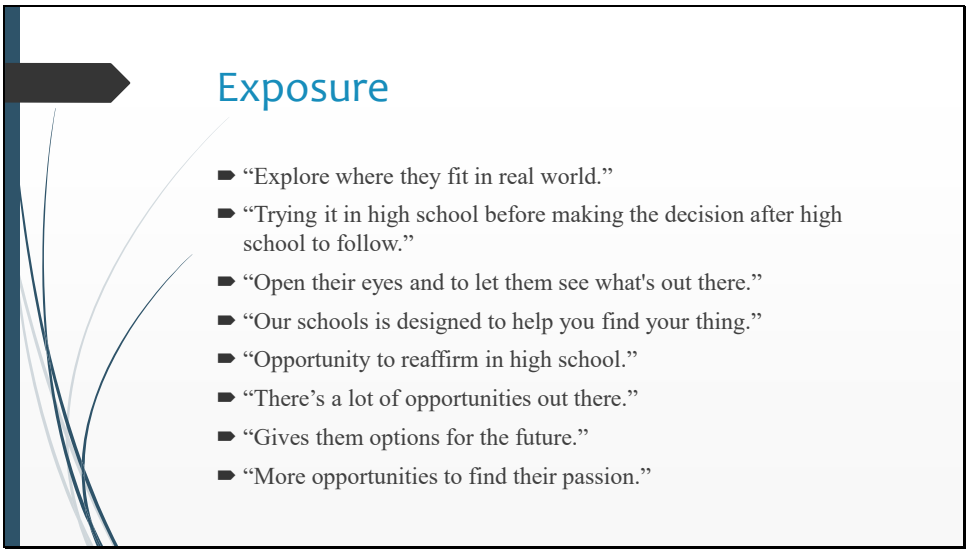
It goes back to the students learning the right questions to ask.

failure's a big part of this for all three of the organizations, failure is built in
Students are supposed to try ideas and it does not work.

Why didn't it work?
What would you do differently?

Back to Socratic Method as the student struggles asking questions to make them use their growth mindset

Slide 64



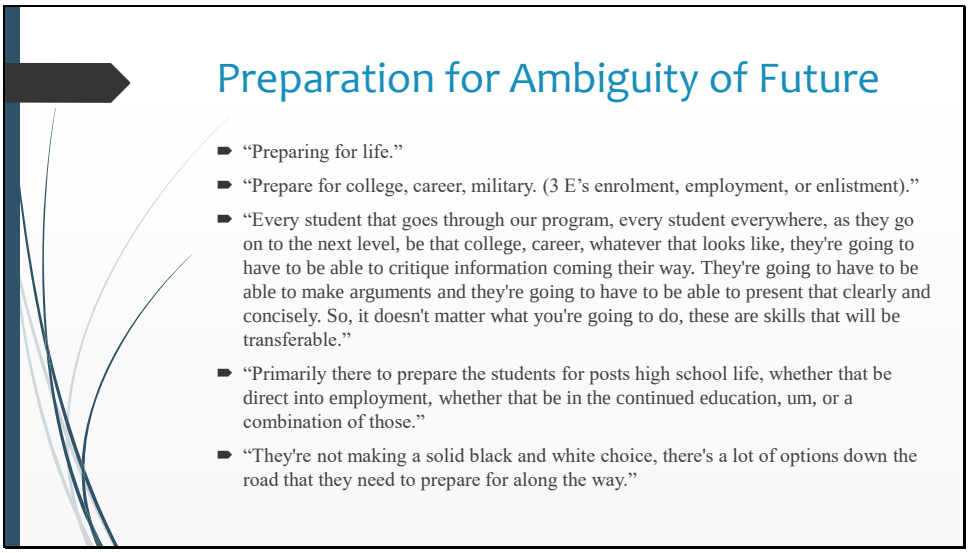
The advantages of students being exposed to career paths in high school to help them make educated decisions towards career paths is advocated by Cohen, Patterson, Kovarik, and Chowning (2013)

The teachers introduce students to different careers to find students passion to aid in student's motivation.

They provide authentic views of different careers by bringing in outside members of the community and taking students on trips to see different professions.
In traditional schools the view of a career path is hitting bullet points and often with rose colored lens.

The exposure was to the members of the community who were working in those career. This provided the students with opportunities to build relationships with these professionals.

Slide 65

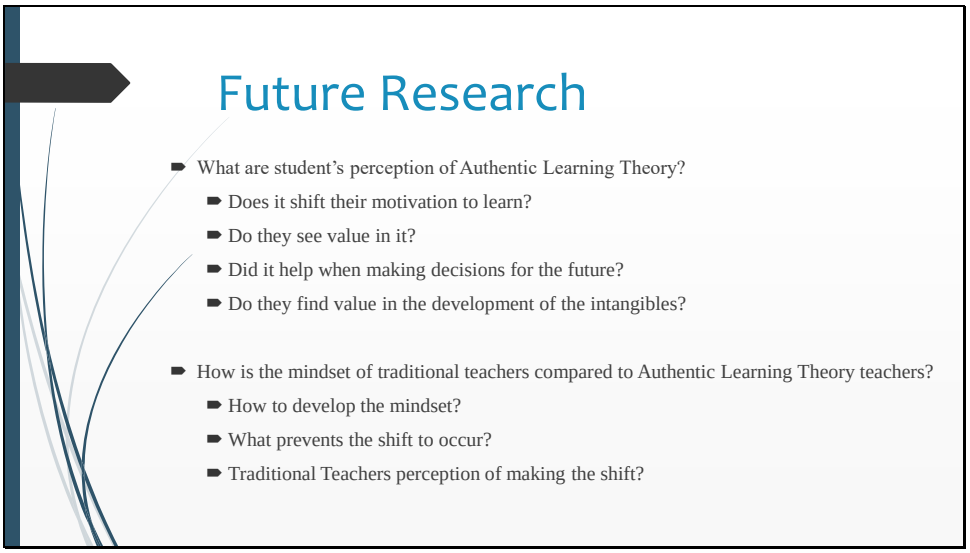


The preparation of students for the ambiguity of their future is supported by Stern, Dayton & Raby (2010)

Deferent from the college or adult learning levels
At the college or adult very directed at the outcome. Must learn these skills to proceed in this particular class or field.

The goal is to provide a base knowledge for whatever happens post high school and the changes which come with it.

Slide 66

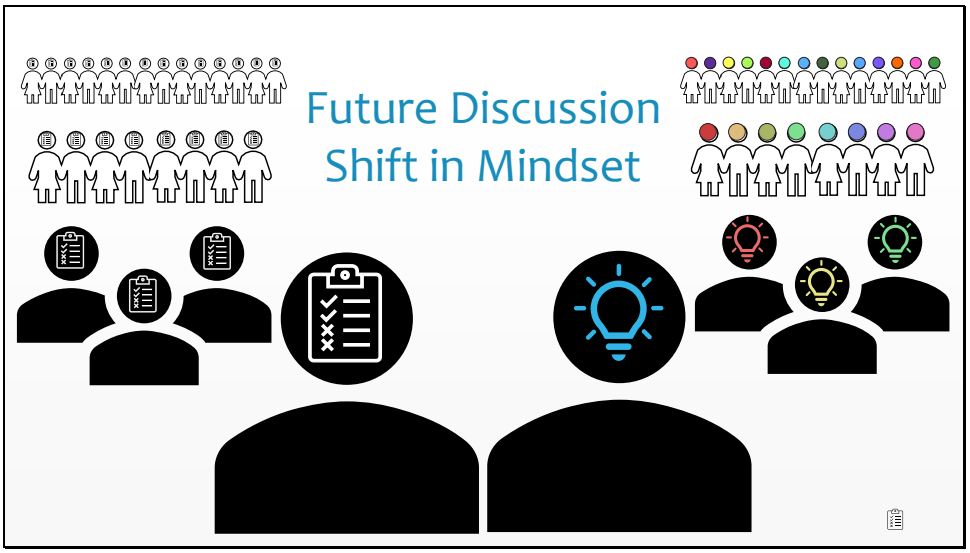


The reason the student's perception of ALT should be researched.
Students are the ones we serve. Knowing their perception of ALT is important to know before any initiative is put into place.
The teachers and administrators are passionate about ATL are the students?
Do they see the relevance?
Do they see the value?
Did they feel more prepared as they graduated?
Did the plan help with future decisions?

The reason for researching the traditional teachers' mindsets.
Everyone in this study made some sort of reference to teachers having the appropriate mindset. They all also mentioned how many teachers did not have that mindset and how much it did not work when they were there. Many teachers have a hard time shifting from how they learned as students, how they were taught to teacher, and how they have been teaching.

What really makes it so hard for traditional teachers to shift their mindset?
What prevents the shift?
What do they think about this type of mindset? Why?
What can help a traditional teacher shift their mindset?

Slide 67



How to help traditional teachers shift their mindset?
What steps should be taken? Plan?
What is needed from leadership to facilitate the shift in mindset?
How to address the hurtles of teachers resisting the shift?

One teacher went so far to email after the focus group to explain issues teachers have. "The teachers ultimately put on the brakes because they felt uncomfortable NOT KNOWING ALL THE ANSWERS AHEAD OF TIME. They felt uncomfortable with the learning process of making mistakes and trying something new. Also some teachers did not like the noise level increase when the students were having productive conversations. Those teachers felt out of control and put on the brakes"

A great example of comparison, think about teachers after work. How to they discuss their jobs? Be it me to assume what the conversations are but I've been to enough happy hours, choir meetings, informal PD's. To know what they look like. "You won't believe what this kid did." "I have to grade all these tests." My plan period got cut short by four minutes"

Now these teachers on the other hand were passionate. I allowed for an hour for all focus groups and interviews we went over on everyone. Multiple times the teachers said, "I could talk about this all day. I love this stuff" There were a couple of times where impromptu brainstorming sessions broke out and I had to get them on task.
That alone says it all.

This makes forces creativity, excitement, it makes learning fun.

Slide 68

Slide 69


Jonathan M. Hart
Email - Mr.Hart1234@gmail.com
Phone – 816-739-9632
University of Missouri Columbia
Advising team –
Dr. Nissa Ingraham (Head Advisor)
Dr. Timothy Wall, Dr. Tyler Tapps, Dr. Dana Melton

Slide 70

References

- Britton, J. (1987). Vygotsky's contribution to pedagogical theory. *English in Education*, *21*(3),22-26.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational researcher*, *18*(1), 32-42.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Department of Elementary and Secondary Education. (2018, October 15). https://dese.mo.gov/
- DeVries, R. (2000). Vygotsky, Piaget, and education: A reciprocal assimilation of theories andeducational practices. *New ideas in Psychology*, *18*(2-3), 187-213.
- Hall, A. (2007). Vygotsky goes online: Learning design from a socio-cultural perspective.In *Learning and socio-cultural Theory: Exploring modern Vygotskian perspectives international workshop 2007* (Vol. 1, No. 1, p. 6).
- Herrington, J., Reeves, T. C., & Oliver, R. (2009). *A practical guide to authentic e-learning*. New York, NY: Routledge.
- Huitt, W., & Hummel, J. (2003). Piaget's theory of cognitive development. *Educationalpsychology interactive*, *3*(2), 1-5.
- Koksal, H. (2019). An Exercise Regarding Values Education with An Authentic LearningApproach. *International Online Journal of Educational Sciences*, *11*(4), 311–329.
- Lave, J., Wenger, E., & Wenger, E. (1991). *Situated learning: Legitimate peripheralparticipation* (Vol. 521423740). Cambridge: Cambridge university press.
- Law, M., Stewart, D., Letts, L., Pollock, N., Bosch, J., & Westmorland, M. (1998). Guidelines for critical review of qualitative studies. *McMaster University occupational therapy evidence-based practice research Group*.
- Merriam, S. B., & Tisdell, E. J. (2016). Qualitative research: A guide to design and implementation (4th ed.). San Francisco, CA: Jossey-Bass.
- Mydland, L. (2011). The legacy of one-room schoolhouses: A comparative study of the American Midwest and Norway. *European journal of American studies*, *6*(6-1).
- Newmann, F. M., King, M. B., & Carmichael, D. L. (2007). Authentic instruction and assessment. *Lowa: Departement of Education*.

Slide 71

References

- Roelofs, E., & Terwel, J. (1999). Constructivism and authentic pedagogy: State of the art and recent developments in the Dutch national curriculum in secondary education. Journal of Curriculum Studies, 31(2), 201-227.
- Rose, J. (2012, May 9) How to break free of our 19th-century factory-model education system.
- Retrieved from https://www.theatlantic.com/business/archive/2012/05/how-to-break-free of-our-19th-century-factory-model education-system/256881/
- Rule, A. C. (2006). The Components of Authentic Learning. *Journal of Authentic Learning*, *3*(1),1-10.
- Sampaolo. M, (2016, April 20). Normal Schools. Retrieved from https://www.britannica.com/topic/normal-school
- Sass, E. (2020, March 14). American Educational History: A Hypertext Timeline http://www.eds-resources.com/educationhistorytimeline.html#1900
- Stein, D. (1998). Situated learning in adult education (pp. 195-202). ERIC Clearinghouse on
- Adult, Career, and Vocational Education, Center on Education and Training for Employment, College of Education, the Ohio State University.
- Steiner, B. C., & Camp, D. N. (1919). *Life of Henry Barnard: the first United States commissioner of education, 1867 1870*(No. 8). Govt. print. off..
- Tessitore, A. (1996). *Reading Aristotle's ethics: Virtue, rhetoric, and political philosophy*. SUNY Press.
- Vygotsky, L. S. (1978). Mind in society: the development of higher psychological processes. In M. Cole, V. JohnSteiner & E. Souberman (Eds.). London: Harvard University Pres
- Wallis, P. (2008). Apprenticeship and training in premodern England. *The Journal of Economic History*, *68*(3), 832-861.
- Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in higher education*, *45*(2), 115-138.
- Zualkernan, I. A. (2006). A framework and a methodology for developing authentic constructivist e-Learning environments. *Journal of Educational Technology & Society*, *9*(2), 198-212.

SECTION FIVE

CONTRIBUTION TO SCHOLARSHIP

Target Journal

The target journal for publication is *The High School Journal* published by the School of Education the University of North Carolina Chapel Hill, North Carolina

The Rationale for this Target

The High School Journal is a peer-reviewed, journal published the School of Education the University of North Carolina Chapel Hill, North Carolina. "The High School Journal publishes research, scholarship, essays, and reviews that critically examine the broad and complex field of secondary education. Founded in 1918, it is one of the oldest peer-reviewed academic journals in education." ("UNC School of Education," n.d.). This journal covers a wide range of educational topics for PK-12 education including authentic learning.

Plan for Submission

Who: *The High School Journal* https://mc.manuscriptcentral.com/unc-hsj

When: Summer 2020

How: Electronic submission through the ScholarOne portal for *The High School Journal*.

Format of Proposed Article

The research article will be submitted for printed publication. The submission requirements include a clear literature review, methods, results/findings, discussion, limitations, conclusion. The text should be no more than 35 pages with no more than a 200-word abstract.

