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"It Sucks, But I'm Grateful": Understanding the Experience of Autistic Students Living in the Residence Halls

Abstract

As populations of Autistic students at institutions of higher education increases, it is becoming more important for institutions to evaluate their programs with these students in mind. While the Autistic population has grown, policies and services on campuses have not become more inclusive or supportive of this population as a response. This evaluation examines the Residential Learning Model, the guide through which the residential life program at one institution of higher education is delivered to the students living in the residence halls. Through the lens of the Autistic students and the student staff who live and work in the residence halls, the model will be explored for ways that it can more effectively reach students on the Autism Spectrum. A utilization-focused program evaluation, using a constructivist approach, examines the lived experience of Autistic students' interactions with peers, residence hall staff, and experience with the programs and interactions that are created through the Residential Learning Model. This evaluation uses the principles of Universal Design Theory to examine the data collected from Autistic students and resident advisors within this program. Using their choice of data collection method, student participants chose the method through which they tell the story of their time in the residence halls written accounts, and reflections of their experiences in the residence halls. These methods, as well as review of key documents that influence and structure the program, shed light on the Autistic student experience. The findings show the differences of expectations between Autistic students and their RAs, the importance of relationship to Autistic students and the learning that takes place in the residence halls, facilitated by the Residential Learning Model. These findings lead to recommendations for RA training, and some changes to the Residential Learning Model. Changes that can help Autistic students navigate through the residence life program, and which may influence their connection to the institution, relationships with staff as well as peers, their well-being, and their motivation to persist through school.

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Christine A. Nelson

Second Advisor

Laura Sponsler

Third Advisor

Sarah Friswold-Atwood

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"It Sucks, But I'm Grateful": Understanding the Experience of Autistic Students Living in the Residence Halls

A Dissertation in Practice

Presented to

the Faculty of the Morgridge College of Education

University of Denver

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by

Mary F. Elliott

August 2021

Dr. Christine A. Nelson, Ph.D.

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Author: Mary F. Elliott

Title: "It Sucks, But I'm Grateful": Understanding the Experience of Autistic Students

Living in the Residence Halls

Advisor: Dr. Christine A. Nelson, Ph.D.

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ABSTRACT

As populations of Autistic students at institutions of higher education increases, it is becoming more important for institutions to evaluate their programs with these students in mind. While the Autistic population has grown, policies and services on campuses have not become more inclusive or supportive of this population as a response. This evaluation examines the Residential Learning Model, the guide through which the residential life program at one institution of higher education is delivered to the students living in the residence halls. Through the lens of the Autistic students and the student staff who live and work in the residence halls, the model will be explored for ways that it can more effectively reach students on the Autism Spectrum. A utilization-focused program evaluation, using a constructivist approach, examines the lived experience of Autistic students' interactions with peers, residence hall staff, and experience with the programs and interactions that are created through the Residential Learning Model. This evaluation uses the principles of Universal Design Theory to examine the data collected from Autistic students and resident advisors within this program. Using their choice of data collection method, student participants chose the method through which they tell the story of their time in the residence halls written accounts, and reflections of their experiences in the residence halls. These methods, as well as review of key documents that influence and structure the program, shed light on the Autistic student experience.

The findings show the differences of expectations between Autistic students and their RAs, the importance of relationship to Autistic students and the learning that takes place in the residence halls, facilitated by the Residential Learning Model. These findings lead to recommendations for RA training, and some changes to the Residential Learning Model. Changes that can help Autistic students navigate through the residence life program, and which may influence their connection to the institution, relationships with staff as well as peers, their well-being, and their motivation to persist through school.

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Chapter 1: Introduction

Articulation of the Research Problem

"It sounds like you won't provide a Mom" (M. Elliott, personal communication, August 14, 2019). This was a sarcastic statement made by the mother of an Autistic student to the Associate Dean of Students as she talked about what she hoped for when her son came to campus in the fall of 2018. Her son, an intelligent, quiet, Autistic young man, had a great deal of anxiety in social situations and making friends was very difficult for him. This mother said she understood that there were 300 other students in the hall and that the staff could not provide "a Mom" for him. She said she appreciated that there was a time for adjustment and that she would encourage him to engage with his peers. Six days after her son moved into the residence hall, he took his own life in his room. I have been thinking about what more could have been done to support him and help him connect within the residence halls, ever since.

Colorado School of Mines (Mines), a mid-size, public, Science, Technology,
Engineering, Math (STEM) institution is the site of this study. The residence life program
at Mines is a relatively new program. The first residence hall on campus was built in
1954, housed only men, most of whom were athletes, and while other buildings
followed, very few students lived on campus and none for longer than one year. For
decades, the campus only had capacity to house 670 of its population of over 4000

undergraduates, with no space for upper-class students, graduate students, or families. In 2010, the school assessed its students, and developed a strategy for the years ahead, a large part of this strategy was the "Residential Campus Community Initiative" (Residential Campus Community Report, 2010) which called for a more developed residence life program, enough buildings to house at least the first-year class, and a robust learning model for the halls. This initiative also created professional staff roles within the residence halls to supervise the Resident Advisors, advise student leadership, and create educational programming for the students; essentially, the residence life program began to evolve. After erecting one new building, renovating another, and acquiring an apartment complex, the entire first year class was able to be housed on campus for the first time in 2012 with enough space for some upper-class students as well. While there had been Resident Advisors (RA) and a Director of Housing up until 2012, they were mostly focused on policy enforcement and risk management, not student learning or retention. Since that time, the student body has grown, three new residence halls have been built, and a Residential Learning Model has been created. The role of the Resident Advisor (RA) is now that of mentor, resource guide, academic advisor, and crisis responder, in addition to policy enforcer. The Residence Life Program at Mines continues to grow as the institution again looks to the future and strategically assesses the needs of its students. Continued building, academic initiatives, theme learning communities, and the Residential Learning Model are hallmarks of the residence life program at Mines today.

The ability to house all first-year students brought with it a requirement that all first-year students, including those who may not have the skills, experiences, or emotional resiliency to do so, live with hundreds of their peers in the residence halls. The residence life program was developed to support and aid in the education and retention of the first-year students at Mines and is based on theory-to-practice models that give a foundation to the practice of the staff within the halls. Practice with a goal of creating a community where students learn from one another, grow in their interpersonal skills and knowledge of themselves, and are encouraged in their academic endeavors.

Autism or Autism Spectrum Disorder is a neurological variation that occurs in people of all genders, races, and in all parts of the world. The nuances of Autism vary along a spectrum, with people experiencing strengths and challenges to various degrees, which is why it is known as a spectrum disorder. While all Autistic people experience their particular neurological variation uniquely, many experience sensory challenges, unique ways of learning, deeply focused thinking, atypical and sometimes repetitive movement, need for consistency, difficulty adjusting to changes in circumstance or environment, need for routine and order, difficulty with communication, and challenges understanding and expressing social interactions (American Psychiatric Association, 2013; National Institute of Mental Health [NIMH], 2018; Autism Speaks, n.d.; Autistic Self-Advocacy Network, n.d.; Notbohm, 2007). Depending on how each individual experiences their diagnosis, everyday interactions with strangers, even close friends or family can pose a challenge, as can daily living tasks, impacting all Autistic people in different ways.

Autistic students are attending institutions of higher education in higher numbers due to more awareness of this disability, earlier diagnosis and intervention, and more support in the K-12 system (Shattuck et al., 2012; Volkmar et al. 2017). A national survey, conducted in 2011 reported that 44% of young people with Autism enrolled in some type of post-secondary education, and 17% of those enrolling in four-year institutions (Newman et al., 2011, p. 19). This same report found that almost 75% of students who had diagnosed disabilities in high school did not consider their disability enough to disclose or chose not to disclose to their institution of higher education (p. 31). Mines has a small population of students who have disclosed Autism as a disability to the school, about three to five percent of the population annually. Based on the Newman et al. report, however, many more students with Autism may be students at Mines than selfreport. A 2013 study by Wei et al. investigated the popular belief that students with Autism often gravitate towards STEM fields. They found, through analysis of a national data set, that of students with disabilities who attend college, those with Autism are more likely to pursue STEM majors (p. 1543). As a STEM institution, this study furthers the assumption that more Autistic students attend Mines than are actually known to the institution.

Cognitively, Autistic college students are academically capable and have successfully maneuvered classroom expectations throughout their education, yet the transition to college and living on a college campus, can pose challenges. A new environment, social expectations, schedule, and people are very different than their environment at home. These changes, to a population that craves structure they can count

on, is challenging. Many college students are required to live in campus housing at some point, in fact, according to the ACUHO-I 2015 Operational Survey (2016), 30% of colleges across the country maintain at least a first-year student live-on requirement (p. 24). Many more institutions strongly encourage first-year students to live in the halls, making residence halls an influential part of the shared experience of many college students.

Statement of the Problem

The residence life program at Mines was designed for neuro-typical students, with little, to no, regard for students on the Autism spectrum. While living in the residence halls did not cause the student's death in this example, he did tell his mother that the halls were a source of increased stress and anxiety and his existing depression was exacerbated by feelings of loneliness and lack of friends or social connections. Autistic student voices have not been incorporated into the design of either the residential program or the physical residence hall buildings at Colorado School of Mines, leaving out a growing population on the campus. In particular, the Residential Learning Model, while developed to be intentionally inclusive of various identities of the residential student, did not account for the neurodiversity among residential students (Residential Learning Model Final, 2020). The creation of the Residential Learning Model included the examination and implementation of research on residential curriculum models, learning outcomes, and research on self-authorship in higher education on a broad scale (Keeling, 2006; Baxter Magolda, et al., 2012). These guides were used to create the structure for the model, but did not consider different approaches that may be needed to serve a diverse

population of students. The learning model is the guide by which the RAs who work with the residential students in the halls implement the values and mission of the department. It guides the programming that takes place with residents, and the interactions between RAs and residential students. As the guiding resource for the department, it should reflect the experiences and input of the students who live in the halls, including Autistic students. The ability for Autistic students to thrive on campus (Museus & Smith, 2016), to have their mental and emotional health needs met, and to persist through higher education to attain their academic goals may be better supported by a positive experience living in the residence halls, which can facilitate stronger connection to peers and the institution as a whole (Osequera & Shik Rhee, 2009; Schudde, 2011; Titus, 2006).

Purpose of the Study

This study is an evaluation of the residence life program at Mines focused on exploring Autistic students' experiences in the residence halls, looking specifically at the learning model, as well as their relationships with the RA staff and peers within the residential community. This evaluation highlights the Autistic student experience to help inform the continued improvement of the residence life program as a whole. Stakeholders in the residence life program, including the students who live there, staff who work there, and administration who oversee the program, will use the results of this study to improve the learning model for all students, and analyze the need for and develop programming and additional initiatives in the halls to specifically meet the needs of the Autistic student population. This evaluation works with Autistic students to learn firsthand how they navigate the social, academic, and personal landscape of the residence

hall environment. This allows students themselves to inform development of the program that can better serve their needs and support them in persisting through their education to meet their goals. In addition to the students who live in the halls, this study also engages the RAs who implement the program to learn from them how different students engage. This evaluation seeks to understand the relationship between student experiences and the Residential Learning Model. I specifically rely upon student experiences and voices to give insight on how the Residential Learning Model is implemented and can be improved by other key stakeholders. RAs and Autistic students are the primary focus because of their direct experiences with the Residential Learning Model. The RAs implement the model and the Autistic students live in the halls and engage with the model as part of living there. This evaluation seeks to learn how the model is directly implemented and received, and the students are the only population that is directly involved in the implementation of the model. Given the growth in the number of Autistic students on campus and the potentially powerful influence that a more supportive and positive residence hall experience may have on their overall college experience, it is vital to understand and include Autistic students' perspectives in any ongoing development efforts within residence life program.

Research has explored the Autistic student experience in higher education, giving insights into the need for mental health and interpersonal support for many Autistic students. There is, however, a lack of research that looks specifically at the lived experience of Autistic students in the residence halls. This evaluation hopes to gain insights from the Autistic students who live in the halls to better understand the need for

social, academic, or mental health supports that may be implemented in the residence halls through the Residential Learning Model. The Residential Learning Model, within the Residence Life program specifically, has been designed with students in mind. However, there is nothing known about how Autistic students in particular, experience the Residential Learning Model. Yearly assessment is conducted with all residential students, this data tells the story of the satisfaction of students who identify in a variety of diverse ways, but we have never asked students to identify themselves in terms of their neurodiversity or disability status. In addition, no qualitative assessment has been done in the past to learn about the experiences of students living in the halls from a specific identity perspective, in this case, Autistic students.

In addition to a lack of research on Autistic student experiences with the Residential Learning Model, this model is relatively new and is still in the formation stages. Conducting a formative evaluation (Weiss, 1998) on the model and exploring the way the model is experienced by the RAs who implement it, and a specific student population that live under the guidance of the model, makes sense at this time in the evolution of the model. A formative evaluation is one that is conducted during the course of program implementation. The goal of conducting an evaluation at this time in the life of a program is to provide information that will help the program improve. (Weiss, 1998). Learning from the Autistic students in the halls, allows the evaluation of this model to focus on creating a better model for these students specifically, and thus for all students.

This evaluation also hopes to gain insights from the RA staff who work with the Residential Learning Model. The RAs have real working knowledge of their own experiences in the halls, as well as perspective on how they implement the Residential Learning Model. Both of these groups, together with the documents that help to create the residential experience for students, may give important insight into how the Residential Learning Model can be improved for our Autistic students and, as a result, all students who live in the halls.

The following questions will guide this study.

Research Questions

- 1. How do Autistic students experience the Residential Learning Model at Colorado School of Mines?
- 2. How do interactions with Resident Advisors and the Residential Learning Model encourage Autistic student persistence, if at all?

The first question aims to examine how Autistic students' make meaning of their experiences in the residence halls, particularly when it comes to their interactions with the RAs under the guidance of the Residential Learning Model. Student's self-described experiences will give informative data about the program, what challenges it poses for students, and implications for how to improve the model. If Autistic students' experience and relationships in the halls influence their persistence through college, which the second question hopes to answer, then the utilization of this evaluation is even more valuable in terms of creating change in the residence life program to promote the success and persistence of Autistic students.

Evaluation Model and Theoretical Framework

This evaluation uses a Utilization-Focused Evaluation (UFE) model (Patton, 1997) and the theoretical framework of Universal Design (Mace et al., 1991) and Universal Design for Learning (CAST, n.d.). UFE demands that the evaluator engages stakeholders at all levels of the program with the evaluation process, those primary intended users of the program, in this case the RAs who work in the residence halls, and those Autistic students who are the participants in the program while they live in the halls, as well as program sponsors, the administration of the student life division, to create a feeling of by-in for the evaluation (Patton, 1997, 2002, 2008, 2012, 2013, 2018). Patton (2012) calls this intentional relationship building and engagement with stakeholders, "the personal factor" (p. 67). Patton states that "the personal factor is the presence of an identifiable individual or group of people who personally care about the evaluation and the findings it generates" (p. 65). Another term for the primary intended users of the findings of an evaluation is stakeholders. In the case of this evaluation the stakeholders who have been identified are the Resident Advisors, the Autistic students who live in the halls, the professional staff, called Residential Life Coordinators, who oversee each hall and supervise the RAs, the leadership team within Residence Life, who work with the residence hall staff to create, assess, and implement the program, and the upper administration who sponsor the Office of Residence Life. The chart below highlights each stakeholder and their relationship to the Residential Learning Model.

Position	Stakeholder Role
Resident Advisor	Responsible for directly implementing the model with residents
Autistic Student residents	Recipients of the Residential Learning Model

Residence Life Coordinator	Supervise RAs, create, assess, and work with RAs to implement the
(RLC)	Residential Learning Model
Associate and Assistant	Supervise the RLCs. Guide the implementation of the Residential
Directors of Residence Life	Learning Model. Work with RLCs to create, assess, and
	implementation of the Residential Learning Model
Director of Residence Life/	Oversee the Residence Life program and supervise the Assoc. and
Evaluator	Assistant Directors of Residence Life
Associate Vice President and	Sponsors of the Residence Life program which the Residential
Vice President for Student	Learning Model is a part of
Life	

Note. Chart depicting the various stakeholders in evaluation.

Figure 1. Each Stakeholder and their Relationship to the Residential Learning Model

RAs and Autistic students are the primary participants in the study. The Residence Life Coordinators, Associate and Assistant Directors of Residence Life, and the Associate Vice President and Vice President met with me throughout this evaluation process. I am also a stakeholder in this evaluation. As the Director of the Residence Life Office and the programs that fall within it, the role I play as evaluator and stakeholder must be balanced. The meetings with other stakeholders allowed me to ensure they were open to the evaluation, checked my own bias and integrity as the evaluator, and kept them informed along the way of the evaluation's progress. This engagement throughout the evaluation ensured buy-in, but also increased the likelihood that the recommendations that I suggest based on the analysis of the data, are used by stakeholders to improve the Residential Learning Model for Autistic students and the student staff who support them.

The improvement of the program with neurodiverse students in mind, also benefit all other students living in the halls, thus adhering to Universal Design Theory. Universal Design is the concept of designing all products and environments and, in this case

programs, to be useable and applicable to the greatest extent possible by everyone regardless of ability (Mace et al., 1991). By improving the Residential Learning Model to meet the needs of Autistic students in the halls, all other students may benefit (Center for Applied Special Technology, as cited in Pearson Policy Report, 2003). According to Universal Design, this notion of making improvements to the Residential Learning Model to make it more universally useable and adaptable for Autistic students, will also increase its applicability to all other students living in the residence halls. Throughout the evaluation I incorporate Universal Design and Universal Design for Learning into the methods, and analysis of the data, as well as in my relationship with participants and stakeholders.

Identity First Language

This evaluation uses the terms Autistic person or student throughout. This terminology reflects a great deal of debate among those in the Autistic community and their allies, but is preferred by many within the community rather than the commonly accepted person-first language that is encouraged for other ability related issues. As stated by Lydia Brown (2011) on the Autistic Self-Advocacy Network's website, stating Autistic people rather than people with Autism is identity-first language, as Autism is a part of someone's identity and way of being and interacting with the world, not a challenge, or a sickness to be dealt with. I am choosing to refer to Autistic students, participants, and individuals throughout this study in this identity-first manner. Some of the Autistic student participants identify as someone with Autism Spectrum Disorder, some did not incorporate their diagnosis into their identity, calling Autism Spectrum

Disorder their "diagnosis." Still other participants expressed pride in peers not knowing or realizing they were Autistic until they disclosed their diagnosis. The participants also varied in their own description of their own diagnosis, some referring to it as a disability, other as a mental health challenge. What I have learned from the participants is that for every single individual with Autism Spectrum Disorder, their experience with their diagnosis is just that, their experience. Thus, I choose to use identity-first language when I refer to students, participants, or Autistic people in general, but refer to it as each participant does in the analysis and reporting of findings. I also capitalize Autistic or Autism throughout this evaluation. This is my way of creating prominence for this population and recognizing this historically marginalized identity for the prominent role it plays in students' lives and the importance of incorporating Autism in common language and practice.

Terminology

Residential Learning Model (RLM): specific learning outcomes that consider how students learn, develop, and grow. Grounded in Self-Authorship theory, the goal of the model is to support students in their journey to know themselves, reflect on their own development, and learn to make decisions grounded in their knowledge of themselves, their values, and relationships with others.

Resident Advisor (RA): students beyond their first year of college at Colorado School of Mines, who work for the department of Residence Life. These students live in communities with other students living in residence life housing and act as guides, mentors, and advisors. These students also uphold Residence Life and school policy and

serve on an emergency on-call rotation for their community. Compensation for the RA role is a single bedroom within a residential community, a full meal plan, and a \$160 monthly stipend.

Residence Life Coordinator (RLC): Professional staff who live and work in the residential communities at Colorado School of Mines. This role supervises the RAs, oversees the facilities, programming, and conduct for their community as well as serves on an on-call emergency response rotation for the entire residential campus. RLCs must hold a Masters' degree in Students Affairs Administration or a related field.

Autism/Autism Spectrum Disorder (ASD): A neurological variation that occurs in people of all genders, races, and in all parts of the world. The nuances of Autism vary along a spectrum, with people experiencing strengths and challenges to various degrees. Autistic students at the Colorado School of Mines are participants in this evaluation.

Universal Design (UD): A concept that started in Japan, this theory started in the field of architecture and has expanded to education and other areas. The theory stresses that the design of all products and environments, and in this case, programs, must be useable and applicable to the greatest extent possible by everyone regardless of ability. In this case, the design of the Residential Learning Model will be examined through a Universal Design lens, checking for usability and engagement with all students, including Autistic students, making the RLM more applicable and useable for all students.

Utilization-Focused Evaluation (UFE): An evaluation theory that demands that all evaluation must be personal to those who are the primary users, or stakeholders of any

program, and that if an evaluation is personal, that is users are included in the evaluation itself, then the evaluation will be used by those stakeholders. Use of the evaluation by the stakeholders is the primary goal of that evaluation.

Overview of the Literature

The literature that acts as both a foundation for and structure for this evaluation covers pertinent topics. An understanding of Universal Design theory both from the perspective of design of environments and the design of curriculum, gives insight into how the Residential Learning Model could be approached to make it more applicable to all students. A deep dive into the research around the Autistic college student experience is also relevant and instructive for this evaluation. While there has not been a lot of research conducted on Autistic students experience in the residence halls, there has been a lot done on their broader college experience, which may be applied to the residence halls and inform the formation of guides used to engage and education students in the halls. The research on the Autistic college experience often revealed challenges with mental health, as well as challenges with relationships with peers. This informs the consideration of mental health when evaluating the Residential Learning Model, which guides the practice within the residence halls. Residence halls, their history, and intention is also explored as a way to see the role that living in the residence halls can have in students' experience on campus as a whole and their retention in higher education. The literature helped to give structure to the design of this evaluation and a foundation of understanding for the people and concepts used.

Universal Design

Rooted in architecture, Universal Design started as the concept of removing barriers for people with disabilities, and largely focused on people with physical disabilities, so that those people could use objects and places as well as people without disabilities (Case, 2003). Since the enactment of the Rehabilitation Act of 1973, which made it so any one, regardless of ability, could participate fully in any program or activity that received federal funding (Section 504), more efforts in accessible design were made. More laws and resolutions, from governments to professional associations began to consider the concept that all people will lose some physical ability at some time in their lives and that design of objects, environments and programs should be designed for this at inception, this was the concept of Universal Design. As Universal Design began to take hold, seven principles were developed to guide the path for future design. This evaluation utilizes the seven principles as well as the implementation of Universal Design in other areas of education to give structure and to interpret the findings of this study.

Methods and Methodology

This evaluation uses UFE to guide the process of evaluation itself. It also uses
Universal Design to consider all aspects of the methods, analysis, and utilization of the
evaluation. Participants were chosen for this study after considering who the primary
users of the Residential Learning Model are, students living in the halls, who are the
recipients of the model and the Resident Advisors who implement the model. Autistic
students were chosen because of the unique experience that they may have in the halls

directly related to their diagnoses. The theory of Universal Design helps to interpret the stories of the participants and unveils how the model can be improved. Participants chose from a variety of methods of data collection, each choosing what worked best for them. All choices resulted in interviews, which were recorded and transcribed. Each interview was coded line by line, which enabled themes to emerge from the data. Documents were also examined as part of the analysis process, which gave even more robust foundation to the themes.

Overview of Findings and Implications

As the stories shared by participants were examined, three main themes stood out and began to help to answer the questions guiding this evaluation. The themes of expectations, relationships, and learning emerged as the overarching umbrellas for the findings. Six major findings, falling under these themes, helped to answer the research questions of this evaluation and inform recommendations for further development of the Residential Learning Model. The three thematic areas of expectations, relationships, and learning are also hallmarks of the Residential Learning Model, lending to relevant application of the findings to the model itself. The implications of the findings create opportunity to adapt the Residential Learning Model to include the guidelines for Universal Design for Learning and the principles of Universal Design. Small changes to the model can create opportunity for Autistic students to build relationships with peers and with their RA, which may enable them to engage more fully in the programs and intentional interactions their RA will develop for them. Developing the RA training to include awareness of the needs of Autistic students and Universal Design concepts may

create pathways to relationships between Autistic students and their RAs. Supportive relationships between RAs and Autistic students, builds trust, supports students' mental health, and may positively influence Autistic students' attitudes regarding their persistence at Mines.

The following chapters explore the relevant literature that informs the formation of this evaluation as well as an explanation of the conceptual and theoretical framework for this evaluation. Based on the literature and the theoretical framework, the methodology and methods for this evaluation emerged. Chapter 3 explains the methodology and methods used to learn from the participants in this study. Chapter 4 follows, with analysis of the data and findings from the study. Finally, discussion of the findings and recommendations for the continued formation of the Residential Learning Model at Mines will follow, as well as a discussion of limitations and implications for further study.

Chapter 2: Review of the Literature

The research around Autistic students and the college experience is growing.

Knowledge gained in this area is helping institutions of higher education prepare for and serve Autistic students better. The majority of published work on this topic consider the Autistic student experience in the classroom and is starting to branch out to the cocurricular areas of college, student organizations, career preparation and the residence halls. There is a limited body of knowledge on the Autistic student experience in the residence halls on campus and less on the experiences of Autistic students with programming in the halls and the student staff expected to facilitate programming.

The goal of this literature review is to give insight and context to better understand the foundations of this evaluation. The literature review is presented in three parts. First, a focus on the Autistic student transition to higher education. Next, background on the history and goals of residence life programs in the United States, and the evolution of learning within residence halls, to give context to the subject of this evaluation. Finally, considerations from the literature on the challenges that Autistic students encounter once they enter college, and in the residence halls specifically, with a focus on mental health and suicidal behavior. This chapter concludes with an overview of the guiding frameworks for this evaluation. The evaluation framework, Utilization-Focused Evaluation, guided the process of this evaluation. The theoretical framework

guiding the analysis of findings and recommendations for this evaluation is Universal Design and Universal Design for Learning, which concludes this chapter.

Search Strategy

To gain context and widen my own understanding and knowledge around Autism and the experience of Autistic students on college campuses I began by outlining context needed to tell the story of the Autism and higher education. Keywords and terms used included, but were not limited to *Autism, college, higher education, STEM, mental health, experience, retention, residence halls, dorms,* and *student learning.* Numerous databases and search engines were used including ERIC, EBSCOHOST, SAGE, and Google Scholar. Sources of information include peer-reviewed journals, books, government websites and reports, dissertations, as well as advocacy organization websites. The majority of the information gathered, unless for historical context, were published in the last seven years.

Autistic Students and Higher Education

Research shows that increased levels of education improve the quality of life and economic competitiveness for individuals (Hossler et al., 1989; Trostel, 2015) and have positive impacts on society as a whole (Perna, 2006). According to Hart et al. (2010), access to postsecondary education is a natural progression from the more inclusive educational opportunities Autistic students experience in elementary and high school, where they attend class, participate (and often excel) in the general curriculum, and graduate with peers (p. 136). Autistic students looking for a college education will benefit

society and themselves if they are able to persist through higher education to attain their goals similarly to their neurotypical, or non-Autistic, peers.

Living on campus has been shown to increase student success and persistence (Osequera & Shik Rhee, 2009; Schudde, 2011; Titus, 2006), it can also involve increased stress and other challenges, particularly for marginalized students, such as those with Autism and other cognitive disabilities (VanBergeijk et al., 2008; Madriaga. 2010; Cage & Howes, 2020). Transitioning to college and life on campus may cause a variety of challenges for Autistic students, including academic, personal, and social difficulties. Facing these challenges is particularly difficult for Autistic students, who experience high levels of mental health issues such as depression, isolation, and anxiety. These students also experience high levels of suicidal behaviors throughout their lifetime (Jackson et al., 2018) including suicidal ideation, plans to die by suicide, and attempts on their lives. Residence halls, in particular, can be a source of agitation, stress, and anxiety, and can contribute to the attrition of Autistic students (VanBergeijk et al., 2008; Madriaga, 2010; Cage & Howes, 2020). Federal laws are in place to clear the path to a college education for those with disabilities (IDEA, 2015), however, those laws do not reach widely outside the classroom and very few are designed to support the social or personal needs of college students with cognitive disabilities, like Autism. This gap presents significant hurdles to students' success, persistence, and overall wellbeing.

Hurdles in Transition to Higher Education for Autistic Students

The transition to college can be a difficult one for any student, but it can be particularly challenging for students with Autism. According to several studies,

enrollment of Autistic students in higher education has increased almost 100% between 2012 and 2018, and will continue to increase, estimated numbers are up to 433,000 students enrolled by fall of 2020 (Wei et al., 2016; Center for Disease Control, 2014). This increase is, at least in part, due to the more robust support of students with Autism and other cognitive disabilities in K-12 schools. Support guaranteed by the Individuals with Disabilities Education Act (IDEA), which provides protections for these students, as well as guidelines for how to best support them throughout their K-12 education. However, federal education policy changes drastically between K-12 and higher education, leaving many Autistic students to advocate for themselves for the first time in their lives.

Support through the K-12 public education system is a collaborative effort between families, students with disabilities, and their schools. Under IDEA (2015), by law, the school must provide equal access and support to students with disabilities throughout their primary and secondary school experience. This level of support and collaboration with families, however, does not persist when a student enters college. Post-secondary education is governed by different laws and policies regarding access to education through the Americans with Disabilities Act (ADA, 2014). The ADA is a broad law, meant to cover many areas of life for people with all kinds of disabilities. Based on the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973, the ADA is civil rights legislation that prohibits discrimination and guarantees that people with disabilities have the same opportunities as non-disabled people (ADA, 2014). Higher education is not compulsory, like the K-12 education system is; therefore, laws

like IDEA do not apply to institutions of higher education. Instead, it is the responsibility of the individual institution of higher education to choose to utilize resources that support their students with disabilities, including those with Autism. Regulations on higher education are also not as stringent as those for schools serving minor children and youth. Federal law demands only that a reasonable accommodation must be provided to facilitate academic success for students who request it. Federal law also requires students to give permission for their institution to engage or communicate with their parents (Anderson & Butt, 2017; FERPA, 2018; Shaw et al., 2009; NCES, 2019). This puts the responsibility to ask and advocate for support and accommodations solely on the student.

Autistic students and their families must adjust quickly to these new rules and policies, especially if they are going directly into higher education from high school.

Under IDEA (Section 1414), secondary schools are required to work with students with disabilities to provide them with recommendations that will help them meet their postsecondary goals (modified, 2019). These recommendations are meant to help students and their families prepare for life after high school and the challenges that may come with it. Yet, in many cases, due to lack of resources, knowledge, parent or school involvement, this planning is either insufficient, ineffective or not completed at all (Cai & Richdale, 2016; Dente & Parkinson 2012; Wei et al., 2016). As a result of this insufficient planning, Autistic students may feel unprepared to transition to the college environment. According to Wei et al. in their examination of a national data set of college age students, found that college enrollment rates were significantly higher among youth with Autism who had participated in transition planning. This report also found that only

32% of Autistic youth, compared to 70% of non-Autistic youth persist to enrollment in college at all. This could be a result of insufficient preparation and a lack of knowledge about how to proceed into higher education. Overall, Autistic students with the goal of post-secondary education enroll at lower rates than their neuro-typical peers (Anderson et al., 2016; Gotham et al., 2015; Wehman et al., 2014). The work of families partnering with high school officials and Federal law can only do so much to support a student with a disability in their transition to higher education. Institutions of higher education must choose to pick up where those school partnerships leave off. The residence life program at Mines has adopted connections across campus, in areas such as academic advising and disability support services, to support Autistic students on campus. According to Wilson, et al. (2000), it is imperative for students with disabilities that coordination of student services occurs so that they can manage their disability across campus in all contexts (p. 42). As students with a wider range of cognitive abilities attend college, consideration of their needs and more support for their persistence must be a priority.

History of Student Learning in the Residence Halls

Residence halls have been a significant fixture on college campuses for a very long time. Oxford and Cambridge, the two British institutions that most American institutions of higher education are based on, had a dormitory model, buildings on campus where students slept in large rooms all together. At the time, only the elite young men of the country were attending college, and the dormitories were for sleeping only. While part of a student's education was in character development and gentlemanly conduct, these lessons were taught by the faculty who often lived on campus with the

students (Blimling, 2015). As faculty on college campuses became more specialized in their research and were expected to create and specialize in a given subject, they were able to give less time to the lives of students outside the classroom. As colleges and universities were created all over the U.S., in more rural areas, there was more need to house students as a practical means to keep them on campus so that they could engage more easily in the curriculum. As time went on, women started to attend colleges, there was more of a need to create specialized residences for them. The needs of students started to influence the residence halls that were built on campuses, and the realization that more services were needed on campuses to engage and education students outside the classroom started to unfold (Blimling, 2015; Schroeder et al., 1994). Resident Assistants or Advisors (RAs) were hired to provide support for students as residence halls continued to evolve. RAs serve as upper-class advisors or assistants, as the name implies, to the students who live in the residence halls. The RAs play a pivotal role in the support, engagement, and learning that takes place in the residence halls (Blimling, 2015). Blimling goes on to state that residence halls cannot be successful in their endeavors to be the educational environments they strive to be without the RAs, "good intentions are just that until they are implemented by RAs, who do the frontline work with students" (p. 162). In 1937, the American Council on Education created a report called *The Student* Personnel Point of View (ACE, 1937). This document maintained that it is up to institutions of higher education to educate students wholistically, the philosophy encourages colleges and universities to "put emphasis, upon the development of the students as a person, rather than upon his [sic] intellectual training alone" (p. 1). This

essentially started the movement that college campuses needed to address student needs outside of the classroom, administered by educators, and residence halls played a major role in this new philosophy of college campuses. This philosophy led to the development of a field of educators whose work is dedicated to college student learning outside of the classroom, and to curriculum development for that learning. The professionals who oversee residence halls create the policies and structures that guides student learning and engagement in the halls. The RAs, however, are the implementors of those structures. RAs once served as policy enforcers and security officers, now RAs serve as the main conduit to the socialization of residents as well (Manata et al., 2017). RAs are also expected to create a sense of community for their residents, through programming and engagement (Blimling, 2015). As stated above, Blimling places a great deal of the responsibility and the credit to student learning in the residence halls on the RA.

Historically, student learning in residence halls often occurs as a result of student interaction with peers, and closer access to campus resources, faculty members, and student organizations (Blimling, 2015; Schroeder et al. (1994), not as a result of direct instruction. Today, more emphasis is placed on direct education of students in the residence halls. The Residential Learning Model is an example of this. Learning Reconsidered II, a guiding tool for curriculum development for learning outside of the classroom in higher education, guides the creation of curriculum and learning outcomes for students living in residence halls. Blimling (2015) describes various types of programs that residence halls use to engage and education students. He describes the influence that these programs have on student learning as dependent on the degree of

student involvement in the program (p. 119). The goal of the Residential Learning Model at Colorado School of Mines is to both engage students, and to facilitate learning within the residence halls.

Residence Hall Design and Autism

Living in a residence hall is an experience that many college students share and for many, this is a positive experience. Living in a residence hall can have a significant impact on student learning (Pascarella & Terenzini, 1991), foster a strong sense of community (Schroeder et al., 1994), positively enhance student achievement (NPEC Report, 2006), facilitate personal growth and psychosocial development (Schroeder et al., 1994), and can encourage retention and persistence (Osequera & Shik Rhee, 2009; Schudde, 2011; Titus, 2006), However, as discussed, Autistic students experience living in the residence halls differently than their neuro-typical peers, which can lead to their attrition. While classroom accommodations can help support Autistic students in their academics, the social skills needed outside the classroom can often be daunting (Jackson et al., 2018). Scholars have suggested that support through the college transition, including help with organization, the development of social and daily life skills, as well as mental health support are likely to be necessary for Autistic students (Clark, 2018; VanBergeijk et al., 2008). However, according to Knott and Taylor's (2014), qualitative study of Autistic students and the staff that support them, there are a great many out of the classroom needs that have not been met by post-secondary education. Through a focus group with four Autistic college student participants and two focus groups with staff who support students on campus, they found that "understanding

the [Autistic] student experience is significantly hampered by the fact that it is rare for students themselves to be included in systematic investigations of what works and what does not" (p. 413). This is precisely why more work must be done to include Autistic voices in the design process for programs and structures.

According to the Association of College and University Housing Officers International's (ACUHO-I) Campus Housing Index (2017), which compares the residential facilities of over 1,000 campuses around the globe, most colleges and universities continue to house students in buildings that traditionally feature large common rooms for gatherings that can accommodate the entire residential community, corridors with bedroom doors on both sides to efficiently use space, cinderblock walls that do not absorb sound, institutional fluorescent lighting, and a lack of privacy. This kind of residence hall design encourages the most extroverted and socially skilled students to thrive, while students not comfortable in crowded, loud spaces often seek the refuge of their rooms, leaving the social connection to others. Many Autistic people prefer solitude, resist even minor changes in routine or surroundings, and have intense negative reactions to the sensory (loud noises, smells, textures, and light) environment (Autism Speaks, n.d.). Coghill and Coghill (2021) discuss ways that residence halls can plan for and design for Autistic students, to better serve them. Some of their suggestions range from designing an early move-in for Autistic students, so that they can gain exposure to the residence halls and gain some comfort there before being joined by hundreds of their peers (p. 212). They also suggest consistent rule enforcement in the halls can meet a need in some Autistic students for established routines, and roadmaps for predictability and safety (p. 215). When it comes to physical design in the residence halls, Coghill and Coghill go on to state that adaptable furniture, and room use can allow for engagement or disengagement as needed by students (p. 215). Small adjustments to environment and program have aided in assisting Autistic student to engage more easily in the community in the residence halls.

The residence halls have historically not contributed to the success of Autistic students, while there are pathways to more supportive environments it will take intentional action on the part of institutions of higher education to change. The disconnect between students' needs and the design of their residence halls creates challenges that undermine Autistic students' academic progress and well-being.

Autistic Students in the Residence Halls

Research has shown that Autistic college students will need the most support in non-academic areas (Jackson et al., 2018). There is a dearth of research on the residential experiences of Autistic students on college campuses. There is a great deal of research that discusses the social needs or challenges faced by Autistic students in college (Ackles et al., 2013; Elias & White, 2018; Hendrickson et al., 2013; Jackson et al., 2018; Knott & Taylor, 2013; VanBergeijk et al., 2008), however, very few studies focus on residence halls, specifically. Gelbar et al. (2014) completed a systematic review of studies that describe Autistic students' experiences in college and found that most focused on mental health issues and feelings of isolation and loneliness, while only two brought up anything about housing or roommate relationships (p. 2596). Residence halls are the home for many students on campus, so it is logical to assume that mental health issues and feelings

of isolation and loneliness are felt by Autistic students living in the residence halls. The two articles explored by Gelbar et al. discuss the added stress and feelings of isolation and invisibility that roommate and other social interactions may create (Connor, 2013; Glennon, 2001).

Some research, such as Madiraga's (2010) study, a year-long qualitative study with eight autistic students at different universities, highlights a need for more inclusive and accessible spaces to increase Autistic students' ability to engage in social interaction as a way to address the social isolation issues reported by all students in her study. As centers of student interaction, residence halls can be a place where Autistic students feel included and engaged if more work is done to understand how to encourage and facilitate this. Clark, in her 2018 dissertation, explains that life in the residence halls can be extremely challenging for Autistic students and that to persist they must know how to advocate for their needs, as the residence halls may be "riddled with 'hidden' regulations that can be overwhelming for any student, but especially so for students who have a diagnosis of Autism Spectrum Disorder" (pp. 17-18).

The combination of the plentiful research showing the social and emotional challenges that Autistic students face on campus and the very small amount of research on the residence halls shows a need for more exploration of how Autistic students experience the residential component of life on campus.

Mental Health and Autism on Campus

As discussed, stress, feelings of isolation, and loneliness have all been described by Autistic study participants when talking about their college experiences. Mental health challenges have become a part of many students' experience in college generally (Active Minds, 2020; Auerbach et al., 2016) and some research estimates that upwards of 80% of Autistic adults experience mental health issues (Lever & Geurts, 2016).

Stress, Anxiety, and Depression

Managing the challenges of daily independent living, like washing dishes, showering, and living with others, as well as the challenges brought on by the need to participate in class and organize themselves, and by exhausting social interactions (Van Hees et al., 2015) result in a great deal of stress on Autistic students. Van Hees et al. investigated the challenges Autistic students face and their social needs. They specifically looked at daily living as a part of the college experience and found that students had a high need for social interaction and a sense of belonging, but that their difficulties with communication and awkward social skills made it difficult for them to connect with peers and faculty. As a result, students felt acutely lonely, isolated, and overwhelmed. Accardo (2017) also found that a majority of Autistic students participating in a study reported obstacles to their success as mental health issues and stressors outside of their academic work. Students in this study also had desire to do well academically and to build relationships with peers, yet they also all reported that anxiety and fear often proved to be barriers to accomplishing these goals (p. 43). The feeling of being overwhelmed was mentioned by participants of multiple studies (Elias & White, 2018; Jackson et al., 2018; Van Hees et al., 2015), which led to a lack of sleep, exhaustion, reduced self-care, and even panic attacks for some students. Students in Van Hees et al.'s study describe every task as taking so much of their attention and energy that they do not have the ability to

pay attention to other needs or to engage in social interaction, further adding to stress, and anxiety (pp. 1678-1680). Anxiety, loneliness, and depression among Autistic students are related to worry about lack of desired social connection, changes that cannot be controlled, and academic issues (Clark, 2018; Knott & Taylor, 2013; Gelbar et al., 2014). Autistic students often report a desire to engage with their peers and make friends (Knott & Taylor, 2013; Van Hees et al., 2015) even though social interactions can be difficult and stressful. Van Hees et al. found that social coaching could help Autistic students to gain confidence and build connection with other students. Proactive approaches to supporting social connections for Autistic students in the residence halls where social interaction is unavoidable, could create a more positive, less overwhelming and stressful experience in the halls and beyond.

Suicidal Behavior

In addition to feelings of isolation, and loneliness while on campus, Autistic students have the additional challenge of high levels of suicidal behavior throughout their lifetime including suicidal ideation, plans and attempts (Jackson et al., 2018). Jackson et al., through an online survey of 56 Autistic adults, the majority of which were undergraduate students, found that 57% of the participants in their study reported at least one co-occurring [occurring alongside their Autism diagnosis] psychiatric diagnosis, of which depression was the most commonly reported (p. 647). Knott and Taylor (2013) found that, as a result of depression, some Autistic students stopped engaging with all parts of university life, including going to class or turning in homework (p. 421). Zahid and Upthegrove (2017) conducted a systematic review of the research investigating the

prevalence and risk factors of suicide attempts and ideation of people with Autism. They highlight two studies that found that 35% and 47%, respectively of Autistic people sampled had attempted suicide (Paquette-Smith et al., 2014, as cited in Zahid & Upthegrove, 2017, p. 239; Makami et al., 2014, as cited in Zahid & Upthegrove, 2017, p. 239) and that Autistic people were more likely to use more lethal means than non-Autistic groups (Kato et al., 2013, as cited in Zahid & Upthegrove, 2017, p. 239). Another reviewed study found that suicidal ideation was 28 times higher in people with Autism than with non-Autistic people (Mayes et al., 2013, as cited in Zahid & Upthegrove, 2017, p. 239). Jackson et al. (2018) also found that loneliness was the main predictor of emotional distress in their study sample (p. 647). Most concerning is that 17% of Jackson et al.'s participants stated that it was likely or very likely that they would attempt suicide someday (p. 648). Zahid et al. (2017) and Jackson et al.'s (2018) work clearly suggests that people with Autism are at a heightened risk of both suicidal ideation and attempts. Loneliness is a contributing factor in suicidal thoughts and behaviors for Autistic adults and loneliness is one of the feelings most named by Autistic college students in studies exploring their experiences on campus. This brings up a major concern for the mental health and well-being of Autistic college students, and is strong motivation to look for solutions, including transforming where students live on campus. The realities of the state of mental health on campus for all students, paired with the challenges facing Autistic students in particular, are compelling reasons for colleges to address whatever areas they can to help students access mental health resources and feel connected and included. This evaluation examines one of the main areas where students

spend a great deal of time outside of the classroom, their residence halls. The residence hall program at Colorado School of Mines may influence the experience of Autistic students, possibly impacting their mental health and their persistence through the institution. It is essential to explore the potential impacts of this program on Autistic students' experiences in order to improve support systems in the residence halls and on campus more generally.

Evaluation Framework

This evaluation utilizes approaches that guide, not only my actions, as the evaluator of this study, but also the lens through which the work with participants and stakeholders takes place. This study is a program evaluation, explained by Stufflebeam and Coryn (2014) as "the systematic assessment of an object's merit, worth, probity, feasibility, safety, significance, and/or equity" (pp. 11-12). In this case the evaluation is formative (Scriven, 1967), focusing on utilizing the results of the study to push the program to evolve and develop into one that better serves the Autistic population at Mines. Stufflebeam and Coryn (2014) introduced different categories of approaches to evaluation and this study will utilize an approach from the "social accountability and use" category (p. 12), which stresses the overall usefulness of an evaluation to the institution and its students and heavily involves these groups in the process of evaluation.

This evaluation uses a constructivist approach, as well as Patton's (1997) utilization-focused evaluation theory, which guides the evaluation itself. The stakeholders, as well as stakeholder participants, in this evaluation are the center of this study. All stakeholders are valued collaborators, creating a more complete evaluation and

offering more opportunity for, as well as increased likelihood of, utilization. Patton (2013) describes a "personal factor," asserting that people are the most critical factor in evaluation use (p. 302) and that the stories, perspectives, and experiences of those who participate in the study, and for whom the evaluation is intended, are the most important parts of the study. For this evaluation in particular, the Autistic students living in the residence halls and the RAs who facilitate the Residential Learning Model are participants and stakeholders. This study is meant to improve the Residential Learning Model, which guides all interactions and programs in the halls, to serve students better. Patton's overarching principle is that evaluation should be completed with the goal of being utilized by the stakeholders to improve or create a program (Patton, 2018, p. 67). Patton uses five operating principles as specific guidance for implementing the overarching usage principle. The five operating principles are "Be guided by the personal factor, engage through options, observe, interpret, and adapt, embed evaluative thinking throughout, and invigorate with leading-edge inputs" (pp. 67-68). Patton also outlines a step-by-step process for evaluation that includes a checklist of 17 directives to achieve a Utilization-Focused Evaluation. These five principles and Patton's checklist are used throughout the evaluation of the Residential Learning Model.

A constructivist lens frames this evaluation, as participants' reality is based on their perceptions, experiences, and understanding of the world, which brings richness and also bias to the data collected. My understanding of constructivism is based on Guba and Lincoln (1994), Stufflebeam and Coryn (2014), and Creswell and Miller (2000). These scholars explain constructivism as a reality that is built based on context, relationships,

and interpretations. They emphasize that reality is socially constructed and that our biases as humans influence our perceptions of it. The reality of the experiences of the Autistic students within the residence life program includes their biases, their histories, and ways of being. By sharing their constructed reality, they give insights that cannot be gleaned by an outside evaluator alone. This evaluation employs methods that rely on the interpretations and descriptions of participant experiences, as well as my own interpretations as the evaluator, to construct the reality and narrative of what is being experienced. Utilization-Focused Evaluation has, at its heart, the people who are a part of the program being reviewed, the users of the program and the users of the evaluation. This means that as the study progresses, the study will also evolve, for the evaluation must be active, reactive, interactive, and adaptive. This evaluation is created as it continues forward, with the input of participants and stakeholders, truly embodying Utilization-Focused Evaluation and constructivist frameworks.

Theoretical Framework

The theoretical framework that I use to analyze and make meaning of the findings of the evaluation is Universal Design and Universal Design for Learning. Jennifer Sarrett (2018) describes Universal Design for Learning from a higher education perspective as "the concept and practice of designing educational environments such that they are accessible to the most students possible, disabled and non-disabled" (p. 680). Universal Design for Learning is based on the theory of Universal Design. A concept, originally founded in architecture, where all environments, tools, and products are accessible for use by anyone, inclusive of all ability levels. To best understand Universal Design,

consider curb cuts at the corner of a sidewalk. A curb cut is an area that dips down to street level at a place where one would cross the street. This dip, allows for someone in a wheelchair to easily cross the street without worry about falling off of the sidewalk. While the idea of curb cuts meets the need for folks with physical disability, curb cuts are also useful for anyone pushing a stroller, or pulling a wagon, or for an older or injured person from having to step up or down. While the curb cut is designed to meet specific codes, it is universally useful to all people, thus an example of Universal Design. Universal Design focuses primarily on physical disability, but the concept is adaptable to learning environments as well, which is Universal Design for Learning. Universal Design has seven principles that must be followed and Universal Design for Learning developed nine guidelines that adapt and compliment the principles, yet apply them to learning. The nine guidelines of Universal Design for Learning are fall under three overarching areas; they are (1) provide multiple means of engagement, (2) provide multiple means of representation, and (3) provide multiple means of action and expression. Each of the guidelines falls under one of these guidelines: (1) provide options for perception, (2) provide options for language and symbols, (3) provide options for comprehension, (4) provide options for physical action, (5) provide options for expression and communication, (6) provide options for executive functions, (7) provide options for recruiting interest, (8) provide options for sustaining effort and persistence, and (9) provide options for self-regulation. Below is a graphic from the Universal Design for Learning website (n.d.) that outlines the Universal Design for Learning guidelines for practice.