Submission Cover Page

Dr. Jonathan M. Hart
Principal Researcher
University of Missouri Columbia
Mr.Hart1234@gmail.com

Abstract

School systems in PK-12 are being challenged to incorporate real-world learning into their curriculum to better prepare students for success after graduation (Karakas-Özür & Duman, 2019). As high school organizations are beginning to apply authentic learning strategies, there is a gap in knowledge for implementation as much of the research has be conducted at the collegiate or adult learning levels. The research question: What are head administrators' and teacher participants, in three midwestern secondary authentic learning programs, perceptions of Authentic Learning Theory (ALT) best practices being implemented to achieve their program goals? This multi-case study used document analysis, interviews, and focus groups to find most promising authentic learning strategies of three high school authentic learning organizations. The study used the ALT, and more specifically Herrington, Reeves, and Oliver's (2009) Nine Characteristics to Achieve Authentic Learning Environments, as the theoretical framework. The research found an overarching theme to be a shift in mindset in head administrators and teachers. It also revealed new authentic learning practices beyond the nine characteristics of Herrington et al. (2009). This research provides a better understanding of ALT, its most impactful practices for practitioners at the secondary level, and data for future researchers.

Keywords: authentic learning; high school; high school teachers; high school students; college and career readiness

The goal of education in the United States in the 21st century was to “promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access” (U.S. Department of Education, 2020, p. 1). With the best intentions in mind, education has not evolved at the same rate as the needs of its consumers (Brkich, 2013).

For more than a century, the U.S. has used the Prussian model for education (Watters, 2015). In 2015, at Emerson High School in Oklahoma City, OK, chalkboards were discovered from 1917 (Hohenadel, 2015). The content on the board was the same curriculum and the same methodologies used to educate students today (Hohenadel, 2015). A one-room schoolhouse classroom layout from the 19th century was comparable to most classrooms in schools, and they looked remarkably similar (Pavlekovish, 2018). The students’ seats were in rows and columns for the lecture method of teaching (Hussain, Azeem, & Shakoor, 2011). This type of learning was what Preble and Gordon (2011) referred to as the "graveyard model of education," where students sat silently and motionless in rows (p. 112). Traditional education has had the introduction of evolving technology, learning theories, students in the classroom, and the world surrounding them (Dimitriadis, 2020) yet, education has remained essentially unchanged (Karakas-Özür & Duman, 2019).

The obedient conformity of accumulating and then repeating information was once useful to an industrial society (Pearce, 2016). The 21st century has demanded skills, such as curiosity, collaboration, problem-solving, and a deeper understanding of the world (Pearce, 2016). As the demand for these types of skills has grown, educators have

realized not only did they needed to redefine success, but they also needed to restructure the approach in which to achieve success (Parker, Maor, & Herrington, 2013).

The educational system in the country has evolved over the years (Church, 2020). According to Brkich (2013), “Educators, as a whole, are facing increased pressures of conservatism and accountability as applied to their curriculum, resulting in excessive test preparation, narrowed curricula, and an inability to prepare students satisfactorily for their lives as adult citizens” (p. 63). Hill and Smith (1998) added "Education for the new millennium must provide authentic educational experiences for our youth. Closing the gap between school life and workplace life is an important step in this direction" (p. 32). Pearce (2016) agreed, “The outcome of any schooling or education system should be to send students into the world prepared for both their personal and professional lives” (p. 3).

In more recent years, some leaders in public-school organizations have turned to the Authentic Learning Theory (ALT) to help bring the real world into education (Parker et al., 2013). As Lombardi (2007) wrote, “Going beyond content, authentic learning intentionally brings into play multiple disciplines, multiple perspectives, ways of working, habits of mind, and community” (p. 2). The enactment of principles of ALT in the modern classroom has made the learning environment as close to real life as possible (Koksal, 2019), moving us away from the chalkboards of the past.

Purpose of Study

As traditional education was influenced to change educational goals, more secondary organizations abandoned the transmission method of education and shifted to a more student-center constructivist approach (Van Aalst, 2009). To achieve constructivist

learning, some secondary organizations used ALT (Roelofs & Terwel, 2009). While districts administrators introduced ALT into their curricula, ALT's most promising practices at the secondary level had minimal research offerings (Brkich, 2013). Most of the ALT research focused on adult learners (Herrington, Reeves, & Oliver, 2009; Newmann & Wehlage, 1993). The lack of research at the secondary level caused a lack of specificity and differentiating opinions on the best characteristics necessary for ALT to have been successful (Snape & Fox-Turnbull, 2013). This study added to the existing body of knowledge and filled gaps in ALT's most promising practices to achieve secondary ALT organization's goals (Munawaroh, 2017).

Literature Review

The idea of learning through authentic experiences was not a new concept. References to real-world learning go back to as early as the 550's BC when Confucius said, "I hear and I forget, I see and I remember, I do and I understand" (Zhao & Kuh, 2004, p. 3). Confucius words meant different ways of learning created different results, but also doing tasks provided understanding for learners. In the early 300's BC, Aristotle claimed, "Using the language of knowledge, even at the crucial moment, is no proof that it is present" (Tessitore, 1996, p. 56). This statement insinuated until people applied theory, they did not fully understand it. For thousands of years, apprenticeships represented this theory (Collins, 1991). An apprenticeship was a type of occupational training where adolescence entered agreements to work for an established craftsperson or merchant for a designated period, typically for years, to learn a craft or trade (Wallis, 2007). In England, non-agricultural apprenticeships comprised of between 7.5 to 10% of the workforce into the 18th century (Wallis, 2007). Formal U.S. public education has not

been based on authentic learning (Hyde, 2012); it came from the Prussian Model of education (Hyde, 2012). The Prussian Model was described as an assembly line to create human capital for the workforce (Watters, 2015). The goal was to intellectually condition students for obedience, subordination, and collective life ideals (Hyde, 2012). The Model fostered obedient workers, soldiers, civil servants, and clerks (Hyde, 2012). The Prussian Model caused criticism around the turn of the 20th century, due to a lack of connection between the formal abstract ideas and the real world (Roelofs & Terwel, 1999).

In the first half of the 20th century Roelofs and Terwel (1999) explained, “to remove this artificial barrier, educational reformers, such as John Dewey in the US, Ovide Decroly in Belgium, Peter Petersen Germany, and Hans Freudenthal in The Netherlands, conceived a learning processes based on the personal experiences of the students” (p. 202). These reformers wanted education to create new subject-matter with the students present instead of being given to them in a process called re-invention (Roelofs & Terwel, 1999). Re-invention pedagogy functioned from the bottom-up, where the real world presented lifelike and instantly applicable information at the students’ levels instead of lessons coming from teachers or from the top-down (Roelofs & Terwel, 1999). In many researchers' opinions, ALT allowed people in the real world to create information at the students’ levels through their experiences (Herrington et al., 2009, Newwman & Wehlage, 1993). Formalization of ALT did not emerge until the second half of the 20th century, after the introduction of theories like constructivism, the sociocultural theory, the zone of proximal development, and the situated learning theory (Lasry, 2006).

Constructivism

As Ferguson (2007) explained, “Constructivism provided a basis for understanding how people incorporated new knowledge into existing knowledge and then make sense of that knowledge” (p. 27). Socrates, who lived from 470 BC to 399 BC, has not been typically associated with the creation of constructivism, but researchers, Ferguson (2007) and Murphy (1997), both gave his epistemologies credit for recognizing that learners built upon their knowledge. Most people have given credit to Piaget’s theory on cognitive development as the beginning of constructivism (DeVries, 2000). Piaget’s cognitive development theory focused on two major tenets, which were “the process of coming to know and the stages we move through as we gradually acquire this ability” (Huitt & Hummel, 2003, p. 1). Piaget depicted two processes used by humans to understand knowledge, assimilation, and accommodation (Huitt & Hummel, 2003). Assimilation was changing the environment to fit into a preconstructed cognitive structure (Huitt & Hummel, 2003). Accommodation was changing a preconstructed cognitive structure to accept something from the environment (Huitt & Hummel, 2003). Piaget believed stimulus providing the knowledge was only a stimulus if the person took an active role in allowing the stimulus to create knowledge (DeVries, 2000). Piaget claimed knowledge was attained through engaged learner participation of four stages (Zualkerman, 2006). Piaget's four stages of Cognitive Development were the following: (a) the sensorimotor stage (infancy), (b) the preoperational stage (early childhood), (c) the concrete operational stage (early adolescence), and (d) the formal operational stage (adolescence through adulthood) (Huitt & Hummel, 2003). Each stage expanded upon the knowledge of the previous stage with ideas gradually getting more specific, providing a

more definitive understanding of the knowledge (Huitt & Hummel, 2003). Piaget also introduced the concept of spontaneous concepts, which meant knowledge grew from a person's own experiences (Britton, 1987). Vygotsky, who lived from 1896-1934, expanded on the idea of Piaget's cognitive development, furthering the idea of constructivism (Hall, 2007). However, Vygotsky did not agree with all of Piaget's theories (DeVries, 2000).

Sociocultural Theory

Vygotsky agreed with Piaget's theories in the notion that social factors played a role in development (DeVries, 2000). Piaget sometimes did not get credit for emphasizing social factors, because much of his research was conducted with individual learners in labs (DeVries, 2000). Vygotsky, on the other hand, put social factors as most important in development, which led to him creating the sociocultural theory (Wornyo Klu, & Motlhaka, 2018). Sociocultural theory pointed to the idea that learning developed within a social environment (Hall, 2007). Vygotsky's sociocultural theory focused on the spoken and written language shared between the learners and their environments to build better understanding (Quigley, 2014).

Zone of Proximal Development

Vygotsky's theory differed from Piaget's well-defined stages of development and instead designed the Zone of Proximal Development (ZPD) (DeVries, 2000). According to Vygotsky, there were three zones of the ZPD (Hall, 2007). The first zone was what the learner could have done without any assistance (Hall, 2007). The second zone, or the ZPD, was what the learner could have done with assistance, guidance, or encouragement from a group or someone knowledgeable (Hall, 2007). The third zone was what the

learner could not have done even with assistance (Hall, 2007). When students were in the ZPD, they relied on what they previously knew, and they were building knowledge and skills through the sociocultural theory (Britton, 1987). In addition to the ZPD, Vygotsky added to Piaget's theory of spontaneous concepts with non-spontaneous concepts (Ferreira, 2014). Non-spontaneous concepts were ideas presented to the subject, and the subject had none, or little, knowledge of the ideas (Ferreira, 2014). Time was needed for the idea to embed in the subjects' experiences and knowledgebases (Ferreira, 2014).

Another area in which Vygotsky and Piaget differed was in the role of the stimulus in the learning process (DeVries, 2000). Vygotsky, an empiricist, believed all stimuli influenced whether the subject actively intended it to be a stimulus (DeVries, 2000). Vygotsky's theory of everything being a possible stimulus emphasized the learners social and physical environments and the contexts of the environments (Roelofs & Terwel, 1999). Realistic situations caused participants to learn the knowledge under the same conditions that the knowledge needed to be recalled, thus making it easier to recall the knowledge when needed (Roelofs & Terwel, 1999).

Situated Learning Theory

Lave and Wenger, (1991) agreed with the importance of the situations and created the situational learning theory (SLT). The SLT was the idea a subject gained more knowledge learning an idea or concept in an authentic environment relating to the topic instead of an abstract classroom setting, which was in short, learning knowledge in the context how it was useful in real life (Roelofs & Terwel, 1999). Lave and Wenger (1991) were the first to present SLT, but many attributed its discovery to Brown, Collins, and Duguid (1989), as they were the first researchers to create a model for classroom practice

(Herrington & Oliver, 1995). Lave and Wenger (1991) emphasized learning with the group by first observing authentic practice followed by gradually moving into the role of functioning agent. Brown et al. (1989) used SLT to create Cognitive Apprenticeship. Cognitive Apprenticeship used authentic practices, authentic activities, and social interactions in similar ways, which were successful in traditional apprenticeships (Brown et al., 1989).

Stein (1998) identified four tenets for situated learning: (a) Learning was grounded in authentic everyday situations, (b) Knowledge was acquired in situations and was transferred only to similar situations, (c) Learning happened through social ways of thinking, perceiving, problem-solving, interacting with procedural knowledge, and (d) Instruction was conducted in a complex social environment. Situated learning, and the understanding that all aspects of an educational environment influenced the understanding of knowledge, led to ALT (Lasry, 2006).

Authentic Learning Theory

The ALT has been given many definitions. Newmann, King, and Carmichael (2007), wrote of ALT as, “Using the construction of knowledge through a process of disciplined inquiry which has value beyond the purposes of certifying school competencies” (p. 3). Newmann et al.’s (2007) lack of support for learning beyond the school competencies was supported by Koksal (2019). Koksal (2019) wrote, “The authentic learning approach entails that students are indirectly exposed to the living values in an authentic environment” (p. 1). Lombardi, (2007) added to the importance of authenticity by emphasizing inclusivity of varying concepts into ALT. Authentic learning “brings into play multiple disciplines, multiple perspectives, ways of working,

habits of mind, and community" (Lombardi, 2007, p. 3). Rule (2006) suggested ALT was "Real-world problems that engage learners in the work of professionals; inquiry activities that practice thinking skills and metacognition; discourse among a community of learners; and student empowerment through choice" (p. 1). What most researchers agreed on was that ALT needed to be as close to as real life as possible (Koksal, 2019).

The ALT also had many varying opinions on the best methods of implementation (Herrington et al. 2009; Newmann & Wehlage, 1993). After reviewing many frameworks of ALT implementation, Herrington, et al.'s (2009) Nine Characteristics to Achieve Authentic Learning Environments were: (See Table 1)

Table 1.

Herrington's Nine Goals to Achieve Authentic Learning Environments

Herrington's Nine Goals to Achieve Authentic Learning Environments
Real World Relevance
Authentic Activities
Expert Performance and Modelling
Multiple Roles and Perspectives
Collaborative Construction and Knowledge
Reflection for Enabling Abstractions
Articulations for Tacit Knowledge to be Explicit
Coaching and Scaffolding by Teacher
Integrated Assessment of Learning in Tasks

Notes: These are the nine tenants recommended by Herrington to achieve authentic learning environments.

These nine characteristics were also noted in other studies (Koksal, 2019; Lasry, 2006; Lombardi, 2007; Luo, Murray, & Crompton, 2017; Nicholl, Flutter, Hosking, & Clarkson, 2013; Snape & Fox-Turnbull, 2013, Teras & Kartoglu, 2017; Wornyo et al., 2018).

Nine Goals to Achieve Authentic Learning Environments

The tenets or goals that were used in this study were the nine tenets recommended by Herrington et al. (2009): Nine Characteristics to Achieve Authentic Learning Environments.

Real-World Relevance

Class activities matched the real-world tasks of professionals in practice as nearly as possible rather than decontextualized or classroom-based tasks (Herrington et al., 2009). This idea was supported by Brown et al. (1989) with their research on the situated learning theory which claimed "Knowledge is not independent but rather fundamentally "situated" being in part a product of the activity, context, and culture in which it is developed" (p. 1). This meant the environment, complexity, and resources for the problem all should have reflected the real world (Brown et al., 1989).