Overall, the guidelines of Universal Design for Learning are meant to help educational institutions, in this case higher education, create more flexible environments, policies, and programs accessible to all students, with a variety of physical, emotional, mental, and intellectual abilities.

These guidelines ask educational programs to examine how they deliver instruction and access to instruction to students. All the guidelines begin with "provide options for..." The guidelines ask that programs consider what options they can provide to students. They do not demand what those options are, just that there is flexibility for the way students access the learning environment. These guidelines help me to make meaning of the data provided by the student participants in this evaluation. The stories shared by participants, when paired with the guidelines for Universal Design for Learning, clear a path to recommendations that could help Autistic students engage with the Residential Learning Model in more meaningful ways. This engagement could aid in the building of relationships with peers and the RAs in the residence halls and possibly facilitate their persistence at Mines.

Universal Design and Universal Design for Learning in Residence Halls

While Universal Design and Universal Design for Learning apply to higher education and the work done outside the classroom, the literature on application of these theories in residence halls is lacking. Universal Design is still largely focused on physical spaces and on physical disabilities. Universal Design for Learning considers ability beyond physical but is largely focused on the curriculum and methods used in the classroom. Higher education's consideration of Universal Design and Universal Design

for Learning continues to grow and work to encompass all aspects of a student's life on campus. Jeanne L. Higbee (2008) considers the implementation of Universal Design in student services outside the classroom, like residence life programs, to be guidelines for good practice (p. 200). The idea that all students can access the opportunities to learn and develop in and outside of the classroom is the goal of higher education and is urged by Universal Design and Universal Design for Learning advocates. Wisbey and Kalivoda (2003), in their chapter on fully accessible on-campus housing, share that, peer interaction, campus involvement and contact with faculty and staff are important to the retention of students with disabilities (p. 257). This is also true for students of all abilities (Pascarella & Terenzini, 1991; Tinto, 1975). Residence halls can be a catalyst for these interactions with peers and faculty, and thus an important support of student retention. Wisbey and Kalivoda (2003) go on to say that, the unique ability for residence halls to program for student learning can help to educate both students with and without disabilities in areas such as interpersonal skill building, and awareness of differences in ability which would benefit all students (p. 260). Burgstahler (2015) discusses a checklist that student services practitioners, and therefore staff in residence life departments can follow to ensure that Universal Design is followed in practice with students. The most common categories that Universal Design application fall into are, planning, policies, and evaluation, physical environments, training of staff, resources and technology, and events (p. 184). Burgstahler emphasizes that if these areas are addressed from a Universal Design perspective, then it will benefit all students. These areas can influence residence halls and the work done within them to help students to feel at home and comfortable.

Summary

Autistic students on college campuses do not have an easy path. Their path is made easier when they begin the transition process early and with guidance, while they are still in high school. When Autistic students get to campus, the experience is often times made more difficult because of lack of connection or relationships with peers. Autistic students are at high risk of mental health challenges, as well as suicidal thoughts and behaviors. Colleges must consider the ways that they can facilitate a smoother transition to the institution and a supportive environment once Autistic students arrive. Residence halls can play a significant role in the Autistic student experience. That role can be challenging, where students feel isolated or lonely. However, residence halls and the RAs who work closely with students can play a supportive and affirming role for those with Autism. Residence halls were created to facilitate the student experience, including student learning. The Residential Learning Model at Colorado School of Mines exists to help students on the path to self-authorship. Through the Residential Learning Model Autistic students at Mines may find ways to engage with peers, build relationships with RAs and classmates, and learn in the halls.

This evaluation examines the Residential Learning Model through Utilization Focused Evaluation, which works with stakeholders, in this case the staff of the residence life department, to fully understand the program. This partnership with the staff ensures that the recommendations of the evaluation will be put to use by the stakeholders. Along with Utilization Focused Evaluation, which guides the process of the study, I utilize the guidance of Universal Design and Universal Design for Learning as the theoretical

framework for the evaluation. The theory of Universal Design for Learning offers guidance for programs to be more inclusive and accessible. Universal Design for Learning helps me examine the data in this study and make recommendations for the stakeholders in the program that follow the theory. Thus, forming the Residential Learning Model into a more inclusive program for the Autistic students living in the residence halls at Mines. The next chapter explains how this evaluation was conducted. The methods used as well as the methodology that guided the process in more depth.

Chapter 3: Methodology/Methods

This section describes the methodology and methods used to understand the experiences of Autistic students living in the residence halls at Mines. This includes their interpretations of, and experiences with, the Residential Learning Model, which guides the programming and interactions between RAs and residents in the halls, and how those experiences have influenced their persistence at Mines, if at all. The research questions that guide this evaluation are

- 1. How do Autistic students experience the Residential Learning Model at Mines?
- 2. How do interactions with the Resident Advisors and the Residential Learning Model encourage Autistic student persistence, if at all?

To gain a full perspective on how the Residential Learning Model is experienced, two groups of students were recruited to participate in this evaluation. Part of understanding the Residential Learning Model is learning how it is implemented by the student staff, the Resident Advisors (RA) who live and work with the students in the halls. The other group of students is Autistic students who live in, or have lived in the residence halls and experience the Residential Learning Model as recipients of the model and the interactions and programs that it prescribes. This section also explains the role of other stakeholders to my understanding of the Residential Learning Model, and the

formation of the evaluation. Data collection methods are also outlined. At every point throughout data collection, Utilization-Focused Evaluation (UFE) design plays a significant role. Patton's (2012) UFE checklist outlines the need for data collection methods to support intended use of the evaluation by the intended users (p. 263). By engaging participants who are both implementors and recipients of the Residential Learning Model, the use of the findings is more likely. Patton's five principles of evaluation as well as Patton's seventeen-step guidelines, are employed throughout the study, with all participant stakeholders, in meetings with other stakeholders, and through program document review. Throughout data collection, and analysis I incorporated the guidelines of Universal Design for Learning. Figure 2 identifies the different areas where Universal Design for Learning was incorporated throughout the evaluation.

Method of Incorporation of UDL and UD	UDL Guideline
Choice of method of participation offered to	Provide options for recruiting interest,
participants and flexibility with time needed	Provide options for perception, Provide
to prepare for interviews	options for Expression & Communication,
Interviews conducted virtually	Provide options for Physical Action
All questions shared with participants ahead of interview	Provide options for Comprehension
Multiple check-ins with participants to ensure	Provide options for Comprehension, Provide
understanding of data and analysis	options for Sustaining Effort & Persistence,
	Provide options for Expression &
	Communication
Creation of a visual representation of the	Provide options for Comprehension Provide
Residential Learning Model	options for Language & Symbols

Figure 2. Incorporation of UDL guidelines throughout evaluation

Evaluand, Evaluation Design, and Methodology

This evaluation utilizes a constructionist approach and is a formative evaluation that relies on Utilization-Focused Evaluation theory or methods to create a foundation and structure for the evaluation. As the evaluator my own values and beliefs about knowledge and how it is created led me to the epistemology of Constructionism. Constructionism holds that meaning, or a person's truth or knowledge is constructed through the interactions a person has with the world around them. Different people experience different things, even in the same environment, so for each individual knowledge is constructed (Crotty, 1998). As an evaluator, the stories and experiences of the students in this evaluation are the truth and knowledge that I seek. The meaning that the students and stakeholders in this evaluation make of their experiences and share with me are constructed by those experiences. Together, as I interpret the data shared with me through the student stories, knowledge is constructed that will guide the findings and recommendations of this evaluation. This evaluation is a formative evaluation, in that it will be used to form, or continue to form the program that is being evaluated. Stufflebeam, an evaluation theorist, describes formative evaluation as a providing guidance for determining improvements for the continued formation of a program (Alkin, 2013). The recommendations that emerge from this evaluation are meant to be used by the stakeholders to continue to improve the Residential Learning Model. Throughout the evaluation process Universal Design and Universal Design for Learning guide the methodology, the interpretation of the data, the findings and the recommendations. Universal Design demands that for a program like the Residential Learning Model, all

aspects of the model must consider how students with varying abilities can participate with the model. This evaluation, following the principles of Universal Design and the guidelines of Universal Design for Learning must also consider accessibility for all stakeholders and participants. Knowledge cannot be constructed or the program improved without ensuring equitable access to the evaluation for everyone.

This qualitative evaluation explores the experiences of Autistic students in the residence halls and the experiences of the Resident Advisors, students who work in the residence halls and whose job it is to create a safe, comfortable learning environment for their residents. Both Autistic students and RAs are participants in this evaluation, examining the Residential Learning Model from the perspective of those implementing the model and those residential students who are on the receiving end of the model. The experiences of these two groups of students, helps to explore the implementation of the Residential Learning Model and the student experience with the model. In addition to collecting data by meeting with RAs and Autistic students, data collection also occurred through meetings with other stakeholders at Colorado School of Mines. The data collected through these meetings helped to shape the evaluation from beginning to end. While the data collected from RAs and Autistic students contributed to the findings in this evaluation, regular meetings with other stakeholders shaped the process.

The Residential Learning Model is the actual subject of this Utilization-Focused Evaluation. Utilization Focused Evaluation is one approach, or theory that guides the process of evaluation. Marvin C. Alkin (2013) uses the metaphor of a tree to refer to the framework that the various evaluation approaches or theories fall into. Theories that

emphasize different dimensions of evaluation make up the different branches of the evaluation theory tree (Alkin, p. 7). Utilization-focused evaluation, created by Michael Patton, emerges out of the "Use" (Alkin, p.12) branch of the evaluation theory tree. Utilization-focused evaluation seeks out the actual users of the results of an evaluation and works with those users throughout the evaluation (Alkin, p. 45). Patton (as cited in Alkin, 2013), describes his theory as "highly personal and situational" (p. 293). This evaluation, examining the experience of Autistic students and RAs working with the Residential Learning Model, is compatible with this method of evaluation. Patton gives step by step instruction on how to perform a Utilization-Focused Evaluation (2012), most of which incorporate the people the evaluation is for. He refers to this as the personal factor. Engagement of the primary stakeholders of a program, or the users of the program, throughout the evaluation increases the likelihood that the evaluation will be put to use. Patton (as cited in Alkin, 2013), says "the stories are the point. The people in the stories, what they do and how they think are the point" (p. 302). Meaning that the primary stakeholder's stories matter to the eventual use of the evaluation. This evaluation enlists the students who work with and participate in this program to share their stories, so that the evaluation of the Residential Learning Model is used to improve the experience of those students with the model.

The program being evaluated, the Residential Learning Model, guides the RAs at Colorado School of Mines in their work with the students in the halls. The model has an explicit goal, to engage residential students to help them work towards self-authorship.

This goal is explained to the RAs as, supporting students as they strive to know

themselves, have confidence in what they know, reflect on that knowledge, and make decisions based on it (Colorado School of Mines, 2020). To accomplish this goal, the Residential Learning Model employs different methods to facilitate the learning process for residential students through the RAs. RAs utilize methods of individual interactions and group experiences with residential students to meet learning outcomes outlined in the model. The learning outcomes fall into three categories, (1) Inclusion and Respect, (2) Community and Responsibility, and (3) Learning and Development (Colorado School of Mines, 2020). The model outlines expectations for how the RAs work to meet these goals with their residential students. The Residential Learning Model is highly personalized to the students living in the residence halls. Just as the goal of the Residential Learning Model, individual students realizing their own self-authorship, is personal to each student. The personalization of the implementation of the model, and the process of achieving self-authorship parallels the principles of Universal Design and the guidelines of Universal Design for Learning. The model also mirrors the importance Patton places on program participants or stakeholders sharing their stories. For this reason, this evaluation theory made sense for this particular evaluation study and Universal Design and Universal Design for Learning also compliment this process.

Stakeholders for this evaluation were identified by their role in supporting either the Residential Learning Model or the Office of Residential Life. RAs and Autistic students are the primary stakeholders, the method of engaging their participation, and collection of data is described below. The creators of the Residential Learning Model, the Associate and Assistant Director of Residence Life, the supervisors of the RAs, the

Residence Life Coordinators, and the Associate Vice President and Vice President of Student Life are all stakeholders as well. Meetings were held with the Associate Vice President and Vice President prior to the evaluation to explain the process and hear what their priorities are for the Office of Residence Life and the curriculum that guides learning in the residence halls. I also serve as a stakeholder, as the Director of the residence life department, I am responsible for all programs within it and the actions of the staff and students within the residence halls. Ongoing updates were shared with all stakeholders on a regular basis throughout the evaluation. Initial meetings were also held with the Associate Director of Residence Life. The Assistant Director of Residence Life position did not exist at the start of this evaluation. The Associate Director is the creator of the Residential Learning Model, along with the Residence Life Coordinators who oversee each residence hall. These initial meetings allowed me to engage Patton's Utilization-Focused Evaluation Checklist (2012). Steps one through six of the checklist address the engagement of stakeholders, the assessment of program readiness for evaluation, the prioritization of primary intended users, and the initial building of the evaluation (p. 13). After meeting with all stakeholders to determine support for the evaluation and to ensure their investment in use of the evaluation, regular meetings were held to continue to learn about the model from them, and to share the evaluation process as it continued with them. Notes were taken at each meeting, and used to guide the formation of questions for the primary participants, the RAs and the Autistic students, as well as aided in my interpretation of the model and how the student participants experienced it.

The student participants in the study were offered a variety of different methods through which to participate. This approach empowers participants to choose the method that best fits their comfort level, partnering with me to share their stories on their terms in a way that meets their needs. Offering different method choices for participants aligns with Universal Design Theory and Universal Design for Learning. By offering multiple methods for engagement (CAST, n.d.) I model how Universal Design for Learning can be incorporated into practice and evaluation methods. This is my way of making this study more universally accessible for all participants. By creating various pathways to sharing participant stories and knowledge, all participants were able to participate equitably, each choosing a method that worked for them. There were four options that students could choose from that would maintain the purpose and structure of the study and give freedom to the participants to choose.

The first option, Photo-Elicitation Interviewing (PEI), encourages participants to share their "view" of their experience in the residence halls by taking pictures or drawing images that reflect their experience and sharing them with me (Clark-Ibáñez, 2004; Ardoin et al., 2014). Ardoin et al. (2014) describe the use of photography as allowing participants the opportunity to "drive the research experience, empowering them to document and reflect on both the cognitive and affective aspects of their experience" (p. 70). Through her own qualitative work with young students, which seeks to understand their experience of their school support systems, Marisol Clark-Ibáñez (2004) found that asking participants to take pictures led to rich interviews with participants, as an inductive research approach (p. 1509). I believe Photo-Elicitation could be helpful with

Autistic students, who often communicate and process thoughts and senses differently than neuro-typical people (ASAN, n.d.). It provides the opportunity to share their experiences in the residence halls through pictures, which may prompt them to share more when we meet in person.

A second option for participants is guided or directed reflective journaling. Similar to PEI, participants share their feelings, thoughts, opinions, and experiences by writing about them. Hayman, Wilkes, and Jackson (2012) describe journaling as "a method of data collection which can be used with other data collection methods to enrich information gathered from interviews" (p. 28). In this case, participants take time to respond to prompts through journaling, then share those journal entries with me, then, like photo-elicitation interviews, students meet with me to talk about their journal entries and elaborate on their reflections, thus giving more depth to their shared story. Boud (2001) encourages journaling as an effective way to reflect on learning, and experiences, and to give attention to the feelings associated with how people make sense of their experiences (p. 9). This is precisely why guided journaling can be so effective and may be a comfortable way for participants to take the time to reflect and gather their thoughts and feelings through journaling before they meet with me in an interview setting.

Use of PEI and reflective journaling allows for the participants to drive much of the interview, explaining their thought processes and feelings associated with their photos or journal entries. Ardoin et al. (2014) prompted participants to journal about and caption their pictures to further their explanation in their own words. This method could also appeal to Autistic participants who might find writing less challenging than verbally

explaining their pictures. According to Clark-Ibáñez (2004) "researchers can use photographs as a tool to expand on questions and simultaneously, participants can use photographs to provide a unique way to communicate dimensions of their lives" (p. 1512). The use of photo-elicitation and journaling allows me to put to use several of Patton's principles (2018), highlighting the "personal factor", which emphasizes the relationship between the participants and the facilitator, giving opportunity to build trust and rapport (p. 72). This personal factor relies on me and the participants to generate meaning and make decisions about the data together. Patton's third principle, "observe, interpret, and adapt" (2018, p. 152), will be used during the interviews. I must pay close attention to what is written, said, and to what I observe as the participants describe their experiences and the images and words chosen to represent them. I will take notes after each interview to help with my interpretation of the interaction and will be able to make decisions or changes as necessary based on the interviews (Patton, 2018, p. 154). Patton's fourth principle, which is to embed evaluative thinking throughout an evaluation process (2018, p. 190), will guide all aspects of participant interactions and guide the steps of the process overall.

The two other options that participants may choose from is semi-structured interviews and focus group interviews. Semi-structured interviews utilize a few consistent questions to structure the interview but allow for changes within the interview depending on the responses of the participant (Jones et al., 2014, p. 135). Semi-structured interviews allow me to share my questions ahead of time with participants so that they feel comfortable and prepared for the interview and allow us to create further knowledge

through follow-up questions and elaboration. Both photo-elicitation and guided reflective journaling incorporate semi-structured interviews as a follow-up activity, allowing participants to explain and expand on their previous capturing of their experiences. PEI and journaling allow participants to lead the direction of the interview through the explanations of their photographs and journal entries, and the semi-structured approach gives me the opportunity to ask questions based on the material presented by the participant, thus allowing the student to guide the interview and knowledge to be constructed together.

Finally, students could opt to participate in a focus group interview. A focus group allows participants with varying experiences and perspectives, to talk together, building off each other's thoughts to explore various sides to a topic that is given to them (Jones, et al., 2014, p. 139). In this case, participants may choose to meet with me in a group of other participants, to have a group conversation of sorts in response to my prompts and questions. Based on what is known about individuals with ASD and the barriers they sometimes experience socially and in communication this may not be a popular choice for them. However, the goal is that students have choices when it comes to how they participate in the study, and this method may generate knowledge through the discussion process that may otherwise not be shared.

Document review is also part of data collection. To establish a rich description of life in the residence halls, and the Residential Learning Model, the curriculum that structures the residential experience, I review the Residential Learning Model. According to Corbin and Strauss (2008) document analysis examines pre-recorded written or

electronic data. That data is examined thoroughly and interpreted by the researcher to understand, make meaning, and develop knowledge (as cited in Bowen, 2009, p. 2). The Residential Learning Model is the key component that guides the RAs in their work and the experience of Autistic students in the halls. A thorough understanding of the Residential Learning Model aids in my understanding of the experience of the student participants.

I will examine the Residence life Handbook as well as the Residential Learning Model and learning outcomes of the residence life program to illustrate the underlying purposes and expectations for life in the residence halls from the perspective of the creators of the program itself. The Residence Life Handbook is the guide that all students living in the residence halls are expected to know and to live by. Guiding principles, policies, student rights and responsibilities, and expectations are outlined in the handbook. The Residential Learning Model is the document that prescribes all programs, activities, and interactions that take place in the residence halls between RAs and their residential students. Learning outcomes for all residential students are stated within this document, as the goal of the residence life program is that students will learn as a result of living in the halls. These documents are reviewed in the document analysis, and provide the basis for some of the prompts given to students for their photographs, journals and interviews.

This addresses Patton's (2018) second operating principle "engage through options," which emphasizes the importance of making recommendations and decisions based on data throughout the evaluation (p. 106). As each data source is analyzed, more

opportunity for making recommendations based on that data and in collaboration with all stakeholders takes shape. Comprehending these intentions, combined with the Autistic student and RA participants' explanations of their experiences in the halls, helps to identify areas of needed improvement in the Residential Learning Model overall, and give light to areas where new elements of the program might evolve.

Utilization-Focused Evaluation Check

Throughout data collection and analysis, Utilization-Focused Evaluation guides the steps used, in particular steps nine through eleven on Patton's (2012) checklist.

Patton's (2012) theory involves stakeholders at every level, including when deciding on data collection methods, guided by the evaluation goal of "intended use by intended users" (p, 263). This evaluation directly involves the users of the Residential Learning Model, in the RA staff as well as the intended recipients of the model, in the Autistic student participants. Offering a choice of method of data collection to all participants ensures that the process involves them and allows them to lead the process of data collection. This increases the acceptance and connection to the evaluation, thus creating a stronger likelihood of use.

The table below outlines Patton's Utilization-Focused Evaluation Checklist, why the step is important to the evaluation process, and what my actions were as the evaluator for each step.

Steps in UFE Checklist	Intention/meaning behind step	What I did to meet the step
1. Assess and build program and	Is the program doing what it says it's	Met with Stakeholders, discussed
organizational readiness.	doing? Are Stakeholders ready for real	feedback about the RLM.
	change?	Discussed what my findings could
		mean in terms of change.

2. Assess and enhance evaluator	Is the evaluator going to do a good job?	I read and prepared with
readiness and competence to	How do you know? Main goal is	classwork, but some of this was
undertake UFE.	useability, will they produce a useable evaluation?	just believing that I could do it.
3. Identify, organize and engage	Again, goal is useability so stakeholders	Considered who benefits from and
primary intended users.	must be onboard and feel supported in	engaged with the RLM most. Who
	their role as stakeholder.	supports the RLM through budget
		or other means? Information
		sharing meetings to maintain
		engagement. Maintain contact
4. Situation analysis conducted	Means to engage the primary intended	with participants. Listening sessions with RAs,
jointly with primary intended	users, continue to learn from	discussions with Associate Director
users.	stakeholders about the program.	about the RLM as it was
430.3.	statement about the program.	implemented. Primary participants
		in the evaluation, engaged
		throughout.
5.Identify and prioritize primary	What will this evaluation be used for?	Learning from Associate Director
intended uses by determining	We cannot know this question until we	and RLCs some of the challenges
priority purposes	understand why we need to evaluate in	of the RLM. Needed to learn how
	the first place.	the RLM was serving Autistic
		students to determine
		recommendations that can be
		useful.
6.Consider and build in process	How can the process of involvement in	Engaging participants allowed
uses if and as appropriate	the evaluation benefit the program?	them to tell their stories, which had not been asked of them
		before. Encouraging an evaluation
		mindset
7. Focus Priority Evaluation	Prioritize what is really being examined	Interviews were meant to get to
questions	by the evaluation and create questions	the research questions and build
•	to get to those priorities.	rapport intentionally.
8. Check that fundamental areas	Evaluator needs to know what they are	Dedicating time to coursework,
for evaluation inquiry are being	doing, and pay attention to the	outside reading and intentionally
adequately addressed	fundamentals of the program.	relying on interpersonal skills.
9. Determine what intervention	Is the change hoped for through the	Examining stories of Autistic
model or theory of change is	evaluation a logical cause and effect?	students highlights the different
being evaluated	What is the 'why' for the change? What	experiences in the halls for all
	guides the program?	students. The idea that students
		living in the halls learn and that
		learning lends to self-authorship is
10. Negotiate appropriate	How does the evaluator get the	being evaluated. Implementing UD and UDL into the
methods to generate credible	information needed from the	methods so that participants were
findings that support intended	participants so that the data provided is	comfortable, and rapport was
use by intended users	useful?	built.
11. Make sure intended users	Working with primary users to consider	Meeting and communicating
understand potential methods	the implications of the chosen methods	regularly with stakeholders and
controversies and their	and working through that together.	participants to explain and answer
implications		all questions helped move forward

12 Cinculate Has of findings	Final abadi ta anauna that tha	Tallead with DICs and Associate
12. Simulate Use of findings	Final check to ensure that the	Talked with RLCs and Associate
	evaluation plan answers all questions to	Director about the process.
	help inform the evaluation. What if?	Engagement with participants
	Questions asked of stakeholders about	directly smoothed the way for
	how they will use the evaluation	possibilities that could come from
	depending on findings.	evaluation.
13. Gather data with ongoing	Process of gathering data continues to	Discussed initial findings with RLC
attention to use	engage all stakeholders transparently.	group to get their thoughts.
		Member checking to ensure
		participants agreed with my
		assessment
14. Organize and present data	Analysis of data so that it can be	I used Nvivo software organized
for interpretation	presented in a way that makes sense to	data and created themes to
	stakeholders. If it does not make sense	further organize and make sense
	it will not be used.	of data. As themes emerged the
		findings became more clear.
15. Prepare an evaluation report	Ensure that findings and	Write Dissertation in Practice
to facilitate use and disseminate	recommendations are complete within	including recommendations for
significant findings to expand	evaluation and practically presented to	program. This will be made into a
influence	be user friendly to ensure use.	report.
16. Follow-up with primary	Report with recommendations to users	Plan for follow up meetings to
intended users to facilitate and	does not ensure that it will be used.	ensure support for the
enhance use		implementation of
		recommendations.
17. Metaevaluation of Use	Assess the effectiveness, process, and	This will come after the
	results of the evaluation.	Dissertation in Practice is
		completed.
	I .	

Note. Chart depicting 17 Steps of Utilization-Focused Evaluation, the intention of the step, and how I followed the step.

Figure 3. Utilization Process of Evaluation

Sampling and Data Collection

The sample of students interviewed come from two groups, students who self-identify as Autistic at Mines who have lived in the residence halls, and students who are Resident Advisors living and working in the halls. This evaluation employs purposeful sampling. As Patton (2002) describes it, purposeful sampling is "selecting *information-rich* cases for evaluation" this "yields insights and in-depth understanding" (p. 230)

These two groups have the most in-depth, first- hand knowledge of their own experiences

living and working in the residence halls and participating in or implementing the Residential Learning Model in the halls.

Participation of Autistic students was recruited in two ways. First, I enlisted the Office of Disability Support Services to reach out to students who have registered with the office for academic or housing accommodations due to their Autism Spectrum Disorder diagnosis. Students who register with Disability Support Services do so to seek accommodations either in the classroom, for testing, or for housing ("Requesting Reasonable Accommodations at Mines," n.d.). The outreach was via email, requesting student participation. Disability Support Services has an ongoing relationship with many Autistic students at the institution; the idea was that utilizing a trusted resource to reach out to request participants could aid in more Autistic students agreeing to participate. The office of Disability Student Services resulted in two students responding and agreeing to participate in the study. They sent a second request which resulted in one more response. In addition, I reached out to all current residential students by email, meaning that Autistic and non-Autistic students received the request. Autistic students do not have to register with Disability Support Services unless they desire accommodations through the office. If no services are desired or needed, those students do not need to reveal their diagnosis to anyone. Disability Support Services estimates that only about one fourth of the Autistic students on campus register with them for services. The email to all residential students sent by me requested that those students who have been diagnosed with Autism consider participating in the study. This approach allowed Autistic students to self-identify and volunteer for the evaluation without being singled out. This outreach

resulted in two students volunteering to participate in the study. With only four participants volunteering to participate, an announcement was placed in the university-wide daily communication. As a result of this outreach one more student volunteered to be part of the study. A third method of gathering participants was utilized during the first meeting with Autistic participants. I asked each participant if they would recommend other students for the evaluation. This method is called a snowball method, where one participant refers another to the evaluation (Patton, 2002, pp. 230-244). This method resulted in no more participants for the study.

Recruitment of Resident Advisor participants also utilized direct email correspondence asking for study participants, as well as a request made by me at a staff meeting over Zoom. These requests resulted in six participant volunteers.

Participant Criteria

Criteria for Autistic students to participate in this evaluation are current students who live or have lived in the residence halls at Mines, and have been diagnosed with Autism Spectrum Disorder by a physician or other clinician. These criteria were chosen because the research questions and purpose of the evaluation are to understand the experiences of Autistic students who live in the residence halls. The Autistic student participants range in age and level at the institution, the characteristics of how they experience their Autism will also vary. The participants are all from within the state of Colorado, more specifically all are from within a 30 mile radius of campus. The participants have different majors of study within the STEM fields. I anticipated that the Autistic student participants would reflect the characteristics of the school itself; most

being white, middle-class, men, as men make up 70% of the student body. However, one woman did volunteer to participate. I hoped that at least ten Autistic participants would take part in this evaluation, to gather thick, rich data. However, only six students on the Autism spectrum volunteered. The full population of Autistic students at Mines is unknown, as Autistic students do not have to self-identify to attend the institution. However, it is estimated by Disability Support Services that 3-5% of the population of Mines students are Autistic, which is between 170-285 students. Given these numbers, the number of participants that volunteered is low.

The criteria for the RA participants were that they had to be a student at Mines and currently serving on the Resident Advisor staff. Six RA participants volunteered to be a part of this study. These students, like the Autistic student volunteers, varied in age and grade level, and represented different majors. Three women and three men participated, all with varying degrees of experience with the RA role. Some had been RAs for up to three years and had advanced to senior leadership, and some were in their first year being an RA. All participants, whether RA or Autistic student, have lived as a resident within the halls at least one year.

The relationship between the Autistic student participants and me, the researcher, is tentative, that is, we do not know each other well, and have varying degrees of relationship. I am an administrator at the institution, I manage the residence life department, which oversees the residence halls that are the subject of the evaluation. To the RAs, I am their supervisor's, supervisor's, supervisor. I know most of the RAs in this group of participants fairly well and that relationship is a positive one. As an authority

figure who holds power in these relationships, I am very aware of, and named that power difference outright with each participant. I declared to participants that there would be no penalties or consequences for any information or opinion that the participant may share with me.

Instrumentation and Procedures

Prior to interviews taking place, each participant completed a short questionnaire to collect demographic information. The Questionnaire also asked each student to choose a pseudonym for themselves. Throughout this evaluation all students are known only by their pseudonym. Five Autistic students and six Resident Advisors volunteered to participate in this study. Below is a chart showing each participant and the demographic information they shared with me, they are identified by their pseudonyms. The top five students listed are the Autistic students and the bottom six students are Resident Advisors. The identity information is self-reported exactly as each participant stated it.

Name	Age	Race	Sexual orientation	Gender Identity	SES	Year in college	Disabilities	Mental health challenges or disabilities	Academic Major
Phoebe	19	White	Bisexual	Woman	Middle-class	2 nd	ASD, generalized anxiety disorder	None reported	Geology
Riley	21	White & Native American	Bisexual	Pronouns they, them, their	Middle-class	311	ASD, Attention Deficit Disorder	Major Depressive Disorder, Anxiety, Insomnia	Mechanical engineering
Michael	20	White	Straight	Man	Middle-class	2 nd	ASD, May- Hegglin Anomaly (blood disorder)	,	Mechanical engineering
N4	21	Ashkenazi	Straight	Man	Middle-class	311	None reported	ASD, Major Depressive Disorder with passive suicidal ideation, anxiety, history of self-harm	
Dean	22	White	Straight	Man	Working- class	Grad student	None reported	ASD	Mechanical engineering
Peter (RA)	21	White	Straight	Man	Middle-class	4*	None reported	None reported	Civil engineering
Cass (RA)	22	White	Bisexual	Woman	Middle-class	4*·	Head injuries	Anxiety, PTSD stemming from sexual assault	Engineering Physics
Claire (RA)	22	White	Straight	Woman	Upper-class	4*		Anxiety, Depression, OCD, Adjustment Disorder	Hydrologic Science & Engineering
Andrew(RA)	19	White	Straight	Man	Middle-class	2 nd	None reported	None reported	Engineering physics
Maria (RA)	20	Colored (sic)	Straight	Woman	Middle-class	2 nd	None reported	None reported	Geophysical engineering
Taylor (RA)	22	Asian	Straight	Man	Middle-class	Grad student	None reported	None reported	Civil Engineering

Note: Chart depicting participant demographic data collected between January 1, 2021 and February 24th, 2021.

Figure 4. Participant Demographic Information

Participants also completed an informed consent document asking each to agree to be a part of the evaluation. This document described the evaluation, possible consequences of participation, expectations of participation, and an explanation of how the data will be kept confidential and safe. Both of these documents were reviewed in the first meeting with each participant, to ensure that each participant wishes to remain part of the evaluation. The demographic information collected includes age, race, sexual orientation, gender identity, socio-economic status, ability, and mental health history, year in school, academic major, and contact information.

Each Autistic participant and I met via Zoom for an initial, virtual meeting to get to know each other. This first meeting was intended to build rapport and discuss the interview process, go over method options, and set up our second meeting, which would be the actual interview. Each initial meeting was scheduled for a half an hour or an hour depending on the needs of the participant. Basing our interactions on the student needs reflects the guidelines of Universal Design for Learning, as it fosters collaboration and community between the participants and me (CAST, n.d). During this meeting, we took time to get to know each other, I explained the purpose and goals of the evaluation, and I went over the documents mentioned above. So as not to overwhelm the participants the first time we met, this meeting simply explained the process and gave me the opportunity to build rapport and trust, which Jones, Torres, and Arminio (2014) describe as being "integral not only to securing participants for an evaluation, but also to sustaining participation over time" (p. 120). Causton-Theoharis et al. (2014) explored the social desires of Autistic people through narrative inquiry using autobiographical accounts of Autistic individuals and came to the conclusion that Autistic people have difficulty navigating a social world with others, they are not necessarily uninterested in relationships or social interaction. Many Autistic people have unique ways of interpreting social cues, and touch, as well as knowing how to interact with others, making their interactions more complex (p. 92). Causton-Theoharis et al. (2014) found that among the participants in their study, there was a strong desire to connect with others. With this in mind, as well as the need that many Autistic students have for predictability, I had to work to ease the path to social connection between the Autistic participants and myself,

through clear explanations of, and adherence to the process, this again follows Universal Design for Learning guidelines.

To prepare for each interview with the RAs, I also met with them via Zoom, in an initial meeting to get to know them better, explain the process, and determine together what method they wanted to utilize for participation. Again, each initial meeting was scheduled for a half an hour to an hour, depending on the needs of the participant. At the end of each initial meetings, we set up a day and time to meet for the interview.

After the first meeting, depending on what method participants chose, each participant received an email with the questions that would guide the semi-structured interviews, or the prompts to guide journal entries. All participants had the same method options to choose from and of those options none of the participants chose photo-elicitation. Semi-structured interviews were chosen most often, followed by focus groups, chosen by three participants, and guided journaling, which was chosen by two participants. The chart below shows the method that each participant utilized in the study.

Phoebe	Guided journaling	
Riley	Semi-structured interview	
Michael	Guided journaling	
N4	Semi-structured interview	
Dean	Semi-structured interview	
Peter	Semi-structured interview	
Cass	Focus-group interview	
Claire	Semi-structured interview	
Andrew	Semi-structured interview	
Maria	Focus group interview	
Taylor	Focus group interview	

Figure 5. Method Used by Each Participant

Between the initial meeting and the interview, scheduled for two hours with each participant, each participant prepared for the interview as they needed to. The time between initial meeting and interview was typically a week or two depending on the needs of each participant. For those participants who chose guided journaling, deadlines for turning in their prompts prior to the interview were clearly articulated and agreed upon at the first meeting and a reminder was sent half-way between the two meetings to each participant.

The second meeting, again via Zoom, was the primary interview for all participants. This interview was scheduled for two hours, so that there was less likelihood that the interview would be cut off due to time. With Patton's utilization evaluation principles as a guide, in particular the fourth operating principle of embedding evaluative thinking throughout the study, interviews with participants were conducted using a semistructured approach, enabling me to share interview questions with the participants ahead of time, while giving space and time for participants to drive the interview and create conclusions about their journal entries or responses to question in collaboration with me (p. 200-201). Sharing questions with participants ahead of time also met CAST's Universal Design for Learning guidelines (n.d). As discussed, this allowed participants to anticipate what will take place in the interview and allowed them to prepare or even write responses to these questions ahead of time as well as prepare explanations for their journal entries. This predictability and chance to prepare in advance could have been particularly important for the Autistic participants who may struggle with spontaneous social interaction.

Data Processing and Analysis

As interviews were conducted, I found that to be completely present in the interview and listen carefully, I did not have time to take notes. Every interview and meeting with participants were recorded through Zoom. Zoom records and automatically transcribes each recording, so immediately after each interview there was a written document of the meeting. This was easily transferred to a secure, password protected database, Nvivo that in addition to the transcription also holds the journal entries of participants, and documents for review. All data is kept in a password protected, dual authentication drive, which can only be accessed by me. All personal information for all participants including signed consent forms and email correspondence is kept confidential using these same measures, as well as pseudonyms, which the participants chose for themselves. All data will be stored for the duration of this evaluation until the information can be shared with stakeholders through the evaluation report. At that time all data will be deleted.

Immediately after each interview, I shared each transcript with individual participants to ensure they had said what they meant to during the interview. After each interview transcription was reviewed, cleaned up, and formatted it was added to Nvivo. Each transcribed interview was read several times to collect words, sentences, and thoughts that when all the interviews were read, created themes that each interview had in common. Several themes began to take shape, such as relationships in the halls, feelings associated with living in the halls, perceptions of the RA staff by the Autistic participants. The emergence of these themes was informed by my own experiences working for almost

two decades in residence halls and by literature associated with student experiences in the residence halls (Blimling, 2015; Cage, 2020; Clark, 2018; Hendrickson, et al., 2013; Knott et al., 2014; Van Hees et al., 2015). As I read through each interview certain passages within the transcripts stood out, and several passages overlapped with other passages in other transcripts. This is how I started to identify themes. I identified a topic that a piece of data fell into, and then when other passages in the transcript related to that topic, I combined them to create a theme. The themes developed organically from the data. They were not created ahead of reading through the data. After the completion of the data analysis of transcripts, I shared themes that emerged from the data with each participant. This resulted in new conversations with some participants that led to clarification of the themes. In some cases, I had up to four additional conversations with participants who asked questions about the themes and added additional data. This form of member-checking allowed me to collaborate further with the participants to ensure my understanding. It also adhered to Universal Design for Learning, as I worked to ensure that participants had multiple opportunities to speak into this process.

The Residential Learning Model was also read through several times. Pertinent information, partly informed by my professional experience and existing research on residential life, was categorized from this document in relation to the research questions as well. The categorization and combining of themes from all documentation brings out nuances and topics that emerge as meaningful information. The analysis of this data follows Patton's (2012) checklist, which outlines that all data analysis must involve stakeholders and participants as well as pay attention to how it will be used by the

stakeholders. My analysis was informed by Universal Design and Universal Design for Learning throughout. The Universal Design guidelines as for flexibility of use and simple and intuitive use (National Disability Authority, n.d.). As themes began to emerge, I considered how the themes related to these guidelines in particular. The explanation of how I got to the findings must be able to be explained plainly and without jargon. Simply put, as I read through the stories of each participant, I began to see areas where the stories overlapped or were similar. After checking in with participants, I identified the themes all participants could relate to, and possibly could be a shared experience.

Utilization-Focused Evaluation Check

Steps 12 and 13 of Patton's (2012) UFE checklist discuss the approach to sharing initial data with stakeholders (p. 13).

12. Simulate Use of findings	Final check to ensure that the	Talked with RLCs and
	evaluation plan answers all	Associate Director about the
	questions to help inform the	process. Engagement with
	evaluation. What if? Questions	participants directly smoothed
	asked of stakeholders about how	the way for possibilities that
	they will use the evaluation	could come from evaluation.
	depending on findings.	
13. Gather data with ongoing	Process of gathering data	Discussed initial findings with
attention to use	continues to engage all	RLC group to get their
	stakeholders transparently.	thoughts. Member checking to
		ensure participants agreed
		with my assessment
14. Organize and present data	Analysis of data so that it can be	I used Nvivo software
for interpretation	presented in a way that makes	organized data and created
	sense to stakeholders. If it does	themes to further organize and
	not make sense it will not be	make sense of data. As themes
	used.	emerged the findings became
		clearer.

Figure 6. Utilization-Focused Evaluation Steps Specific to Data Analysis

To ensure that I continue to focus on the use of the findings of this evaluation, I met with primary users of the Residential Learning Model, the Residence Life Coordinators, to keep them up to date on how things were going with the evaluation following the data collection and the initial analysis of the data. This is a direct suggestion of the UFE checklist (Patton, 2012). We met to discuss the evaluation so far, with the intention of keeping them invested in the study. This was an informative discussion and the coordinators had questions and shared with me some of the challenges they have experienced implementing the Residential Learning Model. We discussed the timeline for delivery of the finalized evaluation and agreed that after more extensive analysis, we would meet again to discuss the findings. The timing of the next meeting will coincide with their review of the model and implementing the proposed changes from the evaluation so that it can be included in the model for the next academic year. The purpose of this evaluation is meant to be formative; collaborating with the Residence Life Coordinators as they begin their own review of the Residential Learning Model is a key way to help to improve the program and increase the likelihood the evaluation is used.

Trustworthiness

Trustworthiness is essential to ensure quality and rigor throughout this evaluation.

Bowen (2009) explains one useful method to show trustworthiness is triangulation (p.

28). One way to triangulate data and corroborate findings is to utilize multiple sources of data. Interview responses and journal entries from Autistic student participants and RAs reflecting their experiences in the residence halls paired with documents that guide the

experiences of both RAs and students living in the halls, create rich data from which to formulate the evaluation and create suggestions for use to the existing program. This, in addition to document review of floor plans, and historical Residence Life guiding documents aid in giving more depth to the findings. Universal Design also aligns with this practice to ensure that information is shared openly, plainly, and with care to ensure accessibility to this information. The various methods utilized by participants and me in our partnership give insight into how Autistic students experience life in the halls, the RAs who serve them experience their roles, and how the policies, programs, and design of the halls impact the experience of both types of participants, making for a more layered, or thick, description of the student experience and therefore more trustworthy data.

Participants were also engaged in member checking. Member checking is considered crucial to establishing credibility (Guba & Lincoln, 1994) as it relies on the participant to validate the truthfulness of the data as it is presented by the evaluator. All participants were given the written transcript of their interview to read over and share notes on. This process ensured that the data analyzed was in fact what each student meant to say, ensuring trustworthiness. Member checking is also aligned with Universal Design, implementing a check of understanding as regular practice ensures that information is accessible. Data, analysis, and findings will be shared with participants for review. This ensures that I understand the descriptions, words, explanations, and intent of participant responses to all prompts and questions. By asking participants to confirm their words, intentions, explanations, and inflections, the data is assumed to be articulated accurately

by the evaluator. This again increases the trustworthiness of the study and allowed me to add comments during member checking to the final analysis, or ask more clarifying questions, making that data even richer.

Lastly, I maintained a journal of thoughts, opinions, beliefs, biases and actions throughout the evaluation study. This included my thoughts on interviews, meetings I had with participants, the process, meetings with stakeholders, and how I felt about this process overall. By partaking in reflexology early in the process and throughout, interpretations will evolve through the study (Creswell & Miller, 2000). The trustworthiness of this process is important to me, so that the results of this evaluation can be useful to stakeholders when considering the future of the Residential Learning Model and the experience of the students who live in the residence halls.

Throughout the evaluation process, regular meetings with program stakeholders were held, to continue relationship building, make informed decisions together, and evaluate the data, while embedding an evaluative approach throughout the evaluation overall. After data collection, before analysis a meeting was held with the professional staff who supervise the RAs in the halls. My initial reactions and insights were shared so that these stakeholders could start to plan for the implementation of the evaluation once it is complete. This meeting sparked conversation about the attitudes of the RAs working with the Residential Learning Model and the connections that RAs create with their residents.

Limitations

Limitations are present in this evaluation, bringing about the need for future study in this area. First, the data in this evaluation comes from one institution, limiting the generalizability of the findings. The participants in this study cannot speak for all Autistic college students or all RAs working in residence life programs. Therefore, the findings must be interpreted by readers with their own context in mind. Second, as anticipated, Autistic student participants were difficult to recruit for the evaluation. One of the hallmark characteristics of Autism is a difficult time with social communication, which may have kept Autistic students from volunteering for this study initially. Of the estimated 150+ students at Mines who identify as having Autism, only 5 agreed to participate in this study. What I did not expect was to have challenges recruiting RAs for this study. Out of 72 RAs on the student staff, only six participated. This study was conducted during a global pandemic, which impacted everyone in different ways. A lack of knowledge of who I am, and therefore lack of trust, may have also influenced the small number of participants. The number of participants is a limitation, as the stories and experiences are limited in number. Each academic year creates new opportunities to learn from students living in the halls, so further study, paired with this evaluation could create more robust findings.

Positionality

My understanding of positionality is based on Kathleen St. Louis' explanation, "the relational space or value one has that influences and is influenced by varying contexts" (2002, p. 3). My identities, values, and beliefs influence how I experience the

world, my perspectives and, undoubtedly, how I conduct and interpret research. I am a neuro-typical, currently able-bodied, white, middle-class, straight woman. I do not share the experience of being Autistic and currently do not have any cognitive or a-typical neurological limitations. As an outsider to the Autistic community, I rely on the willingness of the participants to share openly their experiences with me. I am also not currently, nor have I ever been a Resident Advisor. This role is a demanding one that requires energy, time, and dedication. I also recognize that I oversee the program that the RAs work for, and that may factor into the answers and interactions between the RAs and me. The importance of building rapport and trust with all participants is paramount.

I strongly believe in access to education at all levels for all individuals and groups. I am a higher education and student affairs professional who strongly believes in the value of learning outside the classroom. I work in residence life, an area that many students must participate in as a condition of their attendance at college, and, therefore, believe that the residence halls are integral to students' college experience and that residence life programs play a role in the retention and learning of students. This work also places me in a position of responding to student crises on a regular basis, in particular mental health crises and suicidal ideation, attempts, or completions. While many students I work with are neuro-typical, several are Autistic, which continuously motivates my work and my research.

As the evaluator in this study, I am examining the program that I oversee as Director. I am entrenched in this program, having been a part of designing every aspect of the program. I must utilize the other stakeholders in this program, the students, the

residence life staff, and the upper-administration, to maintain my own balance within this evaluation. As part of the interview process with students, I am acutely aware that I hold power as an administrator at Mines, in particular within the residence life program. It is imperative that I remain vigilant in my reign on this power and to talk through this with participants so it does not impede our relationship. I am confident that this is possible, and I recognize my proximity as a limitation.

Utilization-Focused Evaluation is centered around the need for the evaluation to be used by the primary intended users. The methods and methodology are all tools used to engage participants and stakeholders intentionally, so that the evaluation has meaning for the organization. Patton (2012) outlines step by step instructions to be followed, and alongside those instructions the evaluator must find an approach to evaluation that will not only elicit meaningful data, but will do so in a way that makes sense and is accessible to stakeholders. The next chapter discusses the findings that came about as a result of the analysis of these methods, all with the purpose of creating an evaluation that will be of use to the office of Residence Life at Colorado School of Mines.

Chapter 4: Findings

The following evaluation questions guided the process of interviewing each participant and as findings emerged helped to clarify my understanding of the data.

- 1. How do Autistic college students experience the Residential Learning Model at Colorado School of Mines?
- 2. How do interactions with the Resident Advisors and the Residential Learning Model encourage Autistic student persistence, if at all?

Three main themes emerged as I examined the data from interviews and documents. These themes reflect the data that was collected through journal entries, interviews, review of the Residential Learning Model. In this chapter, I present the three themes as the findings of this evaluation. The three themes are: (1) Expectations and Communication of Roles in the Residence Halls, (2) Relationships within Residential Communities, and (3) Learning in the Residence Halls. The three themes that emerged are connected to the research questions that drive this evaluation. This chapter explores these themes in-depth. Concrete findings based on these themes are discussed in Chapter Five, as well as recommendations associated with the findings. Exploration of the themes allows me to lay a foundation through the words of the participants, on which I base the findings in the next chapter. First, I share an in-depth explanation of the Residential Learning Model. The document review of the model provided insights into why the

model was created, how the model guides the efforts of the RAs, and the expectations for achieving learning outcomes. Next, I go on to explain the three themes found through analysis of the data. I explain each theme and the findings within them. I then explain how the theme connects to the research questions above.

I explore the Residential Learning Model in this chapter to inform the findings of expectations, relationship and learning that are key elements of the model. Understanding the key components of the Residential Learning Model help to shape the findings explored in this chapter. These findings reflect ways that the RAs and Autistic college students experience life in the residence halls. The RA stories focus on their experience as an RA, implementing the Residential Learning Model, building relationships, their reflections on the purpose of their role. I did ask the RA participants about their experiences as first-year students living in the halls, to better understand what experiences might be shared among students, these reflections are included also. The reflections of the Autistic college students tell a story that, at times mirrors the RA student participants, and differs in significant ways, painting a very different picture of the Autistic students' expectations, and relationships with peers.

This evaluation found that students who engaged in relationship with their peers, and had supportive experiences with RAs, had a more affirming overall experience in the residence halls, learned from that experience, and feel more of a connection to the institution. Relationships, the desire to have them, challenges maintaining them, and what Autistic students learned from them, thread together to bind the findings. Expectations, relationships with peers, and learning in the residence halls all

stem from relationship with others for the Autistic student participants. As the Autistic students shared their stories, the concept of relationship and the context for how relationships formed in the halls became foundational to all the findings.