Authentic Activities

In authentic activities, the class activities were ill-defined, so students had to find the problems, to explore topics in-depth, to integrate knowledge from multiple subject areas, to decide which material was relevant or irrelevant, and then to solve the problem (Herrington et al., 2009). The emphasis of authentic activities was encouraged by Bransford, Vye, Kinzer, and Risko (1990) with their research of anchored instruction theory. Anchored instruction theory was to merge content and process by placing learning withing meaningful context (Bransford et al., 1990).

Expert Performance and Modeling

With this objective, students were able to observe experts performing or modeling tasks in real situations before students attempted the task (Herrington et al., 2009). This

was similar to the apprenticeship system (Wallis, 2007). It allowed the students to share narrative stories and access to the social periphery (Brown et al., 1989). This was supported by Lave and Wenger's (1991) research of SLT.

Multiple Roles and Perspectives

This characteristic embodied the pedagogical notion that participants could have researched multiple ideas, roles, and perspectives (Herrington et al., 2009). They could have used different resources, people, and media to gather diverse opinions and points of view (Herrington et al., 2009). The Cognition and Technology Group endorsed this at Vanderbilt (1990) with their research on situated cognition using multiple views to examine *Young Sherlock Holmes*.

Collaborative Construction of Knowledge

Students addressed tasks as two or more people rather than as individuals, and the entire group was incentivized to achieve (Herrington et al., 2009). This caused students to hypothesize then to suggest solutions (Herrington et al., 2009). This was promoted by Slavin (1980) and their research on cooperative learning. Cooperative learning was defined as when students worked in small groups and received feedback based on group performance (Slavin, 1980).

Reflection for Enabling Abstractions

This characteristic identified that participants of authentic learning experiences had the opportunities to reflect on what they learned, how they compared to other learners, and how they compared to experts in varying stages of accomplishment (Herrington et al., 2009). This was supported by Boud, Keogh, and Walker's (2013) research on turning experiences into knowledge using reflection. Bound et al. (2013)

claimed the learners must reflect on what they thought, felt, did, and concluded immediately after their experiences (p. 33). This allowed students to have a deeper understanding of their experiences (Bound et al., 2013).

Articulation for Tacit Knowledge to be Explicit

Within this characteristic, students had the opportunity to converse with members of the group to facilitate social rather than individual understanding and allowed for presentations or debates to implement description and defense of knowledge (DeVries, 2000). This was endorsed by Vygotsky's work on sociocultural theory and the emphasis on speech profoundly influencing the learning process (DeVries, 2000). Vygotsky believed speech was not merely for expression of knowledge but also helped knowledge to find reality and form (Herrington, 1997).

Coaching and Scaffolding by Teacher

Within this characteristic, the teacher with student, provided coaching at critical times when students were out of the ZPD (Herrington et al., 2009). During scaffolding he teachers were there to clarify issues, to keep the students on the right track, and provide support at the precise time the students needed it (Herrington et al., 2009). The teacher gave just enough assistance to take them to the next stage of the process (Herrington et al., 2009). This was supported by Vygotsky's ZPD (DeVries, 2000), which caused students to stay between the zone of actual development and potential development (Herrington et al., 2009).

Integrated Assessment of Learning in Tasks

Under this characteristic, assessments were as close to real-life assessments as possible (Herrington et al., 2009). Through the process, the assessments were informal,

continuous, and seamlessly integrated within the activity (Herrington et al., 2009). There were multiple learning indicators as students fulfilled tasks with appropriate criteria for varied expectations of the finished task (Herrington et al. 2009). This was promoted by Young (1993) and the research on assigning situated learning. Young (1993) claimed assessments should be continuous and ongoing and not add-ons as separate stages of a linear process.

Methods

This qualitative multi-case study gathered the participants' perspectives in secondary authentic learning theory (ALT) programs through interviews, focus groups, and document analysis (Creswell, 2014; Merriam & Tisdell, 2016). The study employed a constructive worldview because of the complexity of the participants' perspectives collected (Creswell, 2014). The members of the three organizations explored by the researcher were typical of a secondary ALT organization (Hill & Smith, 1998). The input from members of the three programs provided insight into the situations, events, and an overall holistic views of ALT secondary programs. This study used the data collected from the multi-case study to compile promising practices of secondary ALT programs, according to Jupp (2006), making it a “good practice study” (p. 130).

Design of Study

In this qualitative multi-case study, the researcher gathered the perspectives of participants in three secondary ALT schools. Through interviews, focus groups, and on-line document analysis, the researcher created triangulation and sought to find practices in ALT pedagogy (Creswell, 2014; Merriam & Tisdell, 2016). Herrington et al.’s (2009)

Nine Characteristics of Authentic Learning Environment was the theoretical lens to guide the researcher in this study.

The questions used to guide the research during the on-line data collection, interview, and focus group were open-ended questions (Kumar, 2019). The questions were: *How would you describe your organization? What are the goals of your organization? What inspired the goals? What are some of the most impactful teaching strategies the teachers are using to achieve the goals? How do they know when the goals have been achieved?*

The questions were designed to provide the participants with a better opportunity to express themselves freely, resulting in a greater variety of information (Law et al., 1998). The interview and focus group data were Zoom recorded and transcribed verbatim, using an on-line transcription service so accurate coding took place (Krueger & Casey, 2015; Merriam & Tisdell, 2016). The transcripts were member checked, or checked for accuracy, by the participants to internally validate the data (Creswell, 2014). Misinterpretations and biases of the researcher were eliminated due to internal validation (Seidman, 2013).

The researcher was reflective of possible bias (Creswell, 2014). The researcher had been an instructor in a secondary ALT organization for the last five years. The researcher was aware of their own positive perception of ALT in secondary education. To avoid confirmation bias, the researcher used three data collection methods and three different samplings from three different secondary ALT programs (Merriam & Tisdell, 2016). The researcher was transparent and thorough with their data collection and findings to create a clear audit trail (Merriam & Tisdell, 2016).

Participants

The three northwest Missouri secondary ALT programs were from school districts classified as rural and suburban, according to the Missouri Department of Elementary and Secondary Education (MODESE) (MODESE, 2018). The organizations were within a 29-mile radius of each other in the state. Each organization was given a pseudonym. The pseudonyms for the organizations were 1E Organization (1E), 2E Organization (2E), and 3E Organization (3E). A pseudonym protected the anonymity of the organizations (Creswell, 2014).The first sampling was a bounded system within each of the three organizations, creating two groups of participants: (a) the head administrator and (b) faculty participants of the ALT programs (Kumar, 2019). These two samplings were selected to reach saturation from their variety of perceptions (Creswell, 2014). All participants provided oral consent to the purpose of the study, procedures involved in the research, all foreseeable risks and discomforts to the subject, successes of the research, length of time, statement of voluntary participation, as well as the participants' rights to confidentiality and rights to withdrawal (American Educational Research Association, 2011; Fink, 2013; Seidman, 2012).

Head Administrator

One participant from each organization was the head administrator of each organization. The head administrator was a purposeful sampling (Merriam & Tisdell, 2016). They were purposeful, because they were key informants due to their unique viewpoints, statuses, and knowledge of the program (Law et al., 1998). Their job was to direct programming, to hire/fire staff, to manage budgets, and to oversee the attainment of the organizations' goals.

Teachers

One focus group from each organization consisted of at least three teachers per organization. An e-mail went out to the teachers in the ALT organization with a brief description of the study, requesting volunteers to participate and to establish a communication line. In the bounded system was the first tier of a two-tiered system, and the second tier was the teachers' chosen sampling (Merriam & Tisdell, 2016). Once the teachers volunteered, communication occurred to establish times to meet for the focus group to provide input.

Data Collection

The data collection tools for each organization were on-line document analysis, interviews with the head administrators, and focus groups of teachers for triangulation (Creswell, 2014). These three data collection techniques were to achieve saturation, validity, and trustworthiness and to avoid bias in the study (Merriam & Tisdell, 2016).

On-line Document

The on-line data collection was from each ALT organization's website. The data collection was a purposeful sampling because it was the only website for the organization (Merriam & Tisdell, 2016). Using the aforementioned questions, the researcher examined the websites for patterns and themes from the websites similar Herington et al.'s (2009) nine goals (Merriam & Tisdell, 2016). The websites were each given a pseudonym aligned with the pseudonym given to the organization it represented. The pseudonyms were Website 1E (W1E), Website 2E (W2E), and Website E3 (W3E). The pseudonyms protected the anonymity of the organizations (Creswell, 2014).

Interview

The interview was conducted with the head administrator of each organization. An e-mail was sent to the head administrators to schedule the interview times for approximately an hour interview (Seidman, 2012). The head administrators were given a pseudonym like the pseudonym given to the organization they represented. The pseudonyms were Head Administrator 1E (HA2E), Head Administrator 2E (HA2E), and Head Administrator 3E (HA3E). The pseudonyms protected the anonymity of individuals (Creswell, 2014). The interviewees did not receive the questions beforehand. The interview questions were open-ended to permit free response and to avoid bias (Kumar, 2019). The interviews were recorded through Zoom and transcribed verbatim, using an on-line transcription service, so accurate coding took place (Merriam & Tisdell, 2016). The interviewee had the opportunity to member check the transcripts. Member checking internally validated the data (Creswell, 2014; Merriam & Tisdell, 2016; Seidman, 2013).

Teacher Focus Group

The focus groups for data collection was at least three teacher participants of the ALT organization. The sampling was random, as all the teachers of the organization received the opportunity to volunteer for the study. Random sampling added to the finding's validity (Kothari, 2004; Merriam & Tisdell, 2016). Random added to the validity by creating a chance selection of participants (Kothari, 2004; Merriam & Tisdell, 2016). After the time was approved by the head administrator to conduct the focus group, blind carbon copy e-mails were sent to the participants to set up a time for focus group to take approximately an hour (Seidman, 2012). Each focus group was given a pseudonym per the pseudonym given to the organization to which they belonged. The pseudonyms

for the focus groups were Focus Group 1E (FG1E), Focus Group 2E (FG2E), and Focus Group 3E (FG3E). Pseudonyms were also given to the individual teachers. Those pseudonyms were names given to the teachers at random to protect the anonymity of individuals (Creswell, 2014). The focus group did not receive the questions beforehand. The questions were open-ended to permit free responses and to avoid bias (Creswell, 2014). The focus group was Zoom recorded and transcribed verbatim, using an on-line transcription service, so that accurate coding occurred (Merriam & Tisdell, 2016). The focus group participants had the opportunities to member check the transcripts, which internally validated the data. (Creswell, 2014; Merriam & Tisdell, 2016).

Data Analysis

The interviews and focus groups data were Zoom recorded and then transcribed verbatim using an on-line transcription service so accurate coding took place (Krueger & Casey, 2015; Merriam & Tisdell, 2016). The transcripts were member checked by the participants to internally validate the data before coding occurred (Creswell, 2014; Merriam & Tisdell, 2016; Seidman, 2013). The member checking occurred by emailing the participants the transcripts to the participants for accuracy. Once the data from the on-line document analysis, interviews, and focus groups were collected, the researcher used triangulation to identify patterns and themes of the individual ALT organizations through open coding (Creswell, 2014; Merriam & Tisdell 2016). These themes and patterns were recognized by the vernacular used to answer the questions (Krueger & Casey, 2015; Merriam & Tisdell, 2016). The repetition of words or theories that aligned with the words, theories, and tenets of Herringtons's (2009) nine goals were defined as themes and patterns. After each one of the organization's data was open coded, similar patterns

and themes were then recoded in a process call axial coding (Merriam & Tisdell, 2016). Axial coding was used to organize the open coding data results into related schemes (Creswell, 2014; Merriam & Tisdell, 2016). The researcher examined responses for the schemes most saturated by the data within the central research questions (Creswell, 2014; Merriam & Tisdell, 2016). Findings provided a thick, rich description while being analyzed through the constant comparative method using Herrington et al.'s (2009) Nine Characteristics of Authentic Learning Environment for constant comparative use in future research (Creswell, 2014; Merriam & Tisdell, 2016).

Findings

Through the coding process of all data, an overarching theme emerged: Shift in mindset. In every document analysis, interview, and focus group, the importance of a shift in mindset was emphasized. One participant said, "Whatever you've been taught to do traditionally as a teacher, think about the positive implications of what could happen for the student, if you do the opposite" (Allen, personal communication, 2020). This was supported by another participant, who said, "True change in terms of, philosophically, what we value in education" (David, personal communication, 2020). Yet another perspective shared was, "You have to go find really, really, really good people who value people before academics" (Nathan, personal communication, 2020). The shift in mindset was also endorsed with, "Through the hiring process we're bringing people on who believe in this work, first and foremost, because it's different from what most all of us experienced as students and as professionals" (Ron, personal communication, 2020).

The importance of ability to shift mindset for new ways of teaching was supported by Ashok (2014). Ashok (2014) claimed everyone must develop a new mindset

but especially teachers shifted in mindset toward “flexible, growth oriented, learning mindset, and an epigenetic approach” (p. 34). Bethge (2018) emphasized the importance of teachers’ shifts in mindsets in facilitating students’ recognition of their intelligence and how to expand their mindsets. The general census, the shift in mindset was what allowed the organizations to implement authentic learning strategies into their organizations.

Another finding was the shift in mindset of participants lead to a shift in goals of the three organizations. The goals shifted from content based to being focused on the individual student. A participant said, “Our three main goals are authentic problems, project, and professional based learning, mentorship of students to help set short- and long-term goals, and personalized learning (Ron, personal communication, 2020).

In some cases, the goals had to be changed. One person’s explanation of the evolution of their goals:

> I would say originally when the (Organization) was created, the goal was to get kids to graduation. But in the last five years, we've taken steps to just truly become personalized and help kids figure out who they are, what are their strengths, talents, passions and interests, and help them find and explore where those things intersect in the real world so that when they leave us, they have an idea of the type career or path that they might be most interested in taking (Michelle, personal communication, 2020).

The goals focused on more than just content. “Our number one goal within student achievement is to find related placement, in college career or military. We also call it the three E's of enrollment, employment, or enlistment” (Bob, personal communication, 2020).

The goals of the organizations focused more on the intangible growth of the students than the tangible. After analyzing responses, intangibles included social emotional skills, employability skills, and cognitive skills; tangibles included required content, certifications, and diplomas. One person supported these ideas when she stated, “Talking about things like empathy and whole person. The skill soft skills, social and emotional learning” (Susan, personal communication, 2020). The goals were not about getting percentages on projects and test. One of the people added, “It's not about chasing points, but it's about learning and demonstrating mastery” (Ron, personal communication, 2020).

The content played a small role in the overall assessment of the student’s growth. That emphasized by one individual “Content 30% or less of the actual grade” (David, personal communication, 2020). Again, this illustrated a mind shift from a traditional Persian inspired education system.

Aligned with Herrington’s Nine Goals

To accomplish the goals of the organizations, a variety of practices were implemented. Some of the practices aligned with Herrington et al.’s (2009) Nine Goals to Achieve Authentic Learning Environments (See Table 2). There were also outlier practices beyond Herrington et al.’s (2009) nine, which were reviewed after the culmination of practices illustrated by the data. The following are the illustrations of Herrington et al.’s Nine Goals and how they emerged through the data collection and data analysis.