The Residential Learning Model

The Residential Learning Model is the guiding curriculum in the residence halls at Colorado School of Mines. The model is based on the work of Marcia Baxter Magolda (2008), and her theory of Self-Authorship. The model also supports the mission and pillars of the department of residence life at Mines, striving to "help students know themselves, identify what they know, reflect upon it, and make decisions from it" (Residential Learning Model Overview, 2020). Self-Authorship is "the internal capacity to define one's beliefs, identity, and social relations" (Baxter Magolda, 2008, p. 269). As with most developmental theories students move through stages at different rates, and there is no perfect trajectory to self-authorship. Baxter-Magolda (2008) and Baxter-Magolda et al. (2012) identified four phases of self-authorship. Those four phases are aligned along a continuum that college students may follow to a place of selfauthorship. The first of the four phases is following external formulas, a reliance on external authorities to determine what they should believe. Next, crossroads, or a struggle between outside influences definitions or ways of being and an internal voice. The third phase, becoming the author of one's own life is when a student has come to the point of listening to their internal voice, and weighing it against external influences. Finally, at the other side of the spectrum is self-authorship, or internal foundations, where a student becomes grounded in a sense of who they are, what they believe, and how they make

decisions based on that internal foundation. These four phases help to guide the creation of the Residential Learning Model. The model guides the RAs in their roles, giving them strategies to help students on their journey to self-authorship. The connection between the theory of Self-Authorship and Universal Design and Universal Design for Learning Theory comes together through this document analysis. Self-Authorship involves the process of finding one's own path, of making decisions based on one's own beliefs and values. Universal Design and Universal Design for Learning involve the removal of barriers so that students have the opportunity to follow the path to self-authorship. While Self-Authorship is the goal of the Residential Learning Model. Universal Design and Universal Design for Learning are the means to help students on their path. Self-Authorship focuses on the individual, and Universal Design and Universal Design for Learning focus on the systems that influence individuals and their navigation through higher education. Paired together students may be more likely to follow their path, made easier with the implementation of Universal Design and Universal Design for Learning.

The Residential Learning Model, as the name implies, exists to aid in student learning through their residential experience and describes learning outcomes for students to achieve by living in the residence halls. The learning outcomes and strategies described in the Residential Learning Model are tied together by the themes of expectations, relationship and learning, just as the findings of this evaluation are.

I stated above that the model is meant to support the mission and pillars of the residence life program at Mines. The mission of residence life is:

We believe living on campus fosters student learning, development, and personal growth. We show dedication to our students by creating experiences and physical

spaces that recognize the unique challenges and opportunities of being an Oredigger at Colorado School of Mines. We are committed to providing intentional learning by facilitating a safe, inclusive, and academically focused environment. We challenge and encourage students to be critical thinkers and civically engaged leaders in a diverse global community. (Residence Life Mission, n.d.)

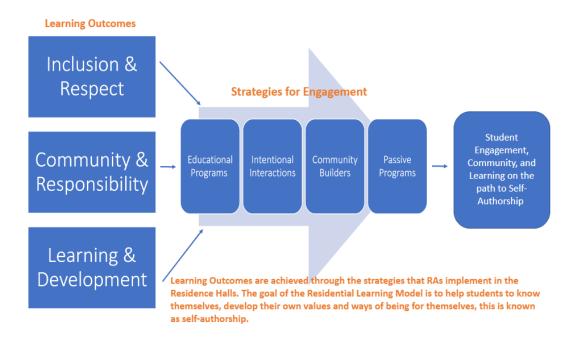
The pillars of community that act as the foundation to the residence life mission and outline the values of the department. Those pillars are Inclusion, Respect, Community, Learning, and Responsibility. The theory of Self-Authorship and the mission and pillars of residence life guide the development of the learning outcomes. The learning outcomes broadly are (Residential Learning Model, 2021):

- Inclusion and Respect: residential students will develop an understanding of their identities, and how to respectfully engage with people whose identities and perspectives differ from their own.
- Community and Responsibility: residential students will be able to meaningfully contribute to their residential community and local community through taking responsibility for their actions, learning, and relationships.
- Learning and Development: residential students will learn and build skills to make meaning of and critically evaluate the world around them.

To achieve these outcomes the Residential Learning Model outlines expectations of the RAs who are responsible for facilitating the model with their residents. The RAs are expected to plan and implement three educational programs each semester for the students in their communities. Each educational program must align with one of the learning outcomes and one of these programs must include a faculty member to help residential students build connections with the academic faculty. Each RA is expected to create and implement eight community builders a semester. Community builders are meant to be interactive and give the opportunity for members of the community to get to know each other better. Finally, each RA is expected to get to know each of their

residents personally. This is accomplished through "intentional interactions" (Residential Learning Model, 2021). Intentional interactions are one on one conversations that the RA has with each residential student, and the RAs are encouraged to center those conversations around the learning outcomes. Each RA is expected to meet intentionally with each resident four times a semester. The Residential Learning Model also expects RAs to create bulletin boards in their communities each month that incorporate one of the learning outcomes. These expectations can be achieved through active and passive programs that are well planned, advertised, and assessed.

The strategies of the Residential Learning Model and the learning outcomes connect with the themes that emerged through the data collected from the Autistic student participants and the RA participants. The expectations, relationships, and learning that emerged as important aspects of participant's experiences living in the residence halls reflect the expectations, relationships, and learning that is dictated by the Residential Learning Model.



Note. Learning outcomes inform the strategies that the RAs use to engage students with the goal of facilitating self-authorship.

Figure 7. Graphic Image of the Residential Learning Model

Theme 1: Expectations and Communication of Roles in the Residence Halls

The first theme centers on expectations and communication. The "Expectations and Communication of Roles in Residential Communities" theme is broken down into three subareas: (1) Expectations of Roles, (2) Expectations of the Relationship Between RA and Residential Student, and (3) Expectations of Policy Enforcement and Structure. Through the analysis of the data this theme emerged, although neither RA nor Autistic college students were asked directly about their expectations, there appears to be a difference between the two groups about their expectations of the roles, relationships, and policies, and how those three areas are communicated. This theme directly connects to research question one, how do Autistic students experience the Residential Learning Model at Colorado School of Mines. The Residential Learning Model clearly outlines

how RAs interact with their residents, yet the Autistic students report very different expectations regarding those interactions. Autistic students are experiencing the Residential Learning Model through a different set of expectations than their RAs. Different expectations coming to the residence halls, and lack of communication from the RAs about their own expectations of their role and the relationship they want to build with residents could be negatively influencing the experience of Autistic students in the halls.

Expectations of Roles

Residential Learning Model Expectations

As I explained above, the Residential Learning Model expects RAs to create programs, both educational and social, for their residents. It also expects that each RA will reach out to the individual members of their community to initiate intentional interactions in order to get to know each resident better and to foster learning between the RA and their resident. While every program and interaction are optional for residents to attend, the RAs work to plan enticing programs that meet the needs of their communities. RAs who build strong relationships with residents typically have an easier time planning programs that residents not only find educational but that they like attending. The responsibility lies with the RA to reach out and to get to know residential students individually. While students in the residence halls may seek out their RA for one reason or another, the onus is on the RA to build a supportive relationship. It is also on the RA to create meaningful educational programs based on their knowledge of their residents

and their needs. Below is a chart briefly describing the different expectations that the Residential Learning Model, RAs and Autistic college students have of each other.

	RA	Autistic Student	RLM
Expectation of RA		Resource, Policy Enforcer, thoughtful of the needs of residents.	
Expectation of Residential student	need they may have.	Follow the rules, be open to friendships with Autistic students.	Engage in relationship with RA. Share needs and identity with the RA through intentional interactions. Attend and engage in programming.
Expectation of Policy Enforcement	and based on how egregious the policy	•	Environment must be safe for all residents. Supplemental documents (Residence Life Handbook) support the learning environment by outlining policies.

Figure 8. Different Expectations of Residential Learning Model, RAs, and Autistic College Students

RA Expectations of Residential Students

The Residential Learning Model asks RAs to engage in outreach to residents, yet the RAs do not talk about how they outreach to residents, only that they create an atmosphere where the residents feel comfortable coming to them. The RA participants share a desire for students in their communities to come to them as a resource (Cass and Claire), and co-create a respectful environment (Andrew). The RAs talk about creating an

environment where all of the residents feel like they can come to them. None of the RAs talked about what specifically this environment looks like, just that they are creating it. When speaking about her RA role, RA Cass, like several of the RA participants, states that she creates a culture "where all my residents could feel like they could come to me. Whether we were talking all the time, or we only had a few conversations here and there." RA Cass believes this is the type of environment she creates, yet she knows that some students she talks to "all the time" and some she just has conversations with "here and there". The expectation of all students to feel like they could come to her, when she only talks to some of them occasionally, may conflict. RA Claire, says, "I felt like my goal was to give unconditional love to my residents and to help them when they asked for it, but also to teach them how to ask for help." The expectation of loving all students within the community may not be realistic, but the RLM dictates that every student should feel known by their RA. RA Claire's goal of teaching students to ask for help reflects the needs she saw in the students she served. Both Cass and Claire expect the residents to know that they are a resource and expect the resident to come to them if they have a need. RA Andrew had a specific goal when he came into the RA role, "I came in with the goal, within my first interactions with residents, to develop a baseline respect that we should expect from each other." Andrew's goal is based on the feelings he had when he was a first-year student about his residence hall floor community. RA Andrew, like the other RAs had an expectation of the behaviors of the students on his floor community. Mutual respect, a loving relationship, the ability, desire, and trust in

them, the RA for all students in their communities to come to them when they need anything.

Autistic Student Expectations of the RA

Many of the Autistic college students have different ideas of what the RA role is, perhaps considering it a more transactional relationship, or expecting the RA to come to them to offer support or resources. This discrepancy certainly shows that the needs of students, Autistic students, may not be what the RAs hope or think those needs are.

Some Autistic college students talked about specific needs they have that an RA could be helpful with, as in the case of Dean. When Dean experiences stress, he acts out by shouting, and sometimes hitting things,

if [an RA] could emphasize [to me] just step away for a couple of minutes, take a few deep breaths. It can be good, because I know in my head that that's what I need to do, but in the moment, it can be very hard to recall that. I do understand the RA can't be everywhere at every time, I do understand there are limits, there are only so many RAs, and they have a lot of tasks on their plate.

Even though Dean knows what might be helpful for him to hear from an RA, he recognizes that there will be times the RA cannot be there to take this role. This kind of attention may not be possible for an RA. It would also take trust on Dean's part to ask for this type of help, and initiative for the RA to get to know Dean well enough to know that this is a need. Autistic participant, Phoebe explained that, "I think it is important for res hall staff to keep an eye out for these students and reach out and make sure that they are doing okay without being overly peppy or intrusive." Phoebe's description of her

needs is specific. She wants the RAs to check in on students to support them, but not to do it in an invasive way. This may be a difficult balance to maintain for the RA staff.

Other students talked about events where their expectations of the RAs ended in disappointment when those expectations were not met. N4 is Ashkenazi and follows a strict Kosher diet. He describes a time he tried to attend a social program put on by the RAs, but he walked away from this opportunity when his dietary needs were not considered for the food order, and he could not partake in what the group was doing. N4 describes this experience,

who decided it was that this was acceptable? Because I think that plenty of people would say, even if they love meat on their pizza that there's something wrong with this, but I also think I was more justified in like I like, I can't eat this.

While this may seem like a small incident, a student could not eat at a program because their dietary needs are different than the majority. This story was an example that this student came back to three times in our one-hour interview, an incident that happened two years ago is still fresh in his mind as a barrier he experienced to making connections with other students in his community, in trusting the RA staff, and feeling known. N4's expectation was that someone, the RAs planning the program, would consider his needs as a resident in the community. When his needs were not considered, he left the program, not feeling welcome. Phoebe states this balance between expectations,

I think it's important that we have an environment where everyone feels safe and welcome and that regardless of your background, or mental state, or anything like that, that this can be a place where you have the opportunity to reach out. And that

if reaching out isn't something that you can do, that people can reach out to you instead, because asking for help is one of the hardest things to do. But I also know that if you have someone coming in, being like, are you okay? Do you need anything? Just like let me know if you need anything? It's annoying, and it doesn't feel genuine and so there needs to be a balance.

Connecting Different Expectations

The RAs and the Autistic students have different expectations of one another when it comes to roles and responsibility. Clearly, students have varying needs that the RAs role can help support. These needs reflect the expectations they have of their RA. Phoebe is looking for support through outreach and genuine care. Dean is expecting the RA to be a helpful guide, and N4 expects the RAs to consider his needs when they plan programs for the community. None of the Autistic students has the same expectations. They all have expectations that come from individual needs. The Residential Learning Model, through the expectation of intentional interactions, helps the RAs know their individual residential students better, meeting individual student expectations of support, acknowledgement, and concern. Through training, and intentional interactions with residents to get to know them well, it is possible to address the needs of residents with Autism, and thus all residents more thoroughly.

Through the strategies included in the Residential Learning Model, "intentional interactions" (Residential Learning Model Staff Expectations) attempt to create an expectation of both RAs and students living in the halls around one-on-one interactions.

The RA is required to reach out to each student in their community and create a space

meant to get to know them better through this strategy. This finding shows a disconnect between what the Residential Learning Model, the RAs implementing the model and the Autistic student residents receiving the model, expect. While some variation between how each member of a residential community fulfills their individual role is understandable, there are other expectations that both RAs and Autistic college students have of the community overall, the support system for residents, the policies that govern behavior in the halls and the enforcement of those policies, as well as the relationship between RA and resident.

Expectations of the Relationship between RA and Residential Student

The relationship between the RA and students living in the halls is unique, taking various forms. Similar to the expectation around roles, the expectations of the relationship that the RA and Autistic student will share are sometimes very different. For some Autistic college students, the relationship is transactional; they know who the RA is but not their name, they are a resource to reach out to if there is a need, but the expectation of friendship may not be even considered. Other Autistic college students found deeper connection with their RA and built a friendship with them, seeing that person as a safe person to go to for support and care. Those students who had stronger relationships with the RA, said that their RA reached out and got to know them, and purposefully checked in on them. These students felt that their RA wanted to get to know them, that they were not just fulfilling the role of their job. Students who had less of a familiar relationship with their RA did not mention that their RA ever reached out to them individually but were available if they were needed.

The Residential Learning Model does not dictate what relationships should be between RAs and residential students, only that those relationships be appropriate. The model only dictates that RAs must reach out to residents and intentionally get to know them. The goal of this is through conversation and discussion students will feel known and valued, build trust with the RAs, and learn through the conversation.

Interviews with all the RAs revealed the expectation that all their residents would feel comfortable with them and relate easily to them. RA Cass feels like the relationship with her residents comes naturally, because of the shared curriculum at Mines that all students must follow their first two years. "I feel like it's so easy to relate to our residents, because you have this one thing that brings you together and like these experiences that are so similar." RA Taylor also talks about his ability to relate to his residents because of the challenges he had faced in his own coursework, "I'd like to think that as much as it sucks for me to have to fail a class or fail a test, I think it really strengthened my ability to support residents as I moved forward." Both RA Cass and RA Taylor believe that by sharing the experiences of taking the same classes and perhaps struggling through coursework with the students in their communities, that they understand the experience their residents have academically, uniting them with a common experience. These RAs relied on their experiences to give them insights into how their own residents might be experiencing the same curriculum. RA Andrew talks about his relationship with his current residents, "I think that they have a kind of perception of me, as someone who they're able to talk to. And that could be about anything really." RA Andrew sees himself as someone who residents find approachable and trustworthy. RA Taylor also talks about

being a support person for his residents, "to sit and listen, and just be in those conversations and those situations where they don't really want to talk, but they also want to cry, but don't know who to cry to, to know that they have me." RA Taylor expects to be a strong support for students, if they reach out to him when they are in need. RAs had certain expectations of the type of relationship they would have with residents. They expect residents to see them as trustworthy, supportive, and relatable, and they expect their residents to see them as a support, or a friend. For Autistic students however, the expectations around relationships with their RAs were vastly different from one another.

Autistic college students described different kinds of relationship with their RA. The RAs all talked about reciprocal relationships with their residents across the entire community, inclusive of all residents. However, many of the Autistic college students did not share the perspective that they had overly affirming relationships or, in some cases, any relationship at all with their RA. Many of the Autistic students had no expectation of any sort of relationship with their RA, and in those cases, there was almost no relationship built at all. Some Autistic college students, like Michael, had no relationship with their RA, never mentioning his community's RA once in our interviews; speaking about the RAs as a larger group with whom he had had only negative interactions. Dean said of his relationship with the RA from his first year,

I honestly don't even remember much about that interaction. It generally didn't go super great I would say. I think this was part of a matter of I hadn't really

yet learned how to talk to people, and my stemming behaviors just weren't as well under control at the time, so it just made for a less than pleasant experience.

Dean's reflection of this experience shows his lack of relationship with his RA at a time in his own development where he did not know how to communicate his needs or control his behaviors. A time when a supportive relationship with an RA could have aided him. Phoebe shares a bit about her experiences with relationships that reflect challenges she has had,

one of my biggest things is that I'm terrible at reciprocating, and I don't know when is appropriate to respond to something. I don't know when it's appropriate to not respond, so I err on the side of don't respond because I don't want to be too much. So, I'm not good at building relationships from scratch.

Both Phoebe and Dean express the challenges they have had communicating when it comes to relationships as part of their Autism diagnosis. The RAs express their relationship with their residents as easy and trusting, sharing that they can easily relate to their residents. However, Dean and Phoebe share a different story that relationship building, and communication may be challenging for some students.

While Dean and Phoebe explain challenges, they had with building relationships, with their RA, N4 talks about his relationship with RAs in a more transactional way. "I was fortunate, I didn't have to call on the RAs very often for their actual RA services or however you want to call it." for N4, the RA was a resource to be called upon for certain services, it was not part of N4's expectations that he would develop a relationship with his RA outside of this transactional one. Dean also expresses

a contentment with a more transactional relationship with RAs "the RAs have been super helpful, both in terms of just saying hi, and checking in on how I'm doing, and being able to help out with resident concerns some, some maintenance things; I've had a couple of lockouts." Dean sees his interactions with RAs as positive and helpful, because they met his expectation of transactional support. Unlike the RAs, who expressed desire to have meaningful conversations, and build relationships with residents that resemble close friendships, some of the Autistic college students did not express the same expectation of that relationship.

For other Autistic college students, in particular Phoebe and Riley, a closer relationship did emerge with their RAs. These relationships came about in both cases when the RA approached the student and expressed a desire to provide care and support. Phoebe describes,

my RA freshman year, she was wonderful. Absolutely wonderful. I loved her so much, like she was, she was our mom that year. She was just so, so lovely, always really cared about us and just absolutely was, someone I knew that would be there for me no matter what. And it never felt like she was like, checking in, just because it was her job. It always felt like she actually, genuinely cared. And that is something that I'm so grateful for.

Clearly, Phoebe's RA was someone who continuously showed support and care towards Phoebe. Riley describes his relationship with his RA,

I could always go to him. When I was, when I was struggling there, while I was living in the dorms, he was one of my safe spaces. There was one day early on,

where I was feeling like garbage, not enough to melt down or anything, but it was a bad day for me. And Nick looked me right in the eyes and said, "look man, if, if there's anything that is bugging you, if there, if there is something wrong, you can come to me. I will be a shoulder for you."

Both descriptions by Autistic college students of their RAs depict the RA reaching out to them, building a genuine relationship based on knowledge of the two students. This relationship gave the Autistic college students, both of whom have experience with depression and anxiety, a person whom they could rely on as a support. Phoebe and Riley may not have begun their time in the residence halls expecting to have these sorts of relationships with their RAs. However, their RAs reached out to get to know them and intentionally let them know that they cared and were a support for them, building trust in the relationship. As a result, both students, in times of need, reached out to their RA for support and received it.

As with the expectations around the roles of RAs and residential students, expectations around relationships between RAs and residential students differs from student to student. The consistent finding is that Autistic student and RAs have differing expectations of one another and what their relationship will look like. More supportive relationships develop when expectations are communicated clearly, and efforts are made to understand the expectations of each other. Autistic students may not have any expectation that their RA will have any sort of relationship with them, yet the RA has the expectation of building relationship with their resident. This finding shows that the lack of expectation around relationship has been a self-fulfilling prophecy for some Autistic

students, if the RA does not reach out to them to build it. The Residential Learning Model dictates that RAs do, in fact, build relationships with each of their residential students.

RAs must be the one to reach out, to let their residents know that they want a relationship, as the Autistic students may not share that same expectation.

Expectations of Policy Enforcement and Structure

The importance of rules came up with the Autistic participants and with some of the RA participants as well. This theme reflected student's expectation of the need for rules, and the frustration when rules were not enforced. The inability for those around them to follow the rules led to lack of trust, judgements about character, and feelings of discomfort. The expectation of rule following is deeply ingrained in some of the participants. This finding reflects a need for residence life to examine the policies within the halls to ensure they are accessible to all students, and then enforce them consistently. These expectations show that lack of enforcement undermines trust in the RA and the safety of the halls for some students. RAs who create an environment where students all understand and adhere to the policies of the residence halls also reinforce the trust and ability for all students to feel safe and like equal participants in the environment.

The Residential Learning Model does not directly discuss rules or their enforcement. All residence life policies are in the residence life handbook, online. All students who live in the residence halls are expected to know all the policies and adhere to them. While this finding does not directly relate to the model itself, it came up enough and with enough specificity that I consider it a finding of this evaluation. The rules and

the educational enforcement of rules relate to the Residential Learning Model because they act as a conduit to learning in the residence halls. They are enforced educationally, and they exist to help facilitate a learning environment.

Autistic Student Expectations of Rule Enforcement

Adherence to the rules is very important to a few of the Autistic college students. N4's expectation is that when a rule exists, everyone needs to follow it. N4 shared a suite with six other men, N4 describes them as loud, and that they played loud music a lot during his first year. N4 says about his roommates,

I'm sure they're not bad people, but could you turn it down, this is really loud music, that's really annoying me, and that it's breaking several rules for you to be playing the music is loud, actually. Like there you can be heard, on the suites across the hall, there's a specific rule that says, you need to turn it down.

While N4 states that he is sure the floormates are "not bad people" this lack of rule following brings up feelings for him regarding their character. N4 also talked about his first impression of his roommate at an orientation event in this example,

The rules of this game were very, are very simple, you say your name, you say who the wind blows for, and then you take a spot. But I noticed my roommate, he ended up in the middle and he said I do this, and I thought to myself "wait a second, you didn't say your name." My immediate, thought, is "you're not, you're not following the rules you're not paying, you're not paying attention, are you?" And it's like that's such an insignificant little thing, but it immediately sent me to wonderingly he's not, I don't, I don't quite have the words for, but it

immediately sent me thinking that he's not super responsible and that he isn't paying super close attention.

This is another example of the expectation that N4 has about his peers' adherence to rules, and how that possibly impacts his relationship with those around him. This example, of another student not getting the rules of a game correct, is something that has stayed with N4 for three years. Both examples show a distrust of those breaking the rules and an immediate judgement about another's character.

Phoebe explains that the lack of rule adherence from her peers and the lack of enforcement by the RAs do not just make her uncomfortable, but unsafe in the environment.

The disrespect that I see all the time. It just, it makes me sad like, there's been times where I just, I don't feel like, even safe with some of these people because they're just so disrespectful.

Phoebe goes on to describe the attitude she has seen from some RAs regarding their ability to enforce the rules,

I'll be your buddy. I don't really care about the rules. No, that's, that's not why you're here. That's not why we need you. We need you for a very specific reason. If I can't count on you to go enforce these things, then what do we have here to uphold that safety net, you know? And it's that's, that's kind of frustrating to me because I, as like one of the one of the traits of ASD, is that rules are very appreciated and having those broken constantly is just so frustrating to me.

Clearly, for some Autistic students, the presence, adherence, and enforcement of rules is very important to their sense of comfort and safety. Phoebe describes a situation that could be common in the residence halls, RAs who are concerned with the desire to be friends with their residents, who, because they may want to be liked, do not enforce policy consistently. Phoebe describes how she has felt when this was the case, and how RA have made her feel frustrated and unsafe.

Importance of Consistent Rule Enforcement

Some of the RAs spoke about their experiences as first-year students, living in a community and the rules that were in place at that time. Like Phoebe, RA Claire expresses how she felt about her own RA not adhering to the rules, "I didn't like my RA; I didn't respect her. As a rule follower, who reads the residence life handbook once and knows it cover to cover, I knew she was not abiding by the rules of her contract." Like N4 and Phoebe, the RA's lack of rule following led to RA Claire losing respect for her. Rules and enforcement of policy are important to Autistic students and, as evidenced here, RAs as well. For these students rules reinforce feelings of trust and safety in the community and those in it.

The expectation that rules will be enforced by the RA is clearly important to these students. The Residential Learning Model, while based around programming and interpersonal interactions with residential students, also supports the Residence Life Handbook, which outlines all student rights and responsibilities, and all policies. The relationship between the two guiding documents may need to be more clearly defined for all members of the community. When some students are not held accountable to the rules,

or the RA is inconsistent enforcing policy, it may undermine the need for policy, resulting in students feeling uncomfortable and unsafe. This creates a barrier to those students engaging equally with the Residential Learning Model, the RA, and the community. The inability to engage fully, either due to unnecessary barriers or miscommunication of expectations, also results in lack of relationship between RAs and their Autistic residents.

This finding relates to the first research question, regarding Autistic student experiences with the Residential Learning Model. The RAs and Autistic students had different expectations of what each of their roles were and how they interacted with each other. The Autistic student participants in this evaluation were able to engage and take advantage of the learning opportunities the model offers, when they were engaged by the RAs and when trust was built between the student and the RA. These variant expectations may have led to lack of trust or connection between Autistic students and their RAs and as a result, lack of participation in the Residential Learning Model. These relationships that were formed when expectations were met or the gap between expectations was closed, lead to the second finding, that relationships with peers, RAs, and with the school matter when it comes to the Autistic student experience in the residence halls and when it comes to their attitudes regarding their persistence at Mines.

Exploration of these two themes lead me to the first two findings of this evaluation. First, different expectations of RAs and Autistic students may impede Autistic student engagement with the Residential Learning Model. The other finding based on this theme is that consistent policy enforcement matters to Autistic student

participants. Both of these findings are further explored in chapter five, as are the recommendations for implementation in the Residential Learning Model.

Theme 2: Relationships

The second theme, relationships in the halls, is also broken down into subsections, they are: (1) Relationship with Mines, (2) Relationships with Peers, (3) Intentional Interactions, and (4) Involvement on Campus. The subsections build upon one another. The student relationships with Mines mirror their relationships with their peers. Students with stronger relationships with peers have a greater connection, or relationship with Mines, and students who struggle to build relationships with peers, have a weaker relationship with the school. The context for how those relationships formed are involvement on campus and intentional interactions in the halls.

Relationships are the major finding on which the other findings are based.

Relationships matter to every participant in the study, but they are formed and maintained differently by Autistic students and RAs. The residence halls and the interactions within them create the context for how relationships are formed. Every one of the five interviews conducted with Autistic college students revealed a strong desire to connect with other students and build friendships, yet only two of the Autistic college students discussed actual relationships that they maintained for any period, with another student. All the Autistic college students, even those who talked about having close friendships, struggle to maintain close relationships. Conversely, all the RA participants discussed relationships extensively, as motivation to become an RA, as a member in a floor community themselves, and as a member of the larger RA community. Some RAs

discussed some feelings of loneliness in the context of their role as an RA. All the Autistic participants discussed feelings of isolation, loneliness, or inability to build or maintain friendships, even when strongly desired. When it comes to the Residential Learning Model, relationships and community building are hallmarks, the foundation of the model itself. These findings show areas where the Residential Learning Model could aid in the facilitation of relationship building between RAs and their residents and between peers in the residence hall environment.

Relationship with Mines

The Autistic student participants and the RA participants all discussed Mines as an entity, personifying the institution as if it were a person. As I continue to read through the data and consider the way the students personified the institution, I determine that the relationships are not with Mines per se, but with the people at the institution. Students also discuss the relationships they have with themselves, and their pride in the attainment of knowledge, skills, and confidence. Students also discussed their relationship with the feeling of belonging that they were or were not able to find at the institution. When I discuss these relationships with Mines, I take into account these varying ways that students personified the institution to represent the other relationships they have formed in their time at Mines. More, this section discusses these relationships in relation to the attitudes that the students have regarding their own persistence at the school. The Autistic student relationships with peers and with Mines mirror each other. Those that struggle with friendships, view their persistence at Mines as a means to an end, something to get through. Those Autistic student participants who had some success building relationships

with peers and RAs have a more connected relationship with Mines, and view their persistence as an accomplishment. One of the guiding research questions for this evaluation is to discern how interactions with the student staff and the Residential Learning Model encourage Autistic student persistence, if at all? Each participant was asked why they chose to stay at Mines. There were differences between the RA answers and the Autistic student participants, differences that reflect the student experience, not just in the residence halls, but as a Mines student. I found that students who had relationships with RAs and peers speak about their choice to persist through Mines as a goal they want to achieve, an accomplishment. This is true for all of the RAs and for three of the Autistic students. For two of the Autistic students, Michael and N4, who did not build relationships with RAs, or specifically talk about affirming relationships with peers, see their persistence as a convenience, they started at Mines, and moving would be difficult, so they stay.

RA Relationship with Mines

Conversely, the RAs talked about their time at Mines as an experience, speaking not just about their academic learning and accomplishments, but about their overall connection to the institution. RA Peter explains that the people at Mines guided his persistence, "the community is so close here, everyone's taking the same classes here your first year and that really gets you close to everybody. So, the community has really kept me here." As a result of experiencing the same course work together, RA Peter feels close to his classmates, like he is part of a wider Mines community. RA Maria, an

international student from Trinidad and Tobago, talks about Mines as a place where she has grown and, in her words, "blossomed."

At home we have this saying, people can take things from you, but they cannot take your knowledge, So, that was kind of really ingrained in me. So, when I came for preview of Mines, just like googly eyed and said, oh my gosh, this is a magical place and it really is, no lie! When I came here, not being home, it doesn't have Triny's or even Caribbean students here, but because Mines is a place where you can blossom and become whoever you would like to be.

Mines has given RA Maria the opportunity to grow into herself. She does not mention the classroom, or the difficulty of academics, instead, she talks about her knowledge and her growth as part of being at Mines. RA Cass talks about her academic department, not in terms of the classes she took, but as a way that she has been involved with the department and the leadership roles she has taken on. "I joined our women's society, got a leadership position, and started advocating more in my department. This year I'm on a diversity inclusion and access committee for our department. I feel like such a leader on this campus." The RA participants consider many areas of their life on campus that have contributed to their college experience, contributions that have led to their persistence.

Autistic Student Relationship with Mines

Many of the Autistic college students talked about their persistence in terms of academics or in terms of overcoming a great hurdle. The focus was not on relationships or the overarching experience, but on making it through. Dean, like some of the RAs has

different reasons for staying at Mines and attributes a great deal to the support he's received,

it's definitely the staff and the faculty being supportive... I do really feel like I am truly welcome here, and that people do truly want me to have a good experience here, and that has been a big factor for making me want to stick around.

Dean was the only Autistic participant to talk about belonging at Mines. Most of the other Autistic college students discussed their persistence as an exercise in determination or a need to just finish what has been started. Riley states,

I told myself, I will be damned if I don't finish it. I, I could take the easy out and just drop and find a career, I could take a less easy out and switch schools, but I stay because I promised myself that I would see Mines through. That I would get my degree, one way or another, eventually. And granted it is taking its sweet time, but I promised myself that I would get there, and so I'm going to keep that promise to myself.

Michael talks about staying at Mines not only because he is determined to accomplish his goals, but also because it is easier to stay than to start over,

I still want to be an engineer. It's much more daunting now, but I think that will only add to the pride I will feel at graduation. I also don't want to leave because it feels like quitting. Plus, if I leave, I will just find the same problems at another university and have to learn to adjust all over again.

N4 came from a similar perspective, "leaving seems like it would be hard. I can get my bachelor's here, there's a program that'll get me my masters shortly afterwards and

leaving sounds like it would be difficult, the professors all know me at this point." While N4 has expressed disappointment in the academic rigor, now that he is in his third year, it is just easier to stay and continue the path he started. Finally, Phoebe talks about even greater hurdles that she faces. Her desire to stay at Mines is also a desire not to succumb to thoughts of suicide,

I am here now, and I have to stick it through and that the, the choice to escape that black hole is mine to make and it's one that I have to make. And I can't just passively go through this. I have to make a concerted effort to make sure that I get out of here alive. Because I want that.

Phoebe expressed that seeing her way through Mines was keeping her on course to also take care of her mental health.

A Difference in Perspective

Students like N4 and Michael persist because it seems like the easiest route to attain their goals of being engineers. Other students like Riley and Phoebe have committed themselves to persisting because they have set personal goals for themselves and want to see that through. Again, Dean talked about belonging and feeling welcome, expressing that those feelings aid in his persistence at Mines. These students are making meaning of their experiences at Mines in some way, but N4 and Michael do not reflect their own identity or relationships with others in their decisions to remain a student. They have different attitudes about their persistence than others, seeing persistence as a means to an end. Each student has had very similar opportunities to engage in the curriculum, the opportunities offered in the residence halls, and to engage with peers, but not every

student could access those opportunities in the same way. Persistence for the RAs is connected to their sense of belonging, their membership in a broader community and their own personal growth. Most of the Autistic students see the goal at the end, a place to work towards, rather than the journey the RAs seem to be experiencing.

Relationships with Peers

Participants' relationship with Mines mirrors their relationships with peers and between the RAs and Autistic residents in the halls. Those students who were able to build strong relationships with peers did so by being vulnerable, and allowing themselves to be known by other students in their residence halls. This skill is not one that everyone shared, RAs along with Autistic students sometimes struggled with relationship building in this way. Many felt pressured to quickly bond with other residents, and then felt isolated when they saw other students forming relationships where they struggled. Relationships in the residence halls are nuanced and different for every student, however the ability to be vulnerable helped to build relationship, while the inability to form relationships relatively quickly led to feelings of isolation. The skills needed to connect with peers in order to build relationships is not shared by all students, certainly not by many of the Autistic student participants.

The Role of Vulnerability in Building Friendships

Many students speak about their relationships in the halls, some of those relationships are affirming friendships and others are not. The common thread between the more supportive relationships that students experienced is the ability to share

about themselves, to get to know others and feel known in return. When Autistic college students were able to do this with peers, relationships were formed.

Dean shares his experiences with his small, residential community his first year, "the other students, it was a bit rough at first, but they were really good to me. Once they understood who I was and how I acted, they were really supportive, and that was very helpful." Dean explains that it took some time for he and his peers to learn about each other, and for them to understand him, but once that happened, relationships formed. Phoebe also describes an important relationship, "we got really close really quickly, within the first couple week it was like, let's share trauma stories. So, we got really close." Phoebe, like Dean, talks about the creation of relationship out of the effort to get to know someone and to allow that person to get to know her. Both Phoebe and Dean's experiences are not unique to students on the Autism spectrum. People build relationships every day by working to get to know peers and allowing themselves to be known in return. What might be most unique is that for both Dean and Phoebe making friends had never come easily. Phoebe expresses that her Autism diagnosis, which she just learned, gave her a sense of understanding about why close friendships had always been challenging,

Friends never came easy. I always felt out of place and like the social manual I was trying to read was in a completely foreign language. It wasn't until later that I realized these struggles could be associated with my then undiagnosed Autism. I made it through, but only once I got to college did I actually start to understand things better. I attribute this to the res halls.

Dean and Phoebe describe friendships with peers that came about when they allowed themselves to be known and worked to make friends, or someone acted in kind to them. Among the Autistic student participants, that was not the norm. Other Autistic college students express challenges in making connections with peers when they got to Mines. N4 describes disappointment in not finding people whom he could relate with,

I was expecting, and people told me, both former students and the people trying to advertise the school to me, that I would find people who are more like me. People who care about studying in the way that I do, or who have an enthusiasm for math, the way I do. I really haven't run into that. I'd say my biggest disappointment is that I was led to expect a certain type of student, I guess, they're present, but they're rare, and I've run into very few.

While Phoebe and Dean found people to build relationships with, that was not the same for N4, nor was it the case for Riley or Michael. Riley talks about the issues of living with other students and the need for privacy that was out of reach because his roommates were not people who he felt comfortable being vulnerable with.

The hard part is that living with roommates, it was kind of hard. I didn't really have opportunities to break down to myself. Whenever you just were overwhelmed with the world, there was basically almost always someone there, which was embarrassing. And well since my, my roommates, were not mental health experts or anything, so they couldn't really help me in that regard. So, I usually found places outside of my dorm.

When asked what a breakdown looked like, Riley explained that it was when he was overwhelmed, that he just needed to tune out and be "off." This is not easily accomplished when you live in a triple occupancy room in the residence halls. While Riley did make friends his first year in the halls, he did not maintain those friendships, although he does have friends now. Michael speaks of being on the "outside" of friendship groups, of not being known or knowing people well enough to get close,

It's hard for me to feel valued or included in other people's lives. I also don't know a lot about what's going on in other people's lives, so it's hard for me to understand their behavior if they are having a bad day or if it's something I said. I'm typically not in that inner circle where I can get to know them well enough to get the meaningful conversation, I want.

While N4, Riley, and Michael all have different reasons why they did not build relationships with others, none of them built lasting relationships with their peers. For Dean and Phoebe, who have made friends and built relationships, they are grateful to have those friendships in their lives. For Riley, living in the residence halls did not result in many friendships, but he has since cultivated friendships through membership in a fraternity. However, for N4 and Michael, there is a lack of connection that each of them regrets and that has negatively influenced their experience as a student in the residence halls. Michael sums this up, "I still don't have friends, and I still feel like I have an empty hole in my life."

The Friendship Window

Some participants described what felt like a window of time that was the designated time to make friends or get involved on campus, a short window, lasting a few weeks at the start of the college experience. This felt to some students that if they did not build relationships or make connections in the first few days of getting to campus, then it was too late for them to connect at all. Michael had a similar statement, "everyone's excited to make friends and have the door open for the first few weeks before they start closing off, and everyone, just like settles into the niches they're nearby." Michael explained that he didn't feel like he fit into a group, and as a result, he never really connected. Phoebe talks about this window of time to explain how she felt about trying to join a student organization on campus,

I remember I tried to go to a couple first meetings for clubs. But it wasn't first meetings, it was like, third, or fourth meetings but that was the first time I had tried to go, and it just felt wrong, everyone else already knew each other. It was past the collecting people stage. I felt like an outsider and even if these people were trying to be welcoming, I never felt like I was allowed to be there, so I never went again.

This finding regarding the perception of relationships forming rapidly and between students in close proximity, as the case for RA Taylor and Michael paints a picture of the experience of trying to build connection and make friends in the residence halls. Phoebe explains the feelings of not feeling "allowed" to be at a club meeting, as relationships had already been established before she felt prepared to attend a club meeting. For some

students being able to connect and bond right away, may be taxing as they try to learn about their new surroundings and the academic responsibilities, they will have in their first few days. These stories where students felt a lack of connection because they did not feel like they belonged is pervasive throughout the Autistic experience in the halls. Many of these students perceived, whether correct or not, that other students had built relationships and that they were not meant to be included in those relationships, that the time had passed for them to be part of the group.

Feelings of Isolation and Loneliness

The feeling of being alone, or like others do not understand or "get" you, is something two students specifically talked about, and others hinted at without talking specifically about it. A few of the RAs also talked about feeling isolated within their roles. A situation that it is sometimes difficult to navigate, balancing the relationships they have with residents, and with friends who are not RAs and may not understand the unique position of the RA. Students with Autism Spectrum Disorder sometimes spoke very bluntly about the sense of isolation they feel, and others talked about it in more subtle ways, like not being in on an inside joke, or reading a different manual for building friendship and connection than other students seem to have. N4 talks about an interaction he had when he joined a group of students who lived across the hall from him,

I was telling a joke, and I was not even halfway through the joke yet and, then they all just started laughing really hard, and I was confused as to why. And then suddenly they were talking loudly, and the topic shifted, and I got very confused and I asked "what's going on?" and apparently earlier that day, someone else had

said something really stupid, while they are dinner together, and so this joke mistakenly set them off, and it's very silly to be really annoyed, but I was, I couldn't help but feel a little upset, it was hard not to feel slighted.

N4 reached out to join conversation with a group yet, he could not contribute or feel a part of the group, because he did not have all the information that the group had, making him feel slighted. This relates to Michael's earlier explanation of not feeling part of a group, of feeling like the outsider.

Phoebe describes her friendship as a bookshelf that must be built and maintained, but sometimes her bookshelf building manual is different than her a potential friend, they can read my manual, but I don't understand how because it's in a language that I've never seen, and I don't know how to read it. Even if it gets translated for me once, that's not enough. I need someone to help me translate every time I try to build a new bookshelf. I can get a little bit more practice each time, but all those nuances are still going to have to get translated.

This metaphor of Phoebe's paints a picture of the challenges Phoebe has with making friends (bookshelves). Building them and making sure they stay in good condition is a challenging task because she is building a relationship and she is not confident that she knows what to do to and she is not sure the other person will understand her ways of understanding the world and the relationship. These interactions with peers may pose challenges, but N4 and Phoebe did not specifically talk about negative interactions that explicitly made them feel isolated or alone. They describe situations where they feel like they do not quite fit. Dean, on the other hand has had a very negative experience with

another student at Mines, one who tried to make him feel as if he did not belong. "There was one person who got up in my face and said, someone like me does not deserve to be at Mines. That I'm taking the slot of a student who deserves to be here." Dean goes on to describe the fact that around the time of this interaction his bicycle tires were slashed on two different occasions. Such overt bullying and purposeful ostracizing, is something that other Autistic students may experience as well. Michael describes a profound sense of isolation,

because I'm the one that's autistic, I spend most, most of my relationships feel one sided where I'm working my ass off to speak and communicate in a way that's understood and understand other people. So, not many people like, naturally get me.

At another point in our discussion, Michael states that, "it's hard to describe the profound feeling of isolation that comes with being autistic." The stories shared by the Autistic college students reflect challenges with relationships that were not reflected in the reflections of the RA participants. The challenges around relationship building or the inability to build friendships at all are tangible for the Autistic students in this evaluation, resulting in loneliness and isolation for some of them.

While the RA participants did not describe feeling isolated from peers or lack of ability in forming close friendships, they do describe a sense of isolation in their roles. There are only 68 other students on campus who are RAs, and there is only one RA per community. RA Cass described the boundary between RAs and their closest neighbors, the residential students who they live with and serve.

I think these roles can be very lonely and very isolating even though their intention is to not be. In terms of boundaries. It's just not appropriate for an RA to go talk to a resident in their room at 3am, it doesn't work the same way it does when you're a resident with another resident.

RA Cass cannot just knock on the door of her next door neighbor to talk through her feelings. Her closest friends are not closest to her in proximity, and she feels a bit removed from the community she leads as a result. RA Peter describes similar feelings "that's the hardest part of this job is just like coming back to your room at the end of the day and being alone." RA Peter and RA Cass are both leaders within the RA community. They mentor other RAs and therefore have even fewer connections with peers within the residential communities where they live. RAs do not live with friends, their relationships with their closest neighbors are friendly and supportive, but not intimate, as they hold a place of power over the students they serve.

While both groups of students describe feelings of loneliness and isolation, the RAs describe that feeling because of the role they have chosen. They do not describe any feelings of isolation or loneliness as a result of their identity or the way that their peers perceive them. Feelings of isolation and loneliness for Autistic college students has been linked to depression and thoughts and behaviors around suicide (Jackson et al., 2018). Yet, there is a desire for Autistic college students to make connections and to make friends (Knott & Taylor, 2013; Van Hees et al., 2015), and that desire has been reflected through the stories of the participants in this evaluation as well. Michael described the strong need to make friends,

I can't go through this school alone. I need a "wingman" for girl troubles, I need a study buddy for hard classes, and I need more than one so my whole social life isn't riding on a small handful of people.

For many of the Autistic participants the challenge of "trying to figure it out" play a large role in their daily lives with peers.

Community is one of the central pillars of the Residence Life mission and one of the learning outcomes that drive the Residential Learning Model. The connections, or lack thereof, described here, and the feelings of loneliness and isolation described by RAs and Autistic participants alike, display a need that could be incorporated into the model to help build community. The forming of relationship, no matter how those are perceived, is a need for participants to fully gain the benefit of the Residential Learning Model. The understanding of community and one's place within it is not being realized, so long as the cultivation of relationships is not fostered. There are two areas where the participants are able to build relationships with both peers and with the school. Intentional Interactions, as outlined in the Residential Learning Model, create opportunities for RAs to get to know residents individually. The second area is through involvement on campus, which I outline in the next section. Although opportunities to engage are often missed, due to lack of effort by the RAs and lack of understanding or ability by the Autistic participants, when executed thoughtfully, these interactions helped build relationship between RAs and Autistic students.

Intentional Interactions and Programming

I include intentional interactions and programming under the umbrella of relationships with peers, because these two strategies are the main ways that the RAs have of cultivating relationships with and among their residential community.

Educational and social programs, as well as intentional time spent with students, called intentional interactions, are the strategies to reaching the learning outcomes of the Residential Learning Model. While different levels of attainment of the outcomes are achieved, the goal is that learning occurs for each student. Some of the Autistic college students noted that they had learned from or at least appreciated the one-on-one interactions with RAs and the programs that allowed for social interaction. Some saw these interactions as challenging and unhelpful, and not at all educational.

Learning as a Result of Intentional Interactions and Programming

Dean talks about his interactions with the RAs as supportive, "the RAs have been super helpful just, both in terms of just checking in and saying hi, there has definitely been some intended interaction, trying to get to know me, making sure I'm doing well." For Dean, his RA reaching out to check in and get to know him helps him to feel like he is supported. Dean also talks about the benefits of attending social programs and getting to know his peers. He appreciates being able to be social and to get to know peers, who in turn help him to be more self-aware about his impact on those around him. Phoebe talks about her interactions with the RAs, "I'm really grateful that I've met these people that have pushed me to advocate for myself and that have advocated for me." Through intentional interactions with her RAs, she has learned to advocate for

herself, a skill she did not have before. Her RA helped her to learn skills and gain confidence through their intentional interactions.

The RA Perspective of Intentional Interactions with Residents

The RAs described their interactions with residents, when it comes to implementing the model. RA Andrew describes the intentional interaction strategy and how it has worked with different residents with different needs.

For the residents that are engaged in having intentional interactions, they really enjoy that we spend a good 45 minutes to an hour just talking because they they're into it, I want to do it, and I want to have a meaningful conversation with them, I think, in that sense it goes well. There are other residents who I have more difficulty reaching out to, and I think that, in terms of intentional interactions it's more of a requirement as opposed to an enrichment to our regular interactions.

RA Andrew, when residents are "into" the idea of engaging with him in an in-depth conversation, the result is a positive interaction for both of them. For residents who may not understand or appreciate this approach, or whom RA Andrew does not know as well, it feels more like a chore, rather than a natural way to get to know his residents. RA Cass has also noticed this, "some of the residents that are a little more hesitant to talk on these topics, it's because they like don't feel a personal connection to their RA." RA Andrew and RA Cass both describe situations where a lack of connection between RA and residential student can result in the outcomes of the Residential Learning Model not being achieved. It is unclear if the RAs know what this lack of connection means to the residential student. More of the RA participants talked about the strategy of intentional

interactions. RA Maria describes these interactions as providing "a space where I can have uncomfortable conversations with my residents, were the best." Clearly, for RA Maria this level of conversation that may have led to discomfort, was a positive learning experience for her and her residents. RA Taylor thinks that the interactions help the RAs get to know their residents on an individual level, the strategy helping the program be "more introspective, in its intentions and its execution. I think it has been a really positive experience for the residents, because now they're not being overlooked as much." RA Taylor describes the intentional interactions between students and RAs as positive, ensuring that no resident is overlooked. Both RA Peter and RA Claire describe these interactions in very positive terms. RA Claire shares that these interactions with residents allowed her to have more meaningful conversations with the students living in the halls. RA Peter says "I felt actually that I was able to educate my residents more through intentional interactions. That is where I had the experiences as an RA, the real, true, educational experiences where people really think, and their mind opens up." The intention of the Residential Learning Model is for students living in the halls to learn and grow in the program, and RA Peter saw real learning take place through these interactions. Similar to the expectations theme, the RAs speak about the intentional interactions and programming with residents in largely positive ways. Yet, the Autistic students do not always share those same positive stories, sharing examples of fear, frustration, and lack of connection. There is a disconnect between the RA perspective and that of Autistic students living in the halls that must be given attention.

Autistic Student Perspective of Programming

While some of the programs and initiatives of the Residential Learning Model had their desired effect on the students, some describe negative experiences with their interactions and attendance at programs. While Phoebe appreciated her interactions with the RAs individually, she struggled to attend programs.

I know there were several programs freshman year that I did not attend even though I wanted to. There were programs that would be put on by Res Life that sounded fun, but my friends and roommates were not interested in going. I was too afraid to go alone.