Having Real World Relevance

The three organizations were authentic learning organizations, so they based much of their curriculum around relevance to the real world, and in 100% of responses from the focus groups and interviews there were data derived related to the theme or relevancy emerged. Bob echoed this notion when he said, “That relevant pieces are probably maybe the most important part of the mission” (Bob, Personal Communication, 2020). This sentiment was reinforced by other participants, saying: They “provide each student with a continuum of real-world learning experiences that connect classroom and workplace learning;” “Students earning industry recognized credentials” (Steve, personal communication, 2020). This was mirrored by someone else who stated, “Making connections between curriculum and next step” (Chris, personal communication, 2020).

Authentic Activities

The organizations made learning relevant by using authentic problems, projects, or professional-based learning (PBL). A participant claimed, “The projects came from community partners vetted by the organizations (Michelle, personal communication, 2020). One person of the study briefly explained a community project the students solved, “An example of an organization we partnered with that said, ‘Hey, here’s access to water, and here is something we're struggling with this particular community. Here's a problem, help us solve it." (Ron, personal communication, 2020).

Students were also allowed to create and to solve their own PBL’s through discovery of career paths. A study participant described, “It really can be anything from building a guitar, learning how to play guitar, working on paintings, working on their writing, poetry, getting better attendance” (Allen, personal communication, 2020).

Expert Performance and Modelling

The organizations all had some sort of partnership with their communities. The organizations took students into their communities and brought their community into their classrooms, so students communicated with local experts and observed an assortment of career paths. This was supported by one person claiming, “We average probably 20 to 25 trips [to community partners’ sites] a week” (Kathy, personal communication, 2020). This was supported by another person, “We bring in outside experts to talk with students and show them what they do” (Nathan, personal communications, 2020). The students also learned from experts on-line through discovery. This was explained when one participant said, “The students get on-line and find resources of professionals to help them solve problems” (Nathan, personal communication, 2020).

Multiple Roles and Perspectives

All the organizations taught the students a process of discovering answers on their own. They did not give formal solutions to follow, for students to memorize, but instilled in the students the skills to problem solve using resources. One participant explained, “We've actually gone to a more generic course titles which truly allows the students to explore” (Allen, personal communication, 2020). Another person agreed saying, “We want them to explore, if they want to go deep and master something, we're good with that too” (Susan, personal communication, 2020). One participant added one of the guiding questions to promote the student’s critical learning was, "Can you come up with a hypothesis, can you test hypothesis, and can you critique resources” (Ron, personal communication, 2020)?

Collaborative Construction of Knowledge

Based on the findings, all the organizations used and promoted some sort of teamwork while working on projects. Teamwork was an intangible asset the organizations emphasized regarding the growth of the student. An individual emphasized this with, “They are life learning experiences, working with other students and working out conflict” (Chris, personal communication, 2020). This was mimicked by another person, “We focus on teamwork. (Kathy, personal communication, 2020). The organizations also foster group conversations sharing knowledge described by a participant, “We also have real conversations with them as a large group about, um, life and decisions that you make” (Allen, personal communication, 2020).

Reflection for Enabling Abstractions

All three of the organizations had their students self-assess throughout the learning process. They reflected on their learning processes, struggles they had during the process, how they addressed the struggles, and what they would do should a similar issue arise. One person said, “We teach them how to self-assess realistically” (Steven, personal communication, 2020). Some assessments were formalized through a sheet, at one of the organizations. This was stated by one, “We have them fill out their employability sheet once a month, (Chris, personal communication, 2020). Some of the self-assessments were aided with the help of a team, “They work with a panel of advisors to sit for maybe 30 minutes to an hour and just talk about their interests, talk about things they explored” (Allen, personal communication, 2020).

Articulation for Tacit Knowledge to be Explicit

Evidence was inconclusive to the amount of conversation done amongst members of a team or group working on a project to establish social understanding of knowledge as 0% of the participants mentioned it. Students did present to advisors, professional audiences, and teachers their knowledge gained, but no evidence of conversations or debates with members in their peer group. However, in future research this is a question that could be asked specifically to find if articulation for tacit knowledge to be explicit was occurring as it is possible the open-ended questions did not lend to this being discovered.

Coaching and Scaffolding by Teacher

All the organizations claimed the teachers used questions to have the students figure out issues or roadblocks during the students learning process, i.e. the Socratic Method (Paraskevas & Wickens, 2003) This was used to understand the students thought process as they solved problems. This was supported repeatedly by: “What support do you need next” (Susan, personal communication, 2020)? “What is your next step” (David, personal communication, 2020)? “What questions should you ask next” (Kathy, personal, communication, 2020)? “What resources do you think you need coming up” (Nathan, personal communication, 2020)?

The teachers collaborated with students while the students worked on problem, project, or professional based learning activities. This was supported by, “Let's learn this together” (David, personal communication, 2020). This notion was strengthened by, “The teachers serve in the role of mentor. They meet with those students every single day, (Ron, personal communication, 2020). Another person’s perspective was, “If you are not

walking around the room, if you are not sitting with a group, if you are not in the hallway with a student, if you're not conferencing with a student, you must not be in class, (Kathy, personal communication, 2020). The teachers were in constant communication with the students assuring the student stayed in the zone of proximal development (Vygotsky, 1978).

Integrated Assessment of Learning in Tasks

The teachers in the organizations assessed using a variety of formal, informal, summative, and formative assessments (Black, 2013). In one organization, they used formal and informal summative assessments at the completion of PBLs via sheets the students and teachers filled out or conversations between the students and teachers. They used formal and informal formative assessment while the students worked on the PBL's by having students fill sheets and having conversations about the student's progress. The assessments reflected the expectations used in a professional setting. Some assessments sheets used for student reflection were sheets provided by the community partners who provided the PBL's. The most utilized form of assessment was informal formative. The teachers would engage in conversations to assess the understanding of material, the progression of the learning process, and to assure the students were heading in a positive direction while working on a PBL. One person asserted, "I'm able to sit down and have conversation with students, groups of students one-on-one and really assess. Do they understand at a much deeper level or is this just a very superficial thing" (David, personal communication, 2020)? Another person added, "They meet with their advisor every day to see where they are" (Michelle, personal communication, 2020). This was repeated by

another, “Assessment is ongoing. It is daily and it is constant” (Kathy, personal communication, 2020).

Outlier Practices Beyond Herrington’s Nine Goals

There were six outlier practices illustrated in the data that were beyond Herrington’s et al.’s (2009) nine goals. The interviewees and focus groups were repeatedly insistent to the importance of these six practices in reaching their organizations goals. 100% of the focus groups and interviews mentioned these six outliers from Herrington et al.’s (2009) nine goals. The six practices were: (a) relationship building, (b) individual learner, (c) setting goals, (d) learning mindset, (e) exposure, and (f) preparation for ambiguity (See Table 3).

Relationship Building

The relationship between the teachers and students in these organizations went beyond the relationships of traditional high school settings, according to the consensus of the qualitative data collected. In every one of the interviews and focus groups, participants stressed the importance of the teacher-student relationship in their organizations. The relationship between the teachers and students in these organizations was different than the teacher-student relationships in a traditional high school setting (Davis, 2003). The teachers in the focus groups introduced themselves as collaborators, instructors, facilitators, or mentors; no one called themselves teachers. Two of groups even corrected the researcher when they called them a teacher. Two of the organizations formalized their relationships’ foundation by, in one organization, teaming a teacher up with a group of students as a mentor.

Another organization teamed a group of teachers up with a student as an advisory board. Their roles went beyond the responsibilities of traditional teacher. They worked with the students to develop the students' tangibles, intangibles, growth mindsets, and future goals evolving from the students' passions. This established a stronger personal relationship with the students according to the study participants. The jobs of the teachers were no longer simply the distributors of knowledge, but their responsibilities evolved as collaborators who worked on the growth of the whole students. This was supported by one person who said, "They appreciate the moments where we come to their level and show them like, we get it. We're just like you, in terms of, we had to do the same things" (Nathan, personal communication, 2020). Another participant added, "I want to see who a kid is when school's not telling them who they have to be. That helps me figure out okay, how to help them become the person they want to be" (Allen, personal communication, 2020).

Building Trust. When discussing expanding the students' intangibles, members in all focus groups referenced trust. The respondents' explained trust was necessary as the teachers guided the students to make examine introspectively at how to improve as individuals. The participants explained they found as the students found and pursued their passions, most of the teachers conceded to the idea of not knowing the content. They then learned alongside the students, coaching and scaffolding, keeping the students in the zone of proximal development (Vygotsky, 1978). Many of the teachers who were teaching specific tangibles (trade, certifications, vocation) had earned their expertise by having professional experience before becoming educators. This allowed the students to learn from experts while the experts helped students develop their intangibles.

In all organizations, participants expressed that the teacher-student relationships promoted the individual learner. One participant said, “We talk about all the things that go into to making them successful” (Susan, personal communication, 2020). Another person agreed, “We have to continually work to make the hierarchy of authority flat. our staff and our adults are partner based human beings first” (Allen, personal communication, 2020). This was echoed by someone else, “The model in the traditional high school does not lend itself to that kind of wraparound care that we provide” (Kathy, personal communication, 2020). Another individual added, “A relationship is a very vital part of a student's success in your program. If you have not got a good relationship with the student, they are not going to work to their potential because there's that block” (Chris, personal communication, 2020).

Individual Learning

Providing students with choices enhanced motivational and performance outcomes (Patall, Cooper, & Wynn, 2010). In all the organizations, the students chose what and/or how they learned. In one of the organizations, the students were provided content to learn, and they chose what lens they wanted to learn it through. For example, if students wanted to learn about making music, while the class was learning about World War I (WWI), students had the option of studying WWI through the lens of music. Teachers asked questions modeling the Socratic Method (Paraskevas & Wickens, 2003). Some of the questions were: What type of music was being made in that period? Did WWI have an impact on the music? Did the music have impact on WWI? If you were to make music in that time, that reflected what was going on, what would it sound like? Exploring WWI through the lens of making music, the students received a deeper

understanding of making music, while also getting a deeper understanding of the content required.

Another example given in the study by participants was, in another program in which the students had a better idea of their passions and career paths, so they got to choose first the class they attended and then the professional, problem, or project based learning activity to acquire the knowledge. In some cases, they earned professional certifications. In the third organization the students had the option to explore their passion and how they learned it to the extent of their choosing. They were able to change what they were learning, if they wanted to, every six weeks with the help of their advising teams. In these organizations, the students established what they wanted to learn, how they wanted to learn it, while simultaneously working on other tangibles and intangible objectives by setting goals.

As one participant explained, “We think student choice is really important” (Susan, personal communication, 2020). Another participant elaborated:

> “This is the information that is there, but we're going to allow you to decide what tools or what avenues you're going to use to learn more about this, to have a deeper understanding of it through the lens that you choose” (Ron, personal communication, 2020).

Another person from another organization echoed the same sentiment, explaining:

> “The way that we do that is to invert the traditional model. Most models start with continent and push into the individual kid. What we do is we start with the individual kid and figure out who that kid is and challenge them to figure out who they are” (Allen, personal communication, 2020).

Setting Goals

Setting goals was another theme that was found in the participants' responses. Setting goals was how the teachers assessed the individual's growth. Setting goals created a plan for the students to follow. Every student in all the organizations set goals for intangibles, tangibles, and their futures. The goals ranged from short-term — like what will the students finish in an hour — to long-term — like what steps the students need to take after high school to start their careers. All three organizations' members said they had formalized the goal setting process to a form, which was referenced almost daily. These goals helped form the students' on-going learning processes, which strengthened the learning mindset. One party said, "What we find works very well is supporting them and setting attainable goals" (David, personal communication, 2020). While another one added, "Cycle of setting a goal, setting an action plan, executing that plan, and then reflecting on what worked and what didn't work" (Ron, personal communication, 2020). Some of the people were more specific. One said, "We talk about their life goal in my class day one" (Chris, personal communication, 2020). Another participant explained life goals were sometimes life-changing, "We have them purposefully work on one or two skills, whether it's attendance, we've even had kids say they wanted to work on their sobriety and drug use" (Nathan, personal communication, 2020).

Learning Mindset

The next theme discovered, the learning mindset, was about the process of how students learned. The teachers provided, some explicit and some implicit, ways to the students with the following: (a) professional, problem, or project activity, (b) taught them

to ask questions, (c) taught them to use their resources, (d) taught them how to make a hypothesis, (e) put the hypothesis into action, (f) then reflect on the process. The learning process was not about getting abstract ideas, memorizing them, and recalling them for formal summative assessments (Black, (2013). The learning mindset allowed students to build upon their own knowledge bases through discovery. The participants said it was about students finding their passion and allowing them to gain exposure to possible career paths. One participant said, “Different exchange with students not about solving the problem it’s about developing the skill to solve that problem” (Ron, personal communication, 2020).Another explained how they gave students’ the reins by asking questions like, “So how can we go about learning this?” (David, personal communication, 2020)? Someone else described helping students how to become better problem solvers, “Instead of setting up the stage, teaching them how to set up the stage” (Ron, personal communication, 2020).

The participants understood the students would not always “head down the right path” (Steve, personal communication, 2020), but that was encouraged for growth. Two participants shared, “We encourage failure in our students. We want them to fail. We tell them that we're okay with it because that's the way they're going to learn” (Kathy, personal communication, 2020). “That is not something that comes automatically to the students that has to be taught. How, if you have made the wrong decision. Yeah. Make another decision” (Debby, personal communication, 2020).

Exposure

The teachers exposed the students to different career paths in multiple ways in their ALT organizations. They provided opportunities for students to explore their

passions. To facilitate the students learning what career paths facilitated those passions, instructors connected students with people or organizations from the community, their communities. They would set up trips to local businesses or bring people into their classrooms to discuss their careers with the students. The teachers believed the more exposure the students had towards different careers, the less ambiguity there may have been for the students in their futures.

Many instructors elaborated. One said, “Explore where they fit in real world” (Michelle, personal communication, 2020). Another added, “More opportunities to find their passion” (Susan, personal communication, 2020). This was echoed by another, “Gives them options for the future” (Nick, personal communication, 2020). A participant supported, “Trying it in high school before making the decision after high school to follow” (Bob, personal communication, 2020).

Preparing for Ambiguity of Future

The teachers explained in their responses that they focused on helping students to establish a plan for after graduation, but inevitably things change. That change in plans was substantial to the motivation for the teachers to build the student’s intangibles. No matter the path the students took, the organizations wanted the students to be prepared to be successful. In fact, every participant in the study used the term “prepare”, or a version of the word: “Preparing for life” (Kathy, personal communication, 2020). “Prepare for college, career, military. 3 E’s enrolment, employment, or enlistment” (Bob, personal communication, 2020). “Primarily there to prepare the students for posts high school life, whether that be direct into employment, whether that be in the continued education” (Chris, personal communication, 2020). “They're not making a solid black and white

choice, there's a lot of options down the road that they need to prepare for along the way" (Stan, personal communication, 2020).

Discussion

The purpose of this study was to bridge the gap between best ALT practices at the adult or collegiate levels and best ALT practices at the high school levels. In the study, the researcher examined what practices were being implemented in secondary authentic learning organizations to achieve their organizational goals. On-line data analysis, interviews, and focus groups, through Herrington et al.'s Nine Goals to Achieve Authentic Learning Environments (2009), allowed perceptions of most promising practices at the secondary level to be known.

The overarching resulting theme was a shift in head administrators' and teachers' mindsets. This laid the groundwork for innovative authentic learning practices to be implemented, to achieve organizational goals. Some of the organizations' practices aligned with Herrington et al.'s Nine Goals to Achieve Authentic Learning Environments (2009), but six outlier practices also were revealed. Along with Herrington's Nine Goals these six outlier practices may be valid practices to be used in other secondary authentic learning programs.

The overarching resulting theme of a shift in mindset metaphorically was like changing the gears in a transmission of a car. The engine does not change the production of power, but the gears cause the engine to be more productive in its achievement. By changing the mindset of the administrators and faculty, it caused the outcomes of the students to be more productive and to accomplish the organizations goals and change the students' trajectories.

Future Research Recommendations

Future research recommendations would be on what students' perceptions are of ALT. Students are the ones education serves so it is important to know the students' perception of ALT. Did they see value in ALT? Were they more passionate about their learning? Did it help when the student's develop goals for after high school? Did they find value in the development of the intangibles? Additionally, other future research could be implementing a shift in mindset for traditional teachers. What will they accept without hesitation? What areas to they resist the shift in mindset? Why will they resist? What can help traditional teachers shift their mindsets?

Limitations

A limitation of the study was the lack of transferable data of best practices, specifically for secondary ALT programs from previous research (Merriam & Tisdell, 2016) Another was the reliability of the answers given by the head administrators and teachers (Merriam & Tisdell, 2016). The administrators and teachers shared their perceptions which could have been bias. Another limitation was only one researcher was open and axial coding the data (Merriam & Tisdell, 2016). One researcher meant one assumptive truth created themes and patterns (Merriam & Tisdell, 2016). On-line document analysis, interviews, and focus groups were used; observations and student interviews and focus groups could have been other useful data collection tools (Merriam & Tisdell, 2016).

Conclusion

The study provided evidence of an overarching theme of a shift in mindset amongst head administrators and teachers in secondary authentic learning organizations.

This shift in mindset was the catalyst to implementing Herrington et al.'s Nine Goals to Achieve Authentic Learning Environments (2009) and six outlier authentic learning strategies with positive impact in achieving secondary authentic learning organizational goals. This study showed the ability for high school organizations to have positive outcomes in student growth in tangibles — like content, certifications, and state standards along with the growth of intangibles — like problem solving, creativity, and growth mindset. This study created a foundation of practices for other secondary organizations wanting to implement authentic learning theory to provide their students with greater learning opportunities for greater success.

References

American Educational Research Association. (2011). Code of ethics. *Educational Researcher*, *40*(3), 145-156.

Ashok, T. D. S. (2014). Development of a new mindset for eLearning Pedagogy: for the Teacher and the Learner. *Current Issues in Emerging eLearning*, 1(1), 4.

Bethge, J. S. (2018). *The power of transformation: A grounded theory study of cultivating teacher growth mindset towards student intelligence* (Order No. 10784511). Available from ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection. (2034442808). Retrieved from http://cupdx.idm.oclc.org/login?url=https://searchproquestcom.cupdx.idm.oclc.org/docvew/2034442808?accountid=10248

Black, P. (2013). Pedagogy in theory and in practice: Formative and summative assessments in classrooms and in systems. In Valuing assessment in science education: Pedagogy, curriculum, policy (pp. 207-229). Springer, Dordrecht.

Boud, D., Keogh, R., & Walker, D. (2013). *Reflection: Turning experience into learning*. Abingdon, UK: Routledge.

Bransford, J. D., Vye, N., Kinzer, C., & Risko, V. (1990). Teaching thinking and content knowledge: Toward an integrated approach. *Dimensions of Thinking and Cognitive Instruction*, *1*, 381-413.

Britton, J. (1987). Vygotsky's contribution to pedagogical theory. *English in Education*, *21*(3), 22-26.

Brkich, C. A. (2014). High school world history teachers' experiences: Learning to use

authentic intellectual work in schools of color. *The Journal of Social Studies Research*, *38*(2), 63-77.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32-42.

Church, M. (2020, 6 25). The evolution of education. *Thought Leaders*. Retrieved from https://www.mattchurch.com/talkingpoint/education-evolution

Cognition and Technology Group at Vanderbilt. (1990). Anchored instruction and its relationship to situated cognition. *Educational Researcher*, *19*(6), 2-10.

Collins, A. (1991). Cognitive apprenticeship and instructional technology. *Educational values and cognitive instruction: Implications for reform*, *1991*, 121-138.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.

Davis, H. A. (2003). Conceptualizing the role and influence of student-teacher relationships on children's social and cognitive development. *Educational psychologist*, *38*(4), 207-234.

DeVries, R. (2000). Vygotsky, Piaget, and education: A reciprocal assimilation of theories and educational practices. *New Ideas in Psychology*, *18*(2-3), 187-213.

Dimitriadis, G. (2020). Evolution in Education: Chatbots. *Homo Virtualis*, *3*(1), 47-54.

Ferguson, R. L. (2007). Constructivism and social constructivism. *Theoretical Frameworks for Research in Chemistry/Science Education*, 28-49.

Ferreira, A. P. (2014). Vygotsky and Piaget: Scientific concepts. *Psychology in Russia: State of the Art*, *7*(3).

Fink, A. (2017). *How to conduct surveys: A step-by-step guide* (6th ed). Thousand Oaks,

CA: Sage.

Hall, A. (2007). Vygotsky goes online: Learning design from a socio-cultural perspective. In *Learning and socio-cultural theory: Exploring Modern Vygotskian perspectives international workshop 2007, (1), 6.*

Herrington, J. & Oliver, R. (1995) *Critical characteristics of situated learning: Implications for the instructional design of multimedia.* In: ASCILITE 1995 Conference, 3 - 7 December 1995, University of Melbourne, Melbourne pp. 253-262

Herrington, J., Reeves, T. C., & Oliver, R. (2009). *A practical guide to authentic e-learning*. New York, NY: Routledge.

Hill, A. M., & Smith, H. A. (1998). Practice meets theory in technology education: A case of authentic learning in the high school setting. *Journal of Technology Education*, *9*(2), 29-46.

Hohenadel, K. (2015, June 12). *Lessons on God and handwriting uncovered on high school blackboards from 1917.* Retrieved from https://slate.com/human interest/2015/06/blackboards-from-1917-emerson-high-school-in-oklahoma-city-uncovers-slate-blackboards-with-lessons-frozen-in-time.html

Huitt, W., & Hummel, J. (2003). Piaget's theory of cognitive development. *Educational Psychology Interactive, 3*(2), 1-5.

Hussain, A., Azeem, M., & Shakoor, A. (2011). Physics teaching methods: scientific inquiry vs traditional lecture. *International Journal of Humanities and Social Science, 1*(19), 269-276.

Hyde, B. (2012, March 14). Our Prussian model of public schooling: Controlling the

masses. Retrieved from https://www.stgeorgeutah.com/news/archive/2012/03/14/our-prussian model-of-public-schooling-controlling-the-masses/#.XTyTt-hKiUk

Jupp, V. (2006). *The Sage dictionary of social research methods*. Thousand Oaks, CA: Sage.

Karakas-Özür, N., & Duman, N. (2019). The trends in authentic learning studies and the role of authentic learning in geography education. *International Education Studies*, *12*(12), 28–43.

Koksal, H. (2019). An exercise regarding values education with an authentic learning Approach. *International Online Journal of Educational Sciences, 11*(4), 311–329.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. Delhi, India; New Age International.

Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners*. Thousand Oaks, CA: Sage Publications Limited.

Lave, J., Wenger, E., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation* (Vol. 521423740). Cambridge: Cambridge University Press.

Law, M., Stewart, D., Letts, L., Pollock, N., Bosch, J., & Westmorland, M. (1998). Guidelines for critical review of qualitative studies. *McMaster University Occupational Therapy Evidence-Based Practice Research Group*, 1-9 Retrieved from http://wwwfhs.mcmaster.ca/rehab/ebp/pdf/qualreview.pdf,

Lombardi, M. M. (2007). *Authentic learning for the 21st century: An overview. ELI Paper 1*. Washington, DC: Educause.

Luo, T., Murray, A., & Crompton, H. (2017). Designing authentic learning activities to

train pre service teachers about teaching online. *International Review of Research in Open and Distributed Learning*, *18*(7). Retrieved from https://doi.org/10.19173/irrodl.v18i7.3037

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research:A guide to design and implementation* (4th ed.). San Francisco, CA: Jossey-Bass.

Missouri Department of Elementary and Secondary Education. (2018, October 15). Retrieved from https://dese.mo.gov/

Munawaroh, M. (2017). The effect of teacher's ability and student's attitude on the subject of craft and entrepreneurship to the development of entrepreneurship spirit in the implementation of authentic problem-based learning. *International Education Studies*, 10, 88. 10.5539/ies.v10n8p88.

Murphy, E. (1997). *Constructivism: From philosophy to practice*. ED444966

Newmann, F. M., & Wehlage, G. G. (1993). Five standards of authentic instruction. *Educational Leadership*, *50*, 8-8.

Newman, F. M., King, M. B., & Carmichael, D. L. (2007). *Authentic instruction and assessment: Common Standards rigor and relevance in teaching academic subject*: Des Moines The Iowa Department of Education.

Nicholl, B., Flutter, J., Hosking, I., & Clarkson, P. J. (2013). Joining up the DOTs: Authentic teaching and learning in Design and Technology education. *Cambridge Journal of Education*, *43*(4), 435-450.

Paraskevas, A., & Wickens, E. (2003). Andragogy and the Socratic method: The adult learner perspective. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *2*(2), 4-14.

Parker, J., Maor, D., & Herrington, J. (2013). Authentic online learning: Aligning learner needs, pedagogy and technology. *Issues in Educational Research*, *23*(2), 227.

Pavlekovish, C. (2018, 2 2). *Why do our classrooms still look like the 20th century*? Medium Newsfeed. Retrieved from https://mseanewsfeed.com/why-do-our-classrooms-still-look-like-the-20th-century-6db5694c394f

Pearce, S. (2016). Authentic learning: What, why, and how? e-Teaching Management Strategies for the Classroom. Sydney, AU: ACEL

Preble, B., & Gordon, R. (2011). *Transforming school climate and learning: Beyond bullying and compliance*. Corwin Press.

Quigley, C. (2014). Expanding our view of authentic learning: bridging in and out-of school experiences. *Cultural Studies of Science Education*, *9*(1), 115-122.

Roelofs, E., & Terwel, J. (1999). Constructivism and authentic pedagogy: State of the art And recent developments in the Dutch national curriculum in secondary education. *Journal of Curriculum Studies*, 31(2), 201-227.

Rule, A. C. (2006). The components of authentic learning. *Journal of Authentic Learning*, *3*(1), 1-10.

Seidman, I. (2012). Interviewing as qualitative research: A guide for researchers in education and the social sciences (4th ed.). New York, NY: Teachers College Press.

(Reprinted from *Organizational Culture and Leadership, 2d ed.*, 1993)

Slavin, R. E. (1980). Cooperative learning. *Review of educational research*, *50*(2), 315-342.

Snape, P., & Fox-Turnbull, W. (2013). Perspectives of authenticity: Implementation in

technology education. *International Journal of Technology and Design Education*, *23*(1), 51-68.

Stein, D. (1998). Situated learning in adult education (pp. 195-202). ERIC Clearinghouse on Adult, Career, and Vocational Education, Center on Education and Training for Employment, College of Education, the Ohio State University.

Teras, H., & Kartoglu, Ü. (2017). A grounded theory of professional learning in an authentic online professional development program. *International Review of Research in Open and Distributed Learning*, *18*(7), 191-213.

Tessitore, A. (1996). *Reading Aristotle's ethics: Virtue, rhetoric, and political philosophy*. Albany, NY: SUNY Press.

U.S. Department of Education. (2020.) *Home Page*. Retrieved from https://www.ed.gov/

Van Aalst, J. (2009). Distinguishing knowledge-sharing, knowledge-construction, and knowledge-creation discourses. *International Journal of Computer-Supported Collaborative Learning*, *4*(3), 259-287.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* In M. Cole, V. JohnSteiner & E. Souberman (Eds.). London: Harvard University Press.

Wallis, P. (2008). Apprenticeship and training in premodern England. *Journal of Economic History*, *68*(3), 832-861.

Watters, A. (2015, April 25). The invented history of the factory model of education. Retrieved from http://hackeducation.com/2015/04/25/factory-model

Wornyo, A. A., Klu, E. K., & Motlhaka, H. (2018). Authentic learning: Enhancing

learners' academic literacy skills. *International Journal of Applied Linguistics and English Literature, 7*(4), 56-62.

Young, M. F. (1993). Instructional design for situated learning. *Educational technology research and development, 41*(1), 43-58.

Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education, 45*(2), 115-138.

Zualkernan, I. A. (2006). A framework and a methodology for developing authentic constructivist e-Learning environments. *Journal of Educational Technology & Society, 9*(2), 198-212.

Table 2.

Herrington's Nine Goals to Achieve Authentic Learning Environment Goals Achieved

Nine Goals to Achieve Authentic Learning Environments	**1E Organization**	**2E Organization**	**3E Organization**
Real World Relevance	X	X	X
Authentic Activities	X	X	X
Expert Performance and Modelling	X	X	X
Multiple Roles and Perspectives	X	X	X
Collaborative Construction and Knowledge	X	X	X
Reflection for Enabling Abstractions	X	X	X
Articulations for Tacit Knowledge to be Explicit			
Coaching and Scaffolding by Teacher	X	X	X
Integrated Assessment of Learning in Tasks	X	X	X

Notes. The "X" represents the achievement of Herrington's Nine Goals to Achieve Authentic Learning Environment goals by each of the organizations.

Table 3.

Outlier Practices Beyond Herrington's Nine Goals to Achieve Authentic Learning Environments

Outlier Practices	1E Organization	2E Organization	3E Organization
Relationship Building	X	X	X
Individual Learner	X	X	X
Setting Goals	X	X	X
Learning Mindset	X	X	X
Exposure	X	X	X
Preparation for Ambiguity	X	X	X

Notes. The "X" represents the achievement of the outlier goals beyond Herrington's Nine Goals to Achieve Authentic Learning Environments by each of the organizations.

SECTION SIX

SCHOLARYLY PRACTIONAR REFLECTION

Reflecting on how I have changed as a scholar and a leader, I must first start with the arduous task of defining leadership. Leadership is a subjective term that organically alters its meaning as different people and groups needed to be led in different capacities. Due to the transformability necessary to lead, leadership was a word hard to define. Northouse (2016) quoted Stogrill (1774), "There are almost as many different definitions of Leadership as there are people who have tried to define it" (p. 7). In the last six decades, as many as 65 different interpretations and characterizations of the word leadership have emerged (Northouse, 2016; as cited in Fleishman et al., 1991). Northouse (2016) explained the definition of leadership, over time, has been constructed by words like personality, behavior, relationships, process, influence, and goals. Building upon a fundamental explanation of leadership, a leader must be versed in a variety of leadership theories, approaches, and styles. These theories, approaches, and styles were what is imperative to better understanding one's self as a leader.