Rather than look at a program as a way to meet people and build new relationships, Phoebe was afraid to attend without the safety of those she knew. While Phoebe was afraid to attend programs, N4 describes a time he attempted to participate in a program, but became frustrated, "then I just kind of went "screw it!" and said I resigned and left. I don't really wish, I'll be honest, I don't wish I'd stayed later, there's no part of me that regrets that decision." While N4 does not regret leaving the program, he missed the opportunity to engage socially with his peers and the RAs who put on the program, because there were barriers to his engagement in the program which led to his frustration.

Some tried to attend programs by themselves, but said they often left right away (N4), or felt awkward, or would only go if they knew someone else was going (Phoebe). Barriers were a lack of personal invitation, feeling welcome, or time. For several Autistic students, attending programs was dependent on feeling welcome or comfortable at the

program, as is the case with N4, "there are some things where I left after a few minutes. I probably said something about needing to study and then went and studied, whether or not I actually had to." N4 found ways to leave programs that he attempted to attend, but when he felt uncomfortable, he did not want to stay. This is also the case for Michael and Phoebe. Michael talks about social programs being taxing on him,

if there's a schedule, something to pay attention to other than the conversation [I am more comfortable], because then I can, if the conversation goes somewhere that I don't understand, or don't want to partake in, I can still participate and feel included. If the event is not interactive, then you're interacting with other people, and that, I can usually maintain that for about 30 minutes is my limit.

Michael needs programs where there is something to do, interactive programs where he is not expected to keep up small talk, as that is more difficult for him. Phoebe also talks about going to programs and the worry that she has about feeling overwhelmed and needing to leave being a barrier to attendance at all.

It was just going to get really overwhelming really quickly and then I wasn't going to be able to actually enjoy it, even if it sounded like something that was really interesting to me. So that kept me from doing a lot of things because I was scared. I didn't feel welcome because I knew that if I did go and got overwhelmed, there might not be an easy out or something like that, it would turn into this whole thing.

For all of these students, attendance at programs could be challenging because they were overwhelmed or uncomfortable.

Finally, involvement in clubs, organizations, or work on campus helped some students to cultivate relationships with peers as well as the school. Involvement for the RAs, taught them skills, built confidence, and connected them to peers. Autistic students who were able to engage in campus organizations benefited like the RAs. However, several of the Autistic student participants could not get involved for a myriad of reasons, yet all resulted in missed opportunity to build relationships.

Involvement on Campus

Finally, for many of the participants, getting involved on campus, or not getting involved tells a story of their relationship with the school. For a few RA participants, involvement is attributed to learning, friendships, and their connection to Mines. For some of the Autistic college students as well, involvement has connected them to peers and to the school, but for a few, involvement on campus was either fleeting, challenging, or has not occurred. Again, the disconnect between what the RAs experience and value for their residents and the actual experience of the Autistic students in the halls is evident when it comes to involvement in clubs and organizations on campus.

Riley talks about being involved in a fraternity and that has been a source of friendship, connection to mines, and support, but because he struggled with some courses as a first-year student he could not join right away, having to work first on his academics before he could join. "I actually am now a Fiji. It attracts a lot of the same personality types uh, that I get along with. A lot of people who get, have passionate hobbies, particularly around games and fiction." For Dean his lack of involvement on campus is

something he regrets, and his lack of involvement also came because his coursework had to come first,

my general just sort of regret is that I just never really got involved much in the way of clubs around Mines. All of their meetings were always either during classes, or when I needed to be doing homework. There was a certain level of motivation in there at the time I just wasn't particularly interested in it, and then by the time I did start thinking about it was so hard to shift gears into it.

Dean has a strict schedule that he sticks to for studying and other needs, clubs and organizations did not fit into that schedule, which kept him from getting involved. Phoebe sees involvement in clubs on campus differently, she felt great pressure to get involved early on, but, like Dean and Riley, she had to figure out her academics first as well as feel ready to join.

I feel like there should be more understanding and less pressure to do all that stuff because it can be really taxing on some people, all the, get involved stuff, it just felt very pushy, and it felt very inconsiderate. Coming to college, it was like, "get involved on campus!" You gotta, you know, go join clubs and do all these things. I was like, I can't. I am just trying to understand how to *exist* right now. This is all so new, and I don't know how to do any of it.

While Phoebe did not like the pressure to get involved on campus, she did engage in a different way, through a job in the residence halls. It is unclear if Phoebe considers her job to be involvement in the traditional sense, but it has enabled her to get to know her neighbors and engaged outside of her coursework. Michael talks about being involved,

"Being on campus made it much easier to participate in student clubs, activities, events, and work study. I got to have a life here." Michael equates his involvement with having a life on campus. While Michael has made comments about a lack of friendships, he finds ways to engage in organizations that interest him.

Several of the RAs talked about their relationship with the office of Residence

Life being their primary area of involvement, a place where they made friends and grew
as people. RA Taylor talks about residence life as being a contributing factor for his
persistence in college, "because as much as like my education is important to me. In these
years I chose to pour my heart and soul into residence life." RA Claire discusses her own
involvement on campus and what she has gained from it,

I realized that it was really important to me to kind of find those places where I feel like I'm contributing and then where I feel welcome, where I have friends. In college, I felt like I really got an opportunity to branch out and befriend people that I wouldn't have even spoken to before.

RA Claire's involvement on campus increased her feelings of connection and she built relationships with peers in those organizations. The connection that students build with the institution through involvement outside the classroom appears to allow these students to pursue areas of interest and build relationships with peers.

The Residential Learning Model does not focus on student involvement in clubs and organizations directly, except for encouraging all residential students to find a place to get involved, and the programs done in the halls, there is not a guide to help students

get involved. Yet, an on-campus job, or joining an organization is a source of engagement for the students in this study.

The relationships that were formed or not formed by the Autistic college students are important factors in their experience with the Residential Learning Model and with their persistence at Mines. Those Autistic students whose RAs reached out to them, were more engaged with their RAs, and therefore participated more easily in intentional interactions with their RA. Those students who felt supported and had affirming relationships with peers and with their RAs also have different attitudes regarding their persistence at Mines than those who did not form relationships with their RAs or their peers. These findings directly answer Research Questions One and Two. Autistic student experiences with the Residential Learning Model are directly influenced by the relationships they form within the halls, either with their peers or with their RAs. Autistic students are more willing and able to engage with the model and learn from it when they have established affirming relationships within the halls. As for Research Question Two, all of the Autistic students plan on persisting through Mines to get their degrees. None of them directly stated that their interactions with the RAs or the Residential Learning Model influenced that. However, those students who were able to build relationships with peers and with the RAs in the residence halls, have different attitudes about their persistence than those Autistic students who did not build relationships in the residence halls. These differences in ways of thinking about persistence indicate that the students who have a stronger relationship with Mines and

people at Mines, may be more likely to persist, and could have less challenges along the way.

The theme of relationships captures so many different ways that relationships are formed and maintained, or not. This theme led to the formation of the next three findings explored further in chapter five. First, relationships matter to Autistic student persistence. The attitudes that Autistic students have about persistence may be influenced by their relationships with peers, the RAs, their own feelings of growth or connection to the school. The next finding is that relationships matter to the mental health and behavior of Autistic students. The participants discussed how their relationships or lack of relationships led to growth and confidence building and sometimes to feelings of isolation or loneliness. The next finding to come from this theme is that the Residential Learning Model's Intentional Interactions and Programming requirements offer both opportunities to build relationships and can act as barriers to relationships. When these two strategies to student learning are implemented along with a genuine interest in getting to know Autistic students, affirming relationships can grow, however, when approached without care, trust and engagement may deteriorate between Autistic students and their RAs. The final theme, learning in the residence halls, is the foundation for the final finding discussed in the next chapter.

Theme 3: Learning in the Residence Halls

The final theme, learning in the residence halls, is also broken down into subthemes, they are: (1) Personal Growth and Change, and (2) Social Learning in the Residence Halls. The goal of the Residential Learning Model is to facilitate student

learning. The strategies and guiding literature for the Residential Learning Model recognize that students are at different levels of development, that growth and learning for each student will look different. All student participants in this evaluation learned as a result of living in the halls, most of what the participants described was personal growth and learning about how to interact and engage with others. What was learned was different for everyone, but it occurred for RAs and Autistic college students alike. Living in a community of their peers, as well as intentional interactions with RAs and programs in the halls, all lent to learning in the halls.

Personal Growth and Change

Growth through Challenge

A few of the Autistic college students talked about growth and learning that took place through challenges they faced. Dean discussed some of the challenges he faced before he got to know the individuals in his community, and they got to know him. He learned to think about how his behavior impacts those around him. "I think it really taught me that [my] behaviors, people might interpret as frightening or threatening. And that actually really helps me to keep them in check. It also taught me the lesson of behaviors have consequences." Dean learned several lessons about himself and how he interacts with those around him. Learning that he can make choices about his own behavior came as a result of living in the halls, in close proximity to his peers. He learned how his behaviors impacted the other students in his community because they shared those impacts with him. Through the conversations he had with his peers in the halls, Dean learned that his actions could frighten people, and he learned to temper his

outbursts through coaching from his peers and the RAs. The living environment and the people in it taught Dean self-awareness. Phoebe learned to reach out for support and to rely on the relationships that she had struggled to build,

how to cope in my lowest moments of struggle and sadness. I learned I can rely more on others and how to be more comfortable opening up about my hardships. Being forced to suddenly learn all this was hard, and I'm grateful that this gave me the opportunity [to learn] in a safer environment. At the same time, it just sucks.

Phoebe said several times that living in the halls *forced* her into learning, she met people who would support her in her roommates and in her RA, and she learned to share what she was going through with them. Phoebe names that the halls are a safe place for her to learn to do this, as the program is designed to be, allowing students the freedom to learn and grow with supports in place for them to do that safely. But she makes it known that the learning and growth came at a cost for her and that she struggles with it. Michael describes lessons he learned through some tough interactions with peers,

I had some self-discovery regarding my interactions with other people, [learning] what my sensitive points are. I know a lot more about what is good for me and what to step away from. It seems that the best time to grow and learn is under a struggle.

For each of these students, something prompted learning that was difficult to navigate socially. Like Phoebe says, "thank you, but it sucks, I have loved college because it's

forced me to go do these things. I hate college because it's forced me to go do these things, like it's never gonna be easy."

Confidence and Self-Authorship

Many of the students reflected areas of personal growth through their interactions in the residence halls and on campus. RA Maria talks about moving from not talking to many peers or being involved in anything to where she is now in the RA role, "I was shy. Especially not being home, it was a bit challenging, but being an RA, you know, I developed my skills, and I was able to open up and feel welcome." She connects developing social skills that helped her to share herself with people to feeling welcome. RA Peter similarly talks about how the residence halls have changed him,

truly being able to be comfortable in my own skin and making my own decisions and not relying on my parents or my family. I got used to living in a different community and it became exciting, and the feeling of independence and being able to do things my way. It's what made me more confident, I think.

RA Peter goes on to describe being more outspoken and able to share his opinions as a result of growth in confidence. RA Cass describes that she has learned to listen as a result of living in the halls, through her role as an RA, "learning to sit down and stopping listening to respond, and more just to understand, surprisingly became a very salient point over the years." The growth of social skills, personal values, and confidence that the residence halls facilitated for the RAs is tangible for them and they all attribute that growth to living in the residence halls.

For the Autistic student participants, personal growth and learning also came up when reflecting on what they learned in the halls. Riley talks about learning to take ownership for his grades and academic achievements,

at this point I care about my grades for my own sake. That, by far is probably the biggest difference, the mindset between motivation to just get through to make my parents happy versus motivation to get through to make myself happy.

This change reflects the goals of the Residential Learning Model, for students to develop self-authorship or ownership of their experiences, thoughts, and decisions. Phoebe reflects,

I think the biggest thing is that I have done a lot of personal growth. During my time here, I have learned a lot about myself. I have learned a lot about how I can and need to interact with other people. I've really grown up.

Riley, who has struggled with mental health issues since middle school, has "learned to be much better about acknowledging and managing my mental health." N4 states that living with roommates,

I learned to be a little more patient, and I learned to be more flexible in some ways, and I've learned how to not get as frustrated when things, I don't want to say when things don't go my way, because that makes me sound like a petulant child, but you understand.

The skills developed while living in the halls, interacting with peers, working through challenges and frustrations without resorting to outbursts, and maintaining one's health, are important life skills that will continue to develop after these students leave college.

These skills were facilitated because of the interactions and experiences they had in the residence halls.

Social Learning in the Residence Halls

The participants all reflected on what they had learned as a result of living in the residence halls. Social learning, or interpersonal skill building, emerged as a particular point for all of them, RAs and Autistic participants alike. Some of the learning that takes place in the halls is not orchestrated by the RA staff at all, it occurs as a result of interactions that students have with other students in a living environment. For all of the participants, some sort of social learning took place as a result of living in close proximity to their peers.

The RA participants discuss their experiences as students living in the residence halls their first years at Mines and their learning from the RA role. RA Claire describes lessons she has learned as an RA working with the students in the halls, "I think I'm more thoughtful, I feel slightly more aware that we are all kind of going through our own stuff, whether good or bad, and then everybody probably deserves a little bit of extra kindness and empathy." RA Peter also described, "realizing that everyone's a person and everyone's making it up as they go." Both RA Peter and RA Claire learned to be more understanding and empathetic as a result of learning from their residents in the halls. RA Andrew talks about his experience as a resident his first-year, "I learned a lot about respecting other people, whether that be their identity, their property, or in any sense of the form of respect. I think that the environment that we wanted demanded trust and respect." Andrew talks about "the environment we wanted." He went on to describe

that his community of peers his first year decided together what they wanted their community to feel like. As a result, he felt engaged and connected to the community and as an RA has tried to replicate that experience for his residents. All three of these RAs describe some sort of values development as a result of living in a community with their peers. Some of the other students describe more practical skill development, like RA Maria, who honed her communication skills through a challenging situation with her roommate. "[I learned] how to effectively communicate, because with my first roommate, I think the main thing was we weren't communicating properly." Maria is not alone in learning from interactions with her peers in the residence halls. Several participants learned about who they are in relationship with others. Dean describes.

Learning how to talk to people and tell them, "hey I'm on the autism spectrum, these are the types of things you might see me do, and these are really good ways to help defuse those types of behaviors." And just generally so they know like, when they see something, they know what it means.

Dean learned to communicate his behaviors and needs to peers so that they could understand him better. Both RA Maria and Dean, who is Autistic, learned how to communicate their needs to others in order to be more successful in their relationships. Phoebe also talks about learning how to be in relationship with others,

I have learned to depend on other people a little bit, and I figured out that is ok, and that I do have the ability to work with and exist with these other people and I'm allowed to ask for their help and to, and to be supported by them.

Phoebe describes learning social skills of sharing herself with her peers, asking for help and allowing others to support her. Other skills that participants describe learning are patience with themselves and others (RA Cass), and tolerance for the behaviors of others (N4). Finally, Michael talks about what he learned about himself as a result of living with peers, "core beliefs, and how people act based on what they think about themselves and the way they view the world, so I figured out a lot about what my triggers are." Michael describes a realization that he had about how his peers' values determined their actions, and how he responds to those actions and beliefs.

All of the Autistic student participants and all of the RA participants learned from their experiences living in the halls. The Residential Learning Model facilitated learning for some of them, and some learned through the challenges of living in close proximity with 25-30 peers. This directly answers Research Question number one, that Autistic students experience the Residential Learning Model by learning about themselves and their peers. Research Question Two is not directly addressed with this finding. While students learned through their interactions with RAs and the Residential Learning Model it is unclear if that learning facilitates persistence at Mines. This theme also led to the formation of the final finding of this evaluation, knowledge of Autistic student needs allows for engagement with the Residential Learning Model, relationship building, and learning in the residence halls. The Autistic student participants who felt known, and had their needs met expressed an appreciation for their learning in the residence halls.

Connecting the Themes

For all three themes, expectations and communication, relationships in the residence halls, and learning in the residence halls, relationship is threaded throughout. The need for relationship, the struggles that come with it, and the regret when relationships are lost or not built. Every interview with participants included elements of the participant's mental health as well as those around them, and interaction and engagement with peers, RAs, as well as professional staff and faculty all play a role in the experiences that students have in the residence halls. Autistic college students and RAs alike share these experiences yet make meaning of them in very different ways. The Residential Learning Model, through its goal of helping students achieve self-authorship can provide guidance for the RAs on how to approach their roles with Autistic college students in new ways, ways that could create more of a welcoming, supportive environment in the halls for Autistic college students. Following the principles of Universal Design, the next chapter will address these findings specifically, and make recommendations on how to use the findings to create an environment that meets the goal of facilitating self-authorship and meets the demands of being a universally accessible program.

Chapter 5: Discussion and Recommendations

Purpose, Procedures, and Guiding Research Questions

The next section discusses the findings and makes meaning of them, guided by Universal Design and Universal Design for Learning. Before this discussion, I briefly summarize the first four chapters as an overview of the entire evaluation. This evaluation informs the continued formation of the Residential Learning Model at the Colorado School of Mines. This chapter also informs the Evaluation Summary Report that will be presented to stakeholders. This report will share pertinent information from all chapters, yet focus on the recommendations and strategies outlined here. The Residential Learning Model was created to facilitate learning for residential college students at Mines. However, the voices of students, neither the student staff of RAs who implement the model, nor those of the students who participate in the model while living in the residence halls were present for the formation of the model. The expertise of the professional staff of Residence Life Coordinators and Associate Directors in the Office of Residence Life was relied upon in the creation of the model. While this expertise enabled the model's creation, the inclusion of student voices can help with its continued formation. The Colorado School of Mines enrolls many Autistic students in undergraduate and graduate programs. As a significant population on campus, with unique abilities and challenges, Autistic students living in the residence halls have

different experiences than many of their neuro-typical peers. As I have explained,
Autistic students often experience feelings of isolation and loneliness as well as increased
stress and anxiety when they live in residence halls. The number of Autistic students at
Mines, and the knowledge that Autistic students may have significant challenges living in
the halls, motivated me to work with Autistic students at Mines to ask them about their
experiences living in the residence halls in order to inform the continued formation of the
Residential Learning Model with the voices of these students in mind.

This evaluation is a Utilization-Focused Evaluation, and followed the methods outlined by Patton (2012) to conduct the evaluation. This evaluation is also a qualitative evaluation using different methods to learn the stories of the participants and gain understanding through their experiences and insights.

The Research Questions that I explored through this evaluation were,

- 1. How do Autistic college students experience the Residential Learning Model at Colorado School of Mines?
- 2. How do interactions with the Resident Advisors and the Residential Learning Model encourage Autistic student persistence, if at all?

Methods of Evaluation

To find the answers to these questions, I recruited and interviewed, through different methods, five Autistic, Mines students who were either living in the residence halls or had previously lived in the residence halls. I worked with these student participants to learn about their experiences in the residence halls, as participants with the Residential Learning Model, as well as gain insights into what made them persist at

Mines. I also recruited and interviewed, through different methods, six Resident Advisors. Students who had lived in the residence halls as first-year students, like the Autistic college student participants, but who had chosen to apply and were hired to be RAs in the residence halls. I interviewed the RAs to gain an understanding of their experience living in the residence halls, and to learn about their experiences as an RA, implementing the Residential Learning Model.

All participants chose what method they were most comfortable with to participate with me in this study. Two Autistic student participants chose reflective journaling as a method, the other three chose to participant through semi-structured interviews. The RA participants also chose different methods, three chose semi-structured interviews and three chose a focus group and participated together in the interview process. All interviews were conducted through Zoom, recorded and transcribed.

I utilized Nvivo software to help me analyze the transcribed interviews, conducting line by line coding as I read through the transcripts numerous times. As I completed the coding process, three themes emerged from the data. These three themes helped me to clarify the findings of the evaluation, the three themes are: (1) Expectations and Communication of Roles in the Residence Halls, (2) Relationships within Residential Communities, and (3) Learning in the Residence Halls. Exploration of these themes through the theoretical framework of Universal Design and the principles of Universal Design, has led me to several recommendations for the continued formation of the Residential Learning Model. Below, I explain Universal Design, followed by a discussion

of the findings, and finally recommendations for the Residential Learning Model, as well as my thoughts on future research and uses for this evaluation.

Universal Design and Universal Design for Learning

Universal Design and Universal Design for Learning theory helps me make meaning of the themes. Universal Design theory insists that environments, tools, and curriculums are designed specifically for people with a wide range of abilities. (Burgstahler, 2018). A Universally Designed approach to the Residential Learning Model means that for every program, interaction, and policy, the ability for all people to access them have been carefully thought through. While Universal Design for Learning gives specific guidance for classroom curricula, it does not consider higher education broadly, and does not consider learning in residence halls. Therefore, I use the overarching themes of Universal Design and Universal Design for Learning to help me understand the areas where the Residential Learning Model falls short of being universally accessible and where improvements can be made. The theory of Universal Design and Universal Design for Learning outline overarching guidelines and principles that, if followed, foster more universally accessible spaces and programs. Taylor and Colvin (2013) address different strategies that can enhance learning, self-determination, and offer the support needed by Autistic college students, but that would benefit all students (p. 13). Support and intentional planning with Universal Design in mind, is needed to accomplish the goals outlined above, and help Autistic college students at Mines engage more meaningfully. Taylor and Colvin talk about the need for a Universal Design perspective for all college students,

In college, individuals with Autism may need more time to learn social skills or rules. They may exhibit difficulty with change in routines or becoming comfortable with new staff and students. Understanding who to go to with questions or to ask for help may not be natural or easily figured out. Knowing when to ask for help is also an area that needs to be taught rather than assumed for students with Autism. Learning how to advocate for oneself is a learning experience for everyone because of the discomfort it causes. (p. 14)

The discomfort of new surroundings, expectations, ways of being and learning may exist for every student, and for Autistic students, that transition may be more difficult.

Adherence to the principles and guidelines of Universal Design and Universal Design for Learning may contribute to a more supportive, engaged environment and community for Autistic students in the residence halls at Mines.

Discussion of Findings

Each of the themes includes a few findings that have implications for the continued formation of the Residential Learning Model at Mines. I explain in this section what each finding is, and how Universal Design, Universal Design for Learning, and higher education literature brings a deeper understanding to that finding.

Finding 1

Different Expectations of RAs and Autistic Students May Impede Autistic
Student Engagement with the Residential Learning Model

RA participants expect the residential students to take the initiative to come to them, to take the first steps in building relationship and engaging in the Residential Learning Model. For example, Cass, talking about her role states that she creates a culture,

where all my residents feel like they could come to me. Whether we were talking all the time, and I saw you in the social spaces every single day and we strike up a

conversation, or we only had a few conversations here and there, when we were passing in the hallway.

Cass believes this is the type of environment she creates, the expectation is that the residents will come to her, not that she will reach out to all her residents to get to know them.

Autistic student participants expected that their RAs would know them, engage with and support them. The Autistic college student participants also expected that the RAs would uphold the policies of the halls consistently. N4's disappointment and frustration, in the example of the RAs failure to consider his needs when they ordered food for a community program, reflects his expectation that the RAs would know the residential students well enough to consider their needs. It also highlights how his trust in the RAs was undermined when he realized he had not been considered.

The Residential Learning Model expects the RA to outreach to residents and build relationship in order to engage the residential students in the learning model. The concept of RAs engaging their residents personally in order to engage them more thoroughly in residence life programs is a common practice in residence halls across the country (Blimling, 2015). Blimling created a competency-based RA education tool to guide RAs as they endeavor to create engaged learning environments for their residents (pp. 169-176). This model shows the need to help RAs develop the skills needed to outreach to residents. The directives of the Residential Learning Model, the training that RAs participate in and the differing expectations of the RAs and their Autistic residents do not line up all the time. There is a gap evident in this finding that can be closed through

training with the RAs. The Residential Learning Model reflects some of the principles of Universal Design for Learning, although not intentionally written with this connection in mind. It provides options for how students engage and considers the needs of students in the guidelines. As I stated in Chapter 2, the paucity of study connecting Universal Design for Learning and residence halls, leaves a lot of guesswork in forming residential programs. However, there are ways that Universal Design and Universal Design for Learning have been implemented into student residential experiences. The implementation of Universal Design for Learning checklists for higher education, as Burgstahler (2015) discusses, can inform the redesign of a campus service like residence life. The most common categories that Universal Design application fall into are, planning, policies, and evaluation, physical environments, training of staff, resources and technology, and events (p. 184). Attention paid to these areas within residence life, may inform the further formation of the Residential Learning Model. All of the implementation suggestions for residence halls, rely on the RA to build a relationship with the residential students in order to even get to the implementation of the model. The disparity in expectations between the RAs and the Autistic students living in the halls is a hurdle that must be removed before the implementation of the Residential Learning Model can begin.