Reflecting on my leadership development through this dissertation, it is hard to recollect what type of leader I was when I started. So much has changed. In the beginning, if someone asked me to describe my leadership, I would have said I was a leader of the people. Meaning, I listened to the people who followed me, I cared for their well-being, and motivated them to do their best to achieve the team's goal. Like Levi (2013) wrote, leaders of organizations have the responsibility to cultivate a culture where missions are followed, goals are achieved, and members are happy. Now it seems like such a crude definition. Leading people is an important part of leadership, but an

effective leader does more than just lead people. A leader must take into consideration and be receptive to so many more elements that affect their followers, organization, and stakeholders (Levi, 2013). As I began to understand these ideologies of leadership, I began to better interpret techniques I was already using and see where I could implement new leadership themes into my leadership roles.

To reflect on my scholar and leadership development, I will analyze my role in the Student Professional Organization (SPO) as the digital media and design instructor (DMDI). This was my position while working on my dissertation. As I examine this scholar and leadership position I will be reflecting upon experiences and decisions, along with future decisions motivated by what I have learned. To understand my position as the DMDI there must first be understanding of the SPO.

Description of the Organization

The SPO was established in 2013 with the mission statement: to provide students a professional, authentic, innovative, and relevant experience that supports a vibrant Kansas City workforce. It is sponsored, funded, and partnered with nine school districts and 15 high schools north of Kansas City MO. The organization also partnered with over 400 business partners in and around the Kansas City region. Companies range from publicly traded companies employing more than 13,000 people to private companies of one person. Looking through Bolman and Deal's (2013) political frame, that produced a lot of stakeholders, as defined by Newcomer, Hatry, and Wholey (2015).

The SPO was broken up into six strands. Each strand specialized in a specific career field. The students chose one of six strands to participate in for the year: (a)

computer science, (b) medicine and healthcare, (c) engineering, (d) global logistics, (e) business and entrepreneurship, and (f) digital media and design.

The SPO served new juniors and seniors, from the schools previously mentioned, every year except for on average 20 returning seniors known as senior associates. According to Johnson's (2018) Diversity Wheel, our students were diverse because of race, sex, ethnicity, and gender.

The foundation of the curriculum was based around the SPO's five professional skills: (a) communication, (b) time management, (c) problem solving, (d) creativity, and (e) integrity. These skills were reiterated regularly to create a professional environment. The students were treated like professionals, more than students, creating expectations of the student's behavior and work to be at the professional level. The first two weeks of the first semester were called Boot Camp. During this time, the students were introduced to the five professional skills. Expectations are presented, and bad habits cultivated in traditional education were eliminated. As the semester continued other professional nuances like elevator speeches, greeting people, networking, proper email techniques, social media presence, interview skills, and resumes were introduced. After boot camp, the students began to work on projects. Each strand receives authentic projects from local business partners. The students, individually or on teams, selected on which projects they worked. They had to contact the business partner, set up a meeting, discuss goals and timelines, and agree on deliverables. When the project was completed, the finished deliverable is presented to the business partner where feedback was given.

Second semester, instead of the students going to their strands they went to an internship Tuesday through Friday. The students used the skills learned in the first

semester to apply and to interview for the internship. Once the student was at the internship, they were treated as employees. The instructors visited each internship for conversations with the mentors and the students. Discussions included the progress of the five professional skills and overall performance. On Monday, the students all met in the classroom to reflect and to learn from each other's experiences.

Leadership Positions

In the DMDI position, my responsibilities went beyond teaching student's digital media and design and focused on the five professional skills. Every year with new students, new goals, new business partners, and new projects, I developed and planned a new educational program (Caffarella & Daffron, 2013). My duties were a combination of team and individual evaluations, creating new cultures, establishing goals, forming new policies within the class, and figuring out when different types of leadership styles should be applied. These roles were ongoing throughout the year, and they began the first day of class.

At first, I began observing the individuals and group dynamics of the class, as recommended by Creswell (2014). I interacted with students and observed how they interact with one another. According to Northouse (2016), this was the psychodynamic approach to leadership, trying to understand the complexity and paradoxical nature of the people I lead. I relied a lot on my emotional intelligence to formulate inferences of my mental notes about my students and class based on observation (Northouse, 2016; Maio, Humphrey, & Qiana, 2016; Goleman, 1995). Throughout my career I have worked with, what Johnson (2018) said was a diverse population which has allowed me the ability to pick up on emotional ques students displayed. These ques are magnified as I plaied into

the word boot camp and applied higher expectations then what they had in their typical classrooms. These initial ques helped speculate what leadership styles were used when creating the culture.

Culture

In my opinion, culture is the most important part of a successful team. Levi (2017), Lencioni (2002), Kotter (2011), Northouse (2016), Gill (2010), Schein (2005) all repeatedly emphasized the attention a leader must give to the culture of an organization. Since my students were new every year, I established a new culture with each new group. A negative was, it was difficult to establish and expand a symbolic frame (Bolman & Deal, 2013). The class had a logo that carried some recognition, but there were other parts of a symbolic frame such as, metaphors, humor, stories, myths, values, vision, etc., not passed down from class to class (Bolman & Deal, 2013). The positive of having new students every year allowed me the opportunity to try new strategies, build upon the ones which worked, and abandon the ones that do not.

This was like Taylor's (2005) scientific management, always evolving the way things were done. Another advantage, my students were from 15 different high schools. Many of them did not know each other, so I imparted in the students that they had an opportunity to be whomever they wanted. Previous reputations did not matter as everyone got a fresh start. To aid in this type of new beginning beyond the five professional skills, we emphasized words like: diversity, open-mindedness, equity, fun, responsibility, positivity, and trust. In addition to those words, I was ethical and brought awareness to students' diversity (Johnson, 2018). As Magolda (2009) advised, I encouraged my students to investigate their pasts to understand their internal voices. We

had difficult discussions about bias, stereotypes, and microaggressions (Johnson, 2018). We conversed about the differences between each other and how various perspectives led to new types of understanding and creativity (Tierney, 2012). This type of open communication and trust built a strong foundation for the team. Lencioni (2002) supported this idea by saying communication and trust were two of the most important parts of being a functional team.

The observance of these philosophies led to informal team norms (Levi, 2017). As the team bought into the norms, it created Janis's (2005) definition of groupthink, when the group moved as one and inadvertently pressured outsiders to follow. The norms allowed my students to feel safe when expressing thoughts, trying new things, and asking questions. This mindset made them more susceptible to experimenting with new educational experiences and set goals higher than what they normally had in the past.

The culture was very goal-driven so we, as a team, established daily, weekly, monthly, semester, and yearly goals and formulate a plan to achieve them (Head & Alford, 2015; Green, 2001; Kotter, 2011; Lencioni, 2002; Levi, 2017; Marzano, Waters, & McNulty, 2001; Northouse, 2016; Spears, 2010). The goals usually consisted of a growth mindset, as defined by Dweck (2015). The goals also related a lot to raising their levels of expectation and taking pride in themselves and their work. I had my students help in the goal creation and how we plan on achieving them to increase their buy-in and ownership (Bolman & Deal, 2013). It also created a shared leadership approach (Northouse, 2016; Spears, 2010; Solansky, 2008). Most of the time, the students helped one another in achieving individual goals and the goals of the classroom. Beyond goals,

there were other aspects of the culture which exceed the typical classroom's attention. The students got to take responsibility for their learning environments.

What a typical student was not used to was taking ownership of their learning environment. The team created the goals with the expectations and the policies to help achieve the goals. I also explained the policies and expectations could be changed at any time by me or the students if it would better the team. I modeled the steps of changing a class policy after Bardach and Patashnik's (2015) Eightfold Path. If the students, or I, thought there was a problem with a policy we illustrate what the problem was and why we thought it is a problem. We had to then provide alternative solutions to the policy. After we presented the new policy, we had to explain the different possible outcomes of the new policy. At this point, others could add an opinion about the policy, and we determined if there needs to be an amendment or compromise. Next, we decided as a class if it was something we wanted to adopt, and, in conclusion, we put the policy into place. After some time, we revisited the policy and made sure it was accomplishing what it was intended.

When I introduced the Eightfold Path approach, as students saw a problem, it empowered them to do something about it. It encouraged them to provide alternative perspectives and to challenge normality (Cohn & Mullennix, 2007). Their complaints about policy went from simple complaints to solutions on how to improve the team. This process had created great successes and some failures. There have been times I saw where policies changed were not going to get the desired effect, but there was no real detriment to not achieving the goal. This allowed the students to fail which further solidified the norms and the culture of encouraged experimentation. Allowing students to

participate, and to lead, in the creation of goals, norms, and policies empowered them (Levi, 2017). This empowerment helped motivate and justify the higher expectations of the students.

Expectations

The SPO and my class expectations was to be professional. I treated my classroom as a small business, and, because of this, I took an andragogical approach instead of a pedagogical approach in my teaching strategies (Merriam & Bierema, 2014). Since the SPO treats students like professional adults, I felt the way knowledge was shared should align with that philosophy. Also, because these students applied to SPO to follow their career paths, they were typically more passionate about their learning than other comparable students. This caused a shift in their learning from Maslow (2005) level of behaviorism to humanism regarding the technical skills used in digital media and design (Merriam & Tisdell, 2016). They were learning, because they wanted to learn, not for a grade. Also, they demonstrated the understanding of the SPO five professional skills. I communicated with my students that I was more concerned about their continued holistic development of the five professional skills then I was their technical skills (Shek & Wong, 2011). To aid in this mindset, I gave one grade at the end of the semester, and it was to assess the individual student's continued improvement of the five professional skills.

Assessing

When assessing the students' growth of the five professional skills I was also using the data to assess myself (Bolling & Zettelmeyer, 2014). To assess the growth of the five professional skills, I used many data collection tools (Creswell, 2014; Datnow &

Park, 2014; Gagliardi, 2018; Newcom, Hatry, & Wholey, 2015). This data was collected in formal, informal, summative, and formative evaluations (Harlen, 2006). I interviewed students, the students' teammates if applicable, and the business partner who worked with the student (Seidman, 2012). I also used a Likert scale assessment, as defined by Fink (2017), which was given to the same people to add quantitative data to the assessment (Creswell, 2014). I also included my observations of the individual student during class time, site visits, and guest speakers (Creswell, 2014). According to Northouse (2016), by focusing on this type of growth in the student, it made me a transformational leader by wanting individual students to reach their full potential.

Motivating Transformation

During the first semester, my students went through a lot of changes. As these changes happened, I ask myself a question recommended by Kochhar-Bryant (2017), "Change to what end?" (p. 1,817). I wanted there to be transformative learning as individuals, and it led to group transformation, but I did not want to push too hard and hinder motivation (Merriam & Bierema, 2009). I also wanted my students to feel confident in being unique and not completely conform. A homogenized process kills creativity (Ibarra & Hansen, 2011). By pushing too hard I learned a valuable lesson.

I was a very achievement-oriented leader (Northouse, 2016). I had high standards and we were going to achieve them. The students were meeting the standards, but the dynamics of the team were not positive (Levi, 2017). I used Northouse's (2016) leadership surveys to collect data from my students' perspectives of my leadership style. I did this to help change my leadership beliefs and norms (Datnow & Park, 2014). The feedback I received was startling. What I thought was my leadership style was much

different than what my students thought it was. My students said I was too domineering. I realized I equated high expectations with an aggressive leadership style. I was a coercion leader (Northouse, 2016). I focused on the expectations of the culture and not the people to develop the culture (Schein, 2005). It hurt to hear those things from my students. I used Dewey's (1986) experimental learning cycle to assess what changes needed to be made. After reflecting I conceptualized a plan that included a more positive support system for my students (Caffarella & Daffron, 2013).

The next year of classes, I experimented with these new methodologies. Unfortunately, I went the opposite direction and was too lenient with my leadership. I was more concerned about the students' mental health than being goal orientated. I looked at it through Northouse's (2016) behavioral approach, I went from being too focused on on-task behavior to being too focused on relationship behavior. My expectations were the same, but the accountability diminished, causing the students' expectations to lower. This affected the students' overall five professional skills transformation along with the quality of work they were producing for their business clients. My goal now is to find a medium between the last two years as I prepare for the following year.

Future Adjustments

Next year is quickly approaching, and, as I prepare to start again, I am excited about the outcomes my leadership can bring to my students and my entire class. As the years go by, there are things I will continue to use as the foundation of my leadership. I strongly believe the right culture is crucial to achieving the desired outcomes of the students, the class, the organization, and myself. When constructing the culture of my

class, I will implement the five professional skills and also continue to build relationships, to empower the students, to inspire a growth mindset, to generate equity, and to raise the students' expectations. I am going to keep the high expectations but experiment with a hybrid style of leadership motivation. I want to use Northouse's (2016) authentic leadership style to hold people accountable. I am going to genuinely communicate with the students on their effort, or lack thereof, to meet their goals. I want to continue to use Caffarella and Daffron's (2013) positive support methods to aid the students' growth. I am going to use Northouse's (2016) servant leadership style as the motivation and groundwork to accomplish the learning transformation. If my students realize I am here for them, I think the feedback I give will be better received.

Scholar and Leadership Shift

To this point, it probably seems like I was discussing my leadership style when I was demonstrating who I was as a scholar practitioner. Through the dissertation process, it has provided me with the understanding on scholarly mindset. In my opinion a scholarly mindset is observing something unbiasedly, using scholarly peer reviewed evidence to support your ideas, and making changes that are moral to all stakeholders. Reflecting on my shift in leadership through the lens of a scholarly practitioner allows me to reflect on past experiences, identify what was happening, and make corrections. It is difficult to observe one's self and to remove bias. It forces me to be honestly assess myself, but that honesty allows for change. Leader should have a plan of what type of leader they want to be yet be introspective and willing to adjust.

Mike Tyson famously said, "Everyone has a plan until they get hit" (Berardino, 2012). I know that no matter how much I prepare for any leadership role I am going to

have to adjust. I know I will have to follow Bolman and Gallos' (2011) three P's: patience, persistence, and process. There are so many variables when leading, which are unaccounted for until the person can see them through the lens of the leader (Levi, 2013). Every day something new appears and the leader must do the best they can to decide which is best for all the parts of the leadership position they lead (Levi, 2013). Ultimately, each day that leader is leading that day for the first time. They get one run through and they are doing the best they can. I feel the knowledge I have obtained through the EdD has given me the tools to be an effective leader - a leader who understands a variety of leadership theories and practices, who can analyze organizations and policies, and do so ethically and with empathy for diversity. I think the knowledge the EdD program has given me allows me to confidently declare my leadership style as undecided, but prepared.

References

American Educational Research Association. (2011). Code of ethics. *Educational Researcher*, *40*(3), 145-156.

Ashok, T. D. S. (2014). Development of a new mindset for eLearning Pedagogy: for the Teacher and the Learner. *Current Issues in Emerging eLearning*, 1(1), 4.

Astalin, P. K. (2013). Qualitative research designs: A conceptual framework. *International Journal of Social Science and Interdisciplinary Research*, *2*(1), 118-124.

Bardach, E., & Patashnik, E. M. (2015). *A practical guide for policy analysis: The eightfold path to more effective problem solving*. Thousand Oaks, CA: CQ Press.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, *13*(4), 544-559

Berardino, M. (2012, November 9). *Mike Tyson explains one of his most famous quotes*. Sun Sentinel. Retrieved from https://www.sun-sentinel.com/sports/fl-xpm-2012-11-09-sfl-mike-tyson-explains-one-of-his-most-famous-quotes-20121109-story.html

Bethge, J. S. (2018). *The power of transformation: A grounded theory study of cultivating teacher growth mindset towards student intelligence* (Order No. 10784511). Available from ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection. (2034442808). Retrieved from http://cupdx.idm.oclc.org/login?url=https://searchproquestcom.cupdx.idm.oclc.org/docvew/2034442808?accountid=10248

Black, P. (2013). Pedagogy in theory and in practice: Formative and summative

assessments in classrooms and in systems. In Valuing assessment in science education: Pedagogy, curriculum, policy (pp. 207-229). Springer, Dordrecht.

Bolling, M., & Zettelmeyer, F. (2014). Big data doesn't make decisions: Leaders Do. *Evanston, IL: Kellog School of Management*.

Bolman, L. G. & Deal, T. E. (2013). *Reframing organizations: Artistry, choice, & Leadership*, (5th ed.). San Francisco: CA Jossey-Bass.

Bolman, L. G., & Gallos, J. V. (2010). *Reframing academic leadership*. Hoboken, NJ: John Wiley & Sons.

Boud, D., Keogh, R., & Walker, D. (2013). *Reflection: Turning experience into learning*. Abingdon, UK: Routledge.

Bransford, J. D., Vye, N., Kinzer, C., & Risko, V. (1990). Teaching thinking and content knowledge: Toward an integrated approach. *Dimensions of Thinking and Cognitive Instruction*, *1*, 381-413.

Breunig, M. (2017). Experientially learning and teaching in a student-directed classroom. *Journal of Experiential Education, 40*(3), 213-230.

Britton, J. (1987). Vygotsky's contribution to pedagogical theory. *English in Education*, *21*(3), 22-26.

Brkich, C. A. (2014). High school world history teachers' experiences: Learning to use authentic intellectual work in schools of color. *The Journal of Social Studies Research*, *38*(2), 63-77.

Brouse, C. H., & Basch, C. E. (2004). The philosophy of John Dewey: How it can be applied to health education to increase colorectal cancer screening. *Journal of Authentic Learning*, 1, 10-20.

Brown, H. (1919). The normal-school curriculum. *The Elementary School Journal, 20*(4), 276284. Retrieved from http://www.jstor.org/stable/993805

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32-42.

Caffarella, R. S., & Daffron, S. R. (2013). *Planning programs for adult learners: A practical guide* (3rd ed.). San Francisco, CA: Jossey-Bass.

Carpenter, J. (2013). Thomas Jefferson and the ideology of democratic schooling. *Democracy and Education*, *21*(2), 5.

Church, M. (2020, 6 25). The evolution of education. *Thought Leaders*. Retrieved from https://www.mattchurch.com/talkingpoint/education-evolution

Claro, S., Paunesku, D., & Dweck, C. S. (2016). Growth mindset tempers the effects of poverty on academic achievement. *Proceedings of the National Academy of Sciences*, *113*(31), 8,664-8,668.

Cognition and Technology Group at Vanderbilt. (1990). Anchored instruction and its relationship to situated cognition. *Educational Researcher*, *19*(6), 2-10.

Cohn, E. R, & Mullenix, J. W. (2007). Diversity as an integral component of college curricula. In Branche, J., Mullennix, J. W., & Cohs, E. R. (Eds.), *Diversity across the curriculum: A guide for faculty in higher education.* Bolton, MA: Anker Publishing Company, Inc.

Collins, A. (1991). Cognitive apprenticeship and instructional technology. *Educational values and cognitive instruction: Implications for reform, 1991*, 121-138.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.

Crooks, M. (2013, December 16). *Apr 23, 1635 CE: First Public School in America*. National Geographic. Retrieved from https://www.nationalgeographic.org/thisday/apr23/first-public-school-america/

Cunningham, J. M., LaMarca, O. (2015, January 16). *Monitorial system*. Britannica. Retrieved from https://www.britannica.com/topic/monitorial-system

Datnow, A. & Park, V (2014). *Data-driven leadership.* San Francisco, CA: Jossey-Bass.

Davis, H. A. (2003). Conceptualizing the role and influence of student-teacher relationships on children's social and cognitive development. *Educational psychologist*, *38*(4), 207-234.

De Bruijn, E., & Leeman, Y. (2011). Authentic and self-directed learning in vocational education: Challenges to vocational educators. *Teaching and Teacher Education*, *27*(4), 694-702.

DeVries, R. (2000). Vygotsky, Piaget, and education: A reciprocal assimilation of theories and educational practices. *New Ideas in Psychology*, *18*(2-3), 187-213.

Dimitriadis, G. (2020). Evolution in Education: Chatbots. *Homo Virtualis*, *3*(1), 47-54.

Driscoll, M. P. (1994). *Psychology of Learning for Instruction*. Boston, MA: Allyn and Bacon.

Dweck, C. (2015). Carol Dweck revisits the growth mindset. *Education Week*, *35*(5), 20 24.

Encyclopedia.com. (2020, 6 25). *Barnard, Henry (1811-1900)*. Retrieved from https://www.encyclopedia.com/people/social-sciences-and-law/education-biographies/henry-barnard

Ferguson, R. L. (2007). Constructivism and social constructivism. *Theoretical*

Frameworks for Research in Chemistry/Science Education, 28-49.

Ferreira, A. P. (2014). Vygotsky and Piaget: Scientific concepts. *Psychology in Russia: State of the Art*, *7*(3).

Fink, A. (2017). *How to conduct surveys: A step-by-step guide* (6th ed). Thousand Oaks, CA: Sage.

Fleishman, E. A., Mumford, M. D., Zaccaro, S. J., Levin, K. Y., Korotkin, A. L., & Hein, M. B. (1991). Taxonomic efforts in the description of leader behavior: *A Synthesis and Functional Interpretation. Leadership Quarterly, 2*(4), 245–287.

Fox-Turnbull, W., & Snape, P. (2011). Technology teacher education through a constructivist approach. *Design and Technology Education*, *16*(2), 45-56.

Gagliardi, J. S. (2018). The analytics revolution in higher education. In J.S. Gagliardi, A. Parnell, & J. Carpenter-Hubin (Eds.), *The analytics revolution in higher education* (1-14). Sterling, VA: Stylus.

Gatto, J. T. (2000). *The underground history of American education*. New York, NY: Oxford Village Press.

Gill, S. J. (2010). *Developing a learning culture in nonprofit organizations*. Los Angeles, CA: Sage.

Goleman, D. (1995). *Emotional Intelligence*: *Why It Can Matter More than IQ. London: Bloomsbury Publishing*

Green, R. L. (2001). *Practicing the art of leadership: A problem-based approach to implementing the ISLLC standards*. Merrill.

Gulikers, J. T., Bastiaens, T. J., & Martens, R. L. (2005). The surplus value of an authentic learning environment. *Computers in Human Behavior, 21*(3), 509-521.

Hall, A. (2007). Vygotsky goes online: Learning design from a socio-cultural perspective. In *Learning and socio-cultural theory: Exploring Modern Vygotskian perspectives international workshop 2007, (1), 6.*

Har, L. B. (2013). Authentic learning. Hong Kong: The Hong Kong Institute of Education. Retrieved from www.ied.edu.hk/aclass/

Harlen, W. (2006). On the relationship between assessment for formative and summative purposes. *Assessment and Learning*, *2*, 95-110

Head, B. W., & Alford, J. (2015). Wicked problems: Implications for public policy and management. *Administration & Society*, *47*(6), 711-739.

Herrington, J. (1997). *Authentic learning in interactive multimedia environments.* Unpublished doctoral dissertation, Edith Cowan University, Western Australia.

Herrington, J. & Oliver, R. (1995) *Critical characteristics of situated learning: Implications for the instructional design of multimedia.* In: ASCILITE 1995 Conference, 3 - 7 December 1995, University of Melbourne, Melbourne pp. 253-262

Herrington, J., & Oliver, R. (2000). An instructional design framework for authentic Learning environments. *Educational Technology Research and Development*, *48*(3), 23-48.

Herrington, J., Reeves, T. C., & Oliver, R. (2006). Authentic tasks online: A synergy among learner, task, and technology. *Distance Education*, *27*(2), 233-247.

Herrington, J., Reeves, T. C., & Oliver, R. (2009). *A practical guide to authentic e-learning*. New York, NY: Routledge.

Hill, A. M., & Smith, H. A. (1998). Practice meets theory in technology education: A

case of authentic learning in the high school setting. *Journal of Technology Education*, *9*(2), 29-46.

Hohenadel, K. (2015, June 12). *Lessons on God and handwriting uncovered on high school blackboards from 1917.* Retrieved from https://slate.com/human interest/2015/06/blackboards-from-1917-emerson-high-school-in-oklahoma-city-uncovers-slate-blackboards-with-lessons-frozen-in-time.html

Hooper, S. (1992). Cooperative learning and computer-based instruction. *Educational Technology Research and Development*, *40*(3), 21-38.

Huitt, W., & Hummel, J. (2003). Piaget's theory of cognitive development. *Educational Psychology Interactive*, *3*(2), 1-5.

Hussain, A., Azeem, M., & Shakoor, A. (2011). Physics teaching methods: scientific inquiry vs traditional lecture. *International Journal of Humanities and Social Science*, *1*(19), 269-276.

Hyde, B. (2012, March 14). Our Prussian model of public schooling: Controlling the masses. Retrieved from https://www.stgeorgeutah.com/news/archive/2012/03/14/our-prussian model-of-public-schooling-controlling-the-masses/#.XTyTt-hKiUk

Ibarra, H., & Hansen, M. T. (2011). Are you a collaborative leader? *Harvard Business Review 10 Must Reads*, *89*(7/8), 68-74. Boston, MA: Harvard Business Review Press.

Janis, I. (1971/2005). Groupthink: The Deperate Drive for Consensus at Any Cost. In J. Shafritz, J. Ott, & Y. Jang (Eds.), *Classics of organization theory* (6th ed., pp. 185-192). Belmont, CA: Wadsworth. (Reprinted from *Psychology Today 5*, 1971)

Jernegan, M. (1918). Compulsory education in the American colonies: I. New England. *The School Review, 26*(10), 731-749. Retrieved from http://www.jstor.org/stable/1078340.

Johnson, A. (2018). *Privilege, power, and difference* (3rd ed.). New York, NY: McGraw Hill.

Jupp, V. (2006). *The Sage dictionary of social research methods*. Thousand Oaks, CA: Sage.

Kaider, F., Hains-Wesson, R., & Young, K. (2017). Practical typology of authentic work-integrated learning activities and assessments. *Asia-Pacific Journal of Cooperative Education, 18*(2), 153-165.

Karakas-Özür, N., & Duman, N. (2019). The trends in authentic learning studies and the role of authentic learning in geography education. *International Education Studies, 12*(12), 28–43.

Katula, R. A., & Threnhauser, E. (1999). Experiential education in the undergraduate curriculum. *Communication Education, 48*(3), 238-255.

Knobloch, N. A. (2003). Is experiential learning authentic? *Journal of Agricultural Education, 44*(4), 22-34.

Kochhar-Bryant, C. A. (2017). Identity, commitment, and change agency: Bedrock for bridging theory and practice in doctoral education. In *Educational Leadership and Administration: Concepts, Methodologies, Tools, and Applications* (pp. 1815-1828). IGI Global.

Koksal, H. (2019). An exercise regarding values education with an authentic learning Approach. *International Online Journal of Educational Sciences, 11*(4), 311–329.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. Delhi, India; New Age International.

Kotter, J. P. (2011). What leaders really do. *Harvard Business Review 10 Must Reads, 89*(7/8)37-55. Boston, MA: Harvard Business Review Press.

Krueger, R. A., & Casey, M. A. (2015). Focus groups: A practical guide for applied research (5th ed.). Thousand Oaks, CA: Sage.

Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners*. Thousand Oaks, CA: Sage Publications Limited.

Lang-8 (2014, 12 14). Essay *"I hear, and I forget. I see and I remember I do and I understand"* Retrieved from https://lang8.com/529437/journals/1493509660603128986220988104828165193 0#

Lasry, N. (2006). *Understanding authentic learning* (Doctoral dissertation, McGill University).

Lave, J., Wenger, E., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation* (Vol. 521423740). Cambridge: Cambridge University Press.

Law, M., Stewart, D., Letts, L., Pollock, N., Bosch, J., & Westmorland, M. (1998). Guidelines for critical review of qualitative studies. *McMaster University Occupational Therapy Evidence-Based Practice Research Group*, 1-9 Retrieved from http://wwwfhs.mcmaster.ca/rehab/ebp/pdf/qualreview.pdf,

Lencioni, P. (2002) *The five dysfunctions of a team*. San Francisco, CA; Jossey-Bass

Levi, D. (2017). *Group Dynamics for Teams*. (5th ed.). Thousand Oaks, CA: SAGE

Lewis, L. H. & Williams, C. J. (1994). In Jackson, L. & Caffarella, R. S. (Eds.). *Experiential learning: A new approach* (pp. 5-16). San Francisco, CA: Jossey-Bass.

Lock, J., & Duggleby, S. (2017). Authentic earning in the social studies classroom: Connecting globally. *One World in Dialogue, 4*(1), 20-27.

Lombardi, M. M. (2007). *Authentic learning for the 21st century: An overview. ELI Paper 1*. Washington, DC: Educause.

Luo, T., Murray, A., & Crompton, H. (2017). Designing authentic learning activities to train pre service teachers about teaching online. *International Review of Research in Open and Distributed Learning, 18*(7). Retrieved from https://doi.org/10.19173/irrodl.v18i7.3037

Magolda, M. B. B. (2009). *Authoring your life: Developing an internal voice to navigate life's challenges*. Stylus Publishing, LLC.

Maina, F. W. (2004). Authentic learning: Perspectives from contemporary educators. *Journal of Authentic Learning*, 1(1), 1-8.

Marzano, R. J., Waters, T., & McNulty, B. A. (2001). *School leadership that works: From research to results*. ASCD.

Maslow, A. H. (2005). A theory of human motivation. In J. Shafritz, J. Ott, & Y. Jang (Eds.), *Classics of Organization Theory* (6th ed., pp. 167-178). Belmont, CA: Wadsworth. (Reprinted from *Psychological Review 50*, 1943)

Merriam, S. B., & Bierema, L. L. (2014). *Adult learning: Linking theory and practice.* San Francisco, CA: Jossey-Bass.

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research:A guide to design and implementation* (4th ed.). San Francisco, CA: Jossey-Bass.

Miao, C., Humphrey, R. H., & Qian, S. (2016). Leader emotional intelligence and subordinate job satisfaction: A meta-analysis of main, mediator, and moderator effects. *Personality and Individual Differences*, *102*, 13-24.

Missouri Department of Elementary and Secondary Education. (2018, October 15). Retrieved from https://dese.mo.gov/

Munawaroh, M. (2017). The effect of teacher's ability and student's attitude on the subject of craft and entrepreneurship to the development of entrepreneurship spirit in the implementation of authentic problem-based learning. *International Education Studies*, 10, 88. 10.5539/ies.v10n8p88.

Murphy, E. (1997). *Constructivism: From philosophy to practice*. ED444966

Mydland, L. (2011). The legacy of one-room schoolhouses: A comparative study of the American Midwest and Norway. *European journal of American studies*.

National Archives Foundation. (1919). *The Smith-Lever Act of 1914*. Retrieved from https://www.archivesfoundation.org/documents/smith-lever-act-1914/

New England Historical Society. (2020, 6 20). *How the Old Deluder Satan Act Made Sure Puritan Children Got Educated*. Retrieved from http://www.newenglandhistoricalsociety.com/olddeluder-satan-act-made-sure-puritan-children-got-educated/

Newcomer, K. E., Hatry, H. P., & Wholey, J. S. (Eds.). (2015). *Handbook of practical program evaluation* (4th ed.). Hoboken, NJ: John Wiley & Sons.

Newmann, F. M., & Wehlage, G. G. (1993). Five standards of authentic instruction. *Educational Leadership, 50*, 8-8.

Newman, F. M., King, M. B., & Carmichael, D. L. (2007). *Authentic instruction and assessment: Common Standards rigor and relevance in teaching academic subject*: Des Moines The Iowa Department of Education.

Nicholl, B., Flutter, J., Hosking, I., & Clarkson, P. J. (2013). Joining up the DOTs: Authentic teaching and learning in Design and Technology education. *Cambridge Journal of Education*, *43*(4), 435-450.

Northouse, P. G. (2016). Leadership: Theory and practice. *Authentic Leadership* (pp. 195-221). Thousand Oaks, CA: Sage.

Paraskevas, A., & Wickens, E. (2003). Andragogy and the Socratic method: The adult learner perspective. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *2*(2), 4-14.

Parker, J., Maor, D., & Herrington, J. (2013). Authentic online learning: Aligning learner needs, pedagogy and technology. *Issues in Educational Research, 23*(2), 227.

Pavlekovish, C. (2018, 2 2). *Why do our classrooms still look like the 20th century*? Medium Newsfeed. Retrieved from https://mseanewsfeed.com/why-do-our-classrooms-still-look-like-the-20th-century-6db5694c394f

Pecore, J. L. (2015). From Kilpatrick's project method to project-based learning. *International Handbook of Progressive Education*, 155-171.

Pearce, S. (2016). Authentic learning: What, why, and how? e-Teaching Management Strategies for the Classroom. Sydney, AU: ACEL

Preble, B., & Gordon, R. (2011). *Transforming school climate and learning: Beyond*

bullying and compliance. Corwin Press.

Quigley, C. (2014). Expanding our view of authentic learning: bridging in and out-of school experiences. *Cultural Studies of Science Education*, *9*(1), 115-122.

Reeves, T. C., Herrington, J., & Oliver, R. (2002). *Authentic activities and online learning.* Annual Conference Proceedings of Higher Education Research and Development Society of Australasia. Perth, Australia

Roelofs, E., & Terwel, J. (1999). Constructivism and authentic pedagogy: State of the art And recent developments in the Dutch national curriculum in secondary education. *Journal of Curriculum Studies*, 31(2), 201-227.

Rose, J. (2012, May 9). How to break free of our 19th century factory-model education system. Retrieved from https://www.theatlantic.com/business/archive/2012/05/how-to-break-free of-our-19th-century-factory-model-education-system/256881/

Rule, A. C. (2006). The components of authentic learning. *Journal of Authentic Learning*, *3*(1), 1-10.

Sampaolo. M, (2016, April 20). Normal schools. Britannica Encyclopedia. Retrieved from https://www.britannica.com/topic/normal-school

Schein, E. H. (2005). Defining organizational culture. In J. Shafritz, J. Ott, & Y. Jang (Eds.), *Classics of organization theory* (6th ed., pp. 61-72). Belmont, CA: Wadsworth.

Seidman, I. (2012). Interviewing as qualitative research: A guide for researchers in education and the social sciences (4th ed.). New York, NY: Teachers College Press.

(Reprinted from *Organizational Culture and Leadership, 2d ed.*, 1993)

Shek, D. T., & Wong, K. K. (2011). Do adolescent developmental issues disappear overnight? Reflections about holistic development in university students. *The Scientific World Journal*, *11*, 353-361.

Slavin, R. E. (1980). Cooperative learning. *Review of educational research*, *50*(2), 315-342.

Snape, P., & Fox-Turnbull, W. (2013). Perspectives of authenticity: Implementation in technology education. *International Journal of Technology and Design Education*, *23*(1), 51-68.

Solansky, S. T. (2008). Leadership style and team processes in self-managed teams. *Journal of Leadership & Organizational Studies*, *14*(4), 332-341.

Spears, L. C. (2010). Character and servant leadership: Ten characteristics of effective, caring leaders. *The Journal of Virtues & Leadership*, *1*(1), 25-30.

Stein, D. (1998). Situated learning in adult education (pp. 195-202). ERIC Clearinghouse on Adult, Career, and Vocational Education, Center on Education and Training for Employment, College of Education, the Ohio State University.

Steiner, B. C. (1919). *Life of Henry Barnard: The First United States Commissioner of Education, 1867-1870 (No. 8)*. US Government Printing Office.

Stogdill, R. M. (1974). *Handbook of leadership: A survey of theory and research*. New York: New York, NY Free Press.

Sutinen, A. (2013). Two project methods: Preliminary observations on the similarities

and differences between William Heard Kilpatrick's project method and John Dewey's problem-solving method. *Educational Philosophy and Theory*, *45*(10), 1,040-1,053.

Taylor, F. W. (2005). The principles of scientific management. In J. Shafritz, J. Ott & Y. Jang (Eds.), *Classics of organization theory* (6th ed., pp. 61-72). Belmont, CA: Wadsworth. (Reprinted from *Bulletin of the Taylor Society*, 1916)

Teras, H., & Kartoglu, Ü. (2017). A grounded theory of professional learning in an authentic online professional development program. *International Review of Research in Open and Distributed Learning*, *18*(7), 191-213.

Tessitore, A. (1996). *Reading Aristotle's ethics: Virtue, rhetoric, and political philosophy*. Albany, NY: SUNY Press.

The Glasgow Story. (2020, 6 20). *Glasgow City archives, Department of Education*. Retrieved from https://www.theglasgowstory.com/image/?inum=TGSA02525

Tierney, W. G. (2012). Creativity and organizational culture. In M. N. Bastedo (Ed.), *The organization of higher education: Managing colleges for a new era* (pp. 160-179). Baltimore, Maryland: The John Hopkins University Press.

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, *19*(6), 349-357.

U.S. Department of Education. (2020.) *Home Page*. Retrieved from https://www.ed.gov/

Van Aalst, J. (2009). Distinguishing knowledge-sharing, knowledge-construction, and

knowledge-creation discourses. *International Journal of Computer-Supported Collaborative Learning*, *4*(3), 259-287.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* In M. Cole, V. JohnSteiner & E. Souberman (Eds.). London: Harvard University Press.

Walliman, N. (2017). *Research methods: The basics*. New York, NY: Routledge.

Wallis, P. (2008). Apprenticeship and training in premodern England. *Journal of Economic History*, *68*(3), 832-861.

Watters, A. (2015, April 25). The invented history of the factory model of education. Retrieved from http://hackeducation.com/2015/04/25/factory-model

Westberg, K. L., & Leppien, J. H. (2018). Student independent investigations for authentic learning. *Gifted Child Today*, *41*(1), 13-18.

Wornyo, A. A., Klu, E. K., & Motlhaka, H. (2018). Authentic learning: Enhancing learners' academic literacy skills. *International Journal of Applied Linguistics and English Literature*, *7*(4), 56-62.

Young, M. F. (1993). Instructional design for situated learning. *Educational technology research and development*, *41*(1), 43-58.

Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education*, *45*(2), 115-138.

Zualkernan, I. A. (2006). A framework and a methodology for developing authentic constructivist e-Learning environments. *Journal of Educational Technology & Society*, *9*(2), 198-212.

APPENDICES

Appendix A

Interview Questions for Head Administrator

- How would you describe your organization?
- What are the goals of your organization?
- What inspired the goals?
- What are some of the most impactful teaching strategies the teachers are using to achieve the goals?
- How do they know when the goals have been achieved?

Appendix B

Teacher Focus Group Questions

- How would you describe this organization?
- What are the goals of this organization?
- What inspired the goals?
- What are some of the most impactful teaching strategies you are using to achieve the goals?
- How do you know when the goals have been achieved?

Appendix C

Informed Consent

A QUALITATIVE ANALYSIS OF ADMINISTRATORS AND TEACHER PARTICIPANTS IN THREE MIDWESTERN SECONDARY AUTHENTIC LEARNING PROGRAMS PERCEPTION OF MOST PROMISING PRACTICE TO ACHIEVE THEIR ORGANIZATIONAL GOALS

Purpose of Study:
The purpose of this study is to explore the head administrator and teacher participants of authentic learning program's, perception of best authentic learning teaching strategies.

Principal Investigator
Jonathan Hart
Mr.Hart1234@gmail.com
816-739-9632

Institute:
Northwest Missouri State University
University of Missouri Columbia

Introduction:
You are invited to participate in an interview or focus group that will become the data for this study. The study will help add to the existing body of knowledge and fill needed gaps concerning most promising authentic learning teaching strategies at the high school level. Additionally, research into authentic learning could provide needed guidance to schools and districts in the future.

Background Information:
This is research for a dissertation within the Educational Doctorate Program through the The University of Missouri-Columbia and Northwest Missouri State University.

Possible Risks or Benefits:
There is no risk involved in this study except for your valuable time. This research has the potential to impact other schools and districts that utilize authentic learning.

Right of Refusal to Participate and Withdrawal:
You may also withdraw at any time from the study. You may also refuse to answer some or all of the questions.

Confidentiality:
Any information you provide will remain confidential. Nobody except the principal investigators will have access to it. Your name and identity will also not be disclosed at any time.
AUTHORIZATION

I have read and understand this consent form, and I volunteer to participate in this research study. I understand that I will receive a copy of this form. I voluntarily choose to participate, but I understand that my consent does not take away any legal rights in the case of negligence or other legal faults of anyone involved in this study. I further understand that nothing in this consent form is intended to replace any applicable federal, state, or local laws.

Participant's Name (Printed or Typed):
Participant's Signature:
Date:

Principal Investigator's Signature:
Date:

CONSENT TO BE ZOOM-RECORDED

I consent to be Zoom-recorded while answering the questions of the principal investigator. I understand I can decline to be recorded at any time.

Participant's Name (Printed or Typed):
Participant's Signature:
Date:

Principal Investigator's Signature:
Date:

If you have any questions regarding your rights as a participant in this research and/or concerns about the study, or if you feel under any pressure to enroll or to continue to participate in this study, you may contact the University of Missouri Campus Institutional Review Board (which is a group of people who review the research studies to protect participants' rights) at (573) 882-9585 or umcresearchcirb@missouri.edu.

Appendix D

Email to Teachers

Teachers of (Organization)

Hello, my name is Jonathan Hart. I am a public high school teacher and currently working on my EdD through the University of Missouri. I have been utilizing real-world teaching strategies for the last five years to achieve my organization's goals. The outcomes real-world learning has on my students inspires my passion about the advancement of Authentic Learning Theory at the high school level. Because of this passion, I have dedicated my dissertation research to finding the best authentic learning practices being used to achieve organizational goals at the high school level.

Due to the successes of Organization, your organization is one of four organizations being selected to participate in this study. To collect the data four data collection methods will be used for each one of the authentic learning organizations:

1. Document analysis of the organization's website.
2. Interview of the head administrator of the program
3. Focus group of students, over the age of 18, who have participated in the organization.
4. Focus group of instructors in the organization.

This email is asking for volunteers to participate in the teachers focus group. The focus group will only be instructors from your organization. Five questions will be asked about your organization's goals and what authentic teaching strategies are most useful in accomplishing them. The focus group will be held via Zoom and should only take between 30 and 60 minutes. Confidentiality of all participants will be maintained, and all raw data will only be available to me, the principal investigator. Any data collected will be transcribed for accuracy and all identifiable information will be redacted for anonymity.

After the research is completed the results will be shared with the participating organizations to help strengthen and advance authentic teaching strategies in your organization.

If you have any further questions please feel free to reach out to me at (816)-739-9632 or email me at Jonathan.Hart@mail.missouri.edu.

Please give consideration to providing your unique expertise and insight to this study.

If you would like to participate in this study, please email me at Jonathan.Hart@mail.missouri.edu

Thank you for your time and hopefully your knowledge to advance authentic learning.

Appendix E
IRB Approval

Institutional Review Board
University of Missouri-Columbia
FWA Number: 00002876
IRB Registration Numbers: 00000731, 00009014

482 McReynolds Hall
Columbia, MO 65211
573-882-3181
irb@missouri.edu

May 18, 2020

Principal Investigator: Jonathan Hart (MU-Student)
Department: Educational Leadership-EDD

Your IRB Application to project entitled STAKEHOLDERS PERCEPTIONS OF ORGANIZATIONAL
GOAL ATTAINMENT AT THE SECONDARY SCHOOL LEVEL THROUGH THE LENS OF AUTHENTIC LEARNING THEORY was reviewed and approved by the MU Institutional Review Board according to the terms and conditions described below:

IRB Project Number	2023425
IRB Review Number	265068
Initial Application Approval Date	May 18, 2020
IRB Expiration Date	May 18, 2021
Level of Review	Exempt
Project Status	Active - Exempt
Exempt Categories (Revised Common Rule)	45 CFR 46.104d(2)(ii)
Risk Level	Minimal Risk
Approved Documents	Script to be read to participants before participating to obtain oral consent. Questions to ask teacher focus group Questions to ask student focus group Questions to ask Head Administrator Email to students recruiting volunteers Email to instructor recruiting volunteers.

The principal investigator (PI) is responsible for all aspects and conduct of this study. The PI must comply with the following conditions of the approval:

1. Enrollment and study related procedures must remain in compliance with the University of Missouri regulations related to interaction with human participants following guidance at https://research.missouri.edu/about/covid-19-info.php.
2. No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date.
3. All changes must be IRB approved prior to implementation utilizing the Exempt Amendment Form.

4. The Annual Exempt Form must be submitted to the IRB for review and approval at least 30 days prior to the project expiration date to keep the study active or to close it.
5. Maintain all research records for a period of seven years from the project completion date.

If you are offering subject payments and would like more information about research participant payments, please click here to view the MU Business Policy and Procedure: http:// bppm.missouri.edu/chapter2/2_250.html

If you have any questions or concerns, please contact the MU IRB Office at 573-882-3181 or email to muresearchirb@missouri.edu.

Thank you,
MU Institutional Review Board

VITA

Jonathan M. Hart is a fourth-generation educator. Since he was young, he knew he was going to be in education. In third grade he dressed up like a teacher for Halloween. In college he was a substitute teacher for four years. He earned his Bachelor of Arts and became a teacher. Shortly thereafter he earned his Master of Science in Secondary Administration followed by his Educational Specialist Superintendency. He taught in a traditional high school setting for eight years and has taught in an authentic learning organization for the last five years. Hart believes in the outcomes authentic learning has on high school students and plans to be a champion for the implication of authentic learning theory in the secondary level to better prepare students for their success.