Finding 2

Consistent Policy Enforcement Matters to Autistic Student Participants

As I discussed above, Autistic student engagement in the Residential Learning Model depends, at least in part, on trust built between the RA and their residential

students. Agreement regarding expectations of one another may increase trust and therefore engagement with the Residential Learning Model. For some of the Autistic student participants, the consistent upholding of the residence life policies is a pathway to building relationship with their RA. Autistic students, like N4 and Phoebe stated several times that "rules" were important to them, that when the RAs did not uphold the rules, respect and trust were lost, creating barriers to relationship with peers and with the RA. This finding reveals important insight into the Autistic student experience in the residence halls and provides context for reasons they may or may not engage with the RAs through the Residential Learning Model. The RA role encompasses many different requirements, they ensure the halls are safe and that policy is enforced, and they provide peer counseling and crisis support for residents (Schroeder et al., 1994; Blimling, 2015). The wide variety of roles the RA is expected to play, may cause confusion for residents and for the RA themselves when it comes to fulfilling these roles. Reingle et al. (2010) found that many of the RAs studied acknowledged that they did not always report or refer students who broke policy or experienced mental health challenges. The lack of referral occurred for various reasons, including a worry that their relationship with residents would change or that it would disrupt the feeling of community for all residents (p. 336). Everett and Loftus (2011) also found that the conflicting roles that RAs juggle often result in them not enforcing policies when residents they consider friends break the rules (p. 82). Knowing how important rule following and policy enforcement is to Autistic students and the conflicting roles the RAs must maintain, the implementation of Universal Design for Learning and Universal Design can help RAs to see their roles more

clearly. When it comes to Universal Design and Universal Design for Learning, it is the responsibility of Residence Life to ensure that policies are comprehensible and accessible to all students. This enables all students to engage in the Residential Learning Model and in life in the halls equitably. The policies must also be consistently enforced so that students can rely on those policies to create an environment that is safe and comfortable for them.

Finding 3

Relationships Matter to Autistic Student Persistence

Perhaps the most significant finding. Autistic student participants all shared that they had a strong desire for relationships, and all Autistic student participants shared that they had challenges with building relationships with peers. Related to both Research Questions in this evaluation, those Autistic students who built relationships with peers and with their RAs, had more positive attitudes towards their persistence at Mines and were more engaged in the residence halls, and on campus, than those Autistic student participants who did not build relationships.

Autistic student participants who did not have significant relationships with peers or an RA do plan to persist to graduation. However, those students do not have a connection to Mines or their experiences at the school. Mines is something to get through, to endure. Each of these students said that staying was easier than leaving and starting over, that was their primary reason to persist. Conversely, the Autistic student participants who did build relationships with peers and an RA, as well as all of the RA participants, who also had relationships with peers and an RA, all expressed connection

to the school in various ways. Peter and Dean expressed that the faculty and staff support they received was a factor. Some RAs (Cass and Maria) stated that they felt at home at Mines. Even though Riley and Phoebe each have significant mental health challenges that sometimes worked against their ability to persist in a timely manner, they both stated that they had promised themselves that they could accomplish this goal and were proud of their efforts so far.

Finding 4

Relationships Matter to Mental Health and Behavior of Autistic Students

When it comes to Autistic student's mental health, all the Autistic student participants shared that they manage some level of mental health challenge, from anxiety to major depressive disorder with suicidal ideation. This is important as research has shown that stress, feelings of isolation and loneliness can exacerbate feelings of depression in Autistic students (Clark, 2018; Knott & Taylor, 2013; Gelbar et al., 2014). All the Autistic student participants in this study also reflected that they had experienced feelings of isolation and loneliness. These feelings were felt more acutely for some than others, but certainly for those students who have built relationship with peers or an RA, the relationships were important to those students, and lessened feelings of isolation.

While some Autistic students were able to build relationships with peers and RAs, none of those relationships came easily to the students. The Residential Learning Model asks RAs to build these sorts of relationships with all residents. Universal Design asks that the relationship between residents and their RA is one that meets the needs of the

resident, that there is not one way to have a relationship, and that the participants, in this case, the Autistic college students in the RA's communities, can choose how their relationship with their RA looks.

The Residential Learning Model, while requiring outreach to residential students in hopes of building relationships, may not be as accessible to every student, certainly not to students with Autism. From a Universal Design perspective, the model must "provide adaptability to the user's pace" (National Disability Authority, n.d.) allowing for all residential students to engage in the model, and subsequently in relationship with their RA at a pace they can manage. Meeting student needs when it comes to relationship, supports student mental health by encouraging the RA to get to know their residents and their needs before expecting them to engage or build relationship with them at a pace dictated by the Residential Learning Model.

Finding 5

Intentional Interactions and Programming Offer Both Opportunity to Build Relationship, and Can Act as Barriers to Relationship

Autistic students shared those intentional interactions with their RAs worked to build relationship between them. Phoebe, Dean, and Riley all shared examples of RAs reaching out to get to know them, offering support, and making them feel welcome in the residence halls. Michael and N4 did not have affirming relationships with RAs, missing out on the engagement and learning that may come from that strategy of the Residential Learning Model. The differences among the Autistic students' stories of engagement with

their RAs, highlights the importance of the RA reaching out to their residential students, and genuinely attempting to get to know them.

Programs in the residence halls, a major component of the Residential Learning Model, created barriers for some Autistic student engagement and relationship building. Some Autistic students, like Phoebe, were afraid to even attend programs unless a roommate or friend was with her. Others, like Michael, report that programs where there is no activity and students are expected to make small talk with one another, are difficult for him to maintain for longer and a short period of time. N4 did attend some programs, and Dean appreciates programs for the social aspects of them. These varying opinions and needs, as well as consideration of Universal Design, which demands that creators of programs must consider a variety of needs, and that programs should vary in content, design, and means of engagement ("UDL Guidelines," n.d.) to meet the needs of all students. Universal Design's principle of intuitive design (National Disability Authority, n.d.) asks program designers to accommodate a wide range of skills; this includes social skills and communication skills. The Residential Learning Model could help facilitate relationship among students and build on existing skills to help all students to communicate with one another effectively, engage in programming, and build relationships with peers.

Finding 6

Knowledge of Autistic Student Needs Allows for Engagement with the Residential Learning Model, Relationship Building, and Learning in the Residence Halls

Involvement on campus, engagement with the Residential Learning Model and relationship building for Autistic student participants depends on their ability to feel comfortable, and ready to engage. Phoebe and Michael expressed a regret that they were not ready to engage in friendships or with clubs at the time they felt most welcome to engage. Phoebe talks about the pressure she felt to get involved right away, when she was still figuring out how to just "college," as she puts it. She needed to feel comfortable with her classes, living in a new environment, and trying to make friends with her roommates, the added pressure to join a club was stressful and "rude," in her opinion. She then felt like the organizations she would have joined had moved on without her, she no longer felt welcome to join later in the semester. Michael also felt like friendships moved on without him, that people formed groups early on, and if a problem came up with a group, as it did for Michael, there was no one left to build friendships with. Their perception was that their readiness to engage was not reciprocated by those they wished to engage with. From a Universal Design point of view, the needs of the Autistic students to learn and grow comfortable before they branch out to engage further, should be considered. CAST calls the subsections of the Universal Design for Learning guidelines "checkpoints" ("UDL Guidelines," n.d.). One of the checkpoints for providing multiple means of engagement for students is, "optimize relevance, value, and authenticity" ("UDL Guidelines," n.d.). This checkpoint goes on to explain that because no two students will find the same means or reasons for engagement relevant to them, personalizing and contextualizing the program for students' individual needs is important ("UDL Guidelines," n.d.). The RAs play a key role in personalizing the Residential Learning Model to their residents.

Autistic student participants who had an RA reach out early and get to know them (Riley and Phoebe) were able to engage continuously with their RA, learning from those relationships and setting a foundation of support for their first years on campus. Dean did not build a relationship with his first RA, but since then has had several affirming interactions with RAs in his residential community, which has lent to feeling supported in his living community. Michael and N4 never had relationships with their RAs, and both shared negative interactions with RAs, that reinforced their differences, and further isolated them from the residential community. Michael and N4 are also the two students who see their persistence as a means to an end, a way to attain a degree, rather than participants in an affirming educational experience.

RAs, through the Residential Learning Model, and their role as a leader for the residential communities they serve, have a unique ability to get to know their residential students individually. All the RA participants in this evaluation felt that they had created an environment, and that they were a person, that their residents felt comfortable approaching in any situation. Their confidence in their ability to build relationships with every one of their residents, conflicts with the Autistic student perspective. None of the Autistic student participants in this evaluation felt comfortable going to their RA without a pre-existing relationship being formed. Those pre-existing relationships occurred for two of the participants and only because their RA reached out to them first, expressed care, support, and a desire to get to know them. The one example an Autistic student gave

of reaching out prior to relationship formation with the RA, was Michael's example of the RA overreacting, in his opinion, to feelings he was having about self-harm. After that interaction with the RAs in his community, Michael never reached out again. RA knowledge of their individual residents enabled those RAs to encourage their residents, including their Autistic residents, to engage in programming, find jobs, connect with peers, and join organizations. This engagement by the Autistic college student participants may influence how they feel about being at Mines, and their attitude about their own persistence.

Autistic students whose RAs reached out to them, to get to know them and show they cared about them, were able to engage in relationship with those RAs and with peers more readily than Autistic student participants who did not have this experience with their RA. The importance of relationships expressed by the Autistic student participants plays a role in every aspect of their lives in the residence halls and on campus. The thread that holds their experience together is relationships with peers, their RAs, and other campus entities. The Residential Learning Model can incorporate these findings to better serve the Autistic student population, and therefore all students who live in the residence halls.

These findings show that when Universal Design guidelines are followed, Autistic students can engage more readily in programs, with peers, and with the RAs, as may all students in the residence halls. The next steps are to update the Residential Learning Model to intentionally incorporate the guidelines and principles of Universal Design and

Universal Design for Learning, to best meet the needs of the residential students, and serve the Autistic residential students better.

Recommendations for the Formation of the Residential Learning Model

The findings outlined here lead to guidance for the formation of structure for the Residential Learning Model as well as training for the RA staff. Varying expectations between RAs and Autistic residents, and the ways that RAs reach out to build relationships with residents, along with inconsistent policy enforcement create an inconsistent experience for Autistic students in the residence halls at Mines. These recommendations for training, program creation and the Residential Learning Model overall, work to create a more consistent approach to student interaction, and policy enforcement by the RAs as well as wider changes to the Residential Learning Model in terms of expectations and structure for RAs to follow and residents to understand. The principles of Universal Design (Story, 2011; Case, 2003) and guidelines for Universal Design for Learning (CAST, n.d.) must be included in the Residential Learning Model to be accessible to all students living in the residence halls. The Residential Learning Model was created on the foundation of Self-Authorship (Baxter-Magolda, 2008; Baxter-Magolda et al., 2012), in hopes that students will move through the phases of self-authorship to understand their own core beliefs and values, and learn to make decisions and base relationships on their individual sense of self. The design of the model and the learning outcomes create a path for many students to gain self-authorship, yet, some students are not able to engage with the model or the RAs implementing the model

as easily as others. This is where Universal Design steps in, augmenting the model to be more accessible to all students.

Universal Design as applied to higher education practices means that "services are designed not just for the average or typical user but for people with a broad range of abilities, disabilities, ages, learning styles, native languages, cultures, sexual orientations, and other characteristics" (Burgstahler, 2015, p. 180). In this case, the consideration of student neurodiversity is included, and informs the recommendations outlined below.

First, a short discussion regarding the role of the RA and how this evaluation highlights the capacity of that role and perhaps informs recommendations for the professional staff to be more involved in the creation and implementation of some of the learning outcomes detailed in the Residential Learning Model. This evaluation draws attention to the importance of relationships to students living in the residence halls, both the RAs and the Autistic students made that clear. Based on that knowledge, assessing the role of the RA in the actual education of residential students is a recommendation of this evaluation. Knowing the time and energy it takes to build trusting relationships, the RA role may be best suited to the formation of relationships and Intentional Interactions only. Leaving the educational programming to the Residential Life Coordinators, who have academic backgrounds in education of college students. While this is not explicitly a recommendation, it is my recommendation that this be explored as an option for further formation of the Residential Learning Model.

The Residential Learning Model must consider the time and effort it takes to build relationship between RAs and individual residents. Intentional Interactions can help build

relationship, but only if the RA approaches each resident the way they need to be approached, genuinely seeking relationship with each student first. Knowing each student's needs takes time and intention on the part of the RA. As the Residential Learning Model is written now, each RA has three Intentional Interactions as well as educational programs to plan and execute in a certain amount of time each semester. The Autistic student participants discussed a finite window of time that they felt existed, where they could make friends and join organizations. The RAs also have a finite window of time to build relationships with their residential students. Adding flexibility into the Residential Learning Model, to give RAs the time to get to know individual residents, is one way to be able to meet individual needs through future Intentional Interactions and programs.

The programs created by Residence Life to either create a sense of community connectedness or to teach students about a topic must consider the barriers that students may face in feeling welcome and having the ability to attend within the structure of the program, to aid in their success. Universal Design, under the principle of equitable use (Case, 2003; Story 2011), would encourage the Residential Learning Model to create pathways for students to seek engagement outside the classroom in whatever way fits their comfort level and ability. This creates access to involvement if it is desired by the student, but not in the pushy way that Phoebe describes it, but rather, removes barriers and encourage involvement and guidance on how to engage if the student wants to. Intentional interactions in the Residential Learning Model help the RAs gain knowledge about residents, as well as create learning between the RA and the resident around areas

of identity, personal values, and beliefs on an individual level. Intentional interactions are also designed to build interpersonal and communication skills. The programs planned by RAs are a vehicle to engage residents, educate them on different topics, facilitate interaction between students, and build a sense of community in the residence hall. Both strategies, intentional interactions and programs, combine to increase learning in the residence halls.

Strategy for Implementing Universal Design into Intentional Interaction

Practically speaking, the RAs may need specific guidelines to help them understand the importance of reaching out to each individual student and tools to help them begin to understand the needs of each resident. The tools can be questionnaires prior to students coming to campus that ask about individual students, like food allergies or needs. This simple act could have bridged a gap for N4, ensuring that his needs were addressed and cared for in program planning. Setting up individual meetings with residents prior to the start of the academic year, might set the tone early for relationship building and share early the expectation that RAs will meet regularly with residents. Universal Design and Universal Design for Learning call for programs to share information redundantly and in various modes of delivery to users, in this case the students living in the residence halls (Rosetti, 2006; "UDL Guidelines," n.d.). For example, students may get an email from their RA before school starts welcoming them to the floor, telling them about themselves, and letting them know that they will be reaching out to set up a time to get to know the student on an individual level soon. A follow-up email might ask the student to sign up for a meeting with the RA early in the

school year. This private, one on one outreach will engage some students. A bulletin board in the residence hall could outline why the RA wants to know their residents and share more information about the RA with residents. This is another means of outreach that some students may respond to. Finally, in the first, mandatory meeting between residents and the RA, the RA can again share something about themselves, ask the residents to share about themselves, then reiterate again, that they are looking forward to getting to know each individual resident through a one-on-one meeting. Auditory outreach, in person, could engage more students as well, allowing students to take in this information the best way they can and reiterates the importance the RA puts on getting to know their residents.

These varying methods of outreach and invitation, communicate the same thing, but in various ways, so that every student gets the information as they need to. These methods provide multiple means of engagement to all students, giving them the time and space to process that the RA wants to get to know them and that one of the means for the RA to do that will be one on one meetings. This prepares students and shares the expectations of the Residential Learning Model and the RA with students. This also follows the CAST's guideline of providing multiple means of representation ("UDL Guidelines," n.d.). The RA has emailed, created a bulletin board, and stated in person, that they would like to set up a meeting to get to know their residents. They have also given time to the residents to ask questions and process what is expected of them. RAs can meet with students in various ways; through Zoom, in person sitting in a room, or by taking a walk together. These methods give students multiple means of

action and expression, another guideline CAST outlines for Universal Design for
Learning ("UDL Guidelines," n.d.). This is one example of what an RA can do to engage
their residents and show interest in them while engaging the guidelines of Universal
Design for Learning. As the Residential Learning Model is examined through the lens of
the guidelines, and the findings of this evaluation are considered as well, the areas that
could be changed to create a better experience for students become evident.

Strategy for Implementing Universal Design into Programming

The previous example addressed the needs of Autistic student participants when it comes to Intentional Interactions. The same is true for programs in the halls. An example of an educational program typically implemented in the halls, is an in-person panel about effective study habits sponsored by another office on campus. A Universal Design approach to this program, asks RAs to follow the principles and guidelines of Universal Design and Universal Design for Learning. To do so, the RA in this example, knowing that some students will feel comfortable showing up on their own and some students will not, because they have taken the time to get to know each student, plans for different ways of inviting their residents to the program. The RA makes flyers advertising the program, putting one flyer on every student's door. The RA also includes information about the program in a group text to all the residents. The RA also goes to a few students to personally invite them to the program and perhaps let them know that they would like them to attend with the RA. Multiple approaches to advertising and inviting residents may create a pathway for relationship building with individual residents. The RA may also record the program, or take notes during it, so the lessons of the program can be

shared later with residents who are unable to attend the program in person. The RA can also work with residents to create a bulletin board with content from the program to reiterate what was learned and to build relationship with the students who attended the program with the RA. This example of varying the ways the RA approaches the invitation to the program, interacting within the program, and follow-up, address each of the guidelines for Universal Design for Learning. The RA in this example, created multiple means for students to engage in the program (in person, through video, bulletin board after the program), multiple means of representation of the program (auditory, visual recording, printed text), and multiple means of engagement through action and expression (in person, asking questions, meeting with the RA afterwards to plan a bulletin board, writing the pieces for the bulletin board, or responding to the bulletin board in writing) ("UDL Guidelines," n.d.). This kind of programming requires thoughtful planning and motivation on the part of the RA, but it allows the RA to reach their residents in various ways, engaging residents who may not otherwise be able to easily interact with this program.

While this example highlights one kind of program, the Autistic student participants shared that they are each comfortable with different kinds of programs. Some students may respond to an in-person panel because the focus is on what is being said, not on the student to make small talk with peers. Other students, like Phoebe might only attend the program if the RA reaches out specifically to her and invites her to be their buddy at the program. Other students might respond to an online program where students interact via Zoom or another online means, still others might contribute to a program that

is an on-going discussion either virtually or in person on a bulletin board. Universal Design asks us to examine the Residential Learning Model to ensure that every student can access the model in a way that meets their needs. While students may choose not to engage, the means to engage in the opportunity must be present. The model should encourage RAs to program in multiple ways, encouraging as many students to participate in as many ways as they are able to.

Strategy for Implementing Universal Design into Student Relationships with Peers

The Residential Learning Model, striving to help students to know themselves and build relationships among students in the residence halls, could create pathways for students to get to know one another in the community, creating opportunities for students to get to know different people. This may help students make connections, or at least lessen the feeling that some are outsiders, and some are not, within a community. Programs that encourage and model how to get to know others should be thought of as a primary outcome of the program, not a side effect of it. Interpersonal skill building connects the learning outcomes of the Residential Learning Model, in particular, those around community connection. Universal Design does not consider relationships as part of the principles for design. However, CAST's guidelines do discuss interactions with peers, role models and mentors throughout the guidelines as a pathway to learning ("UDL Guidelines," n.d.). The guidelines and principles consider individual needs of students, when designing for a group or general population. Relationships with others is important to those participants in this study, both RAs and Autistic students alike. Relationships for help with learning and skill building, but also as an antidote for loneliness and isolation

felt by all the participants. Forging relationships is a challenging obstacle for some Autistic students. Although Universal Design does not speak directly to relationships, this evaluation shows that lack of relationship impedes the Autistic student participants from fully participating in the Residential Learning Model and in other areas of campus life as well. Thus, every effort should be made on the part of Residence Life and the RAs to engage residents with one another and help them build relationships, making the model more accessible to every student.

Recommendations for Resident Advisor Training

Not only do these findings have implications for the Residential Learning Model directly, but indirectly, through RA training as well. These recommendations rely on the RAs to do a lot to ensure the residential students have access to all aspects of the Residential Learning Model. The RAs spend a week in training prior to the school year starting, and one to two hours a week training during the academic year. They learn a myriad of lessons in crisis response, social justice, administrative tasks, and programming, to name a few. All lessons are centered on creating a supportive environment in the residence halls that provides a safe, educational, and comfortable home for residential students. The findings of this evaluation show that RAs play a key role in the experience of Autistic students in the residence halls. Their ability to reach out and engage with residents, to support individual needs, and plan effective programming accessible to all their residents is dependent on effective training. Universal Design as a significant part of the Residential Learning Model, is a new concept. While programs created by the RAs follow other accessibility guidelines, Universal Design has never

been the focus. Creating programs and interactions that are accessible to all residents, including those with Autism, will take intention on the part of the RAs. To accomplish the goals of creating programs that are accessible from a Universal Design perspective, and engagement with residents in a way that affirms and gets to know each individual resident, the RAs must understand why Universal Design and Universal Design for Learning are important to their work with students. Incorporating the overarching guidelines for Universal Design for Learning into the RA training will give them context and possibly motivation to serve all their residential students better with this new understanding. This shift from meeting the guidelines of accessibility under the law and truly incorporating a Universally Designed residential program will take time. Training RAs with a Universal Design and Universal Design for Learning lens helps the RAs understand that when they plan their interactions and programs around the needs of our Autistic students all of the students who live in the residence halls benefit.

RAs must gain skills in facilitation as well as interpersonal skills themselves, if they are to model and teach their residents the same. Efforts must also be made to teach RAs effective communication skills so expectations of themselves and the community can be shared with their residents. Clear communication of expectations erases some of the ambiguity around expectations that led to lack of understanding between the RAs and the Autistic student participants in this evaluation. The Residential Learning Model outlines programming expectations but not how RAs communicate with residents. This may be an addition to the model that could help the RAs to create the feeling of community that they hope to. Taylor and Colvin (2013) explain that Autistic students

may have fewer self-advocacy and self-determination skills that other students entering college (p. 12). This helps to explain the expectations of the Autistic student participants in this evaluation who relied on the RA to reach out to them to build relationship and engage them in the community.

Practical Recommendations for RA Training, Residential Learning Model Expectations

Building Relationships and Creating Community

RAs themselves may not be expert relationship builders or excel at facilitating conversations. These skills must be taught if it is part of the expectations of their role. Throughout RA training prior to classes beginning, RAs participate in meals together, in ice-breaker activities and in sharing their stories with other staff members. These activities are skill-building activities, encouraging interpersonal skills, and relationship building skills. During training periods, the RAs must be reminded that every activity they participate in builds skills they will use in their RA role. The "why" behind seemingly benign activities like eating lunch together as a group, if explained, may help the RAs realize the steps that they themselves can take to impart those same skills on their residents. Just as explaining why RAs participate in various activities is important for their learning, empowering the RAs to consider the individual needs of residents is also important.

The RAs are taught about the importance of programming for community building, and as an educational tool as well. However, the importance of first understanding and getting to know residents on an individual level, must be emphasized

and encouraged. This allows the RAs to program for the needs of their residents.

Universal Design guidelines ask that programs and activities are easy to access for everyone, that there are multiple means of engagement for all students. Education is a foundational goal of the Residential Learning Model, the programs and interactions all provide pathways to learning outcomes that residents can achieve. CAST's Guideline 8, asks that options be provided that can "equalize accessibility by supporting learners who differ in initial motivation, communication skills, and self-regulation skills" ("UDL Guidelines," n.d.). RAs who know their residents and plan programs with their needs in mind meet the guidelines of Universal Design.

Training on Policy Enforcement

The findings regarding rule, or policy enforcement and its importance to the Autistic student participants, reveal a need for training around policy enforcement for the RA staff. RAs are expected to be familiar with all residence life and school policies and are expected to enforce those policies in the residence halls. Based on the stories shared by the Autistic student participants in this evaluation, there is a lack of consistency in policy enforcement, and at times a complete lack of enforcement at all by the RAs.

Context shared with the RAs during training, about why policies exist and the importance those policies and their enforcement hold for Autistic students, could facilitate understanding for the RAs and as a result, more consistent enforcement. Policies give a common language to the expectations that the entire community must adhere to. By sharing policies early with students who live in the halls and reinforcing the policies through meetings and written postings in the residence halls, it is more likely that the

policies will be understood by the community. The importance of consistent enforcement to Universal Design, allows for equal access to all students living in the halls. CAST discusses the importance of providing options for students to collaborate and communicate with peers in a community in Engagement Checkpoint 8.3 of the guidelines ("UDL Guidelines," n.d.). Collaboration and communication are made easier when everyone in the community understands and adheres to the community standards and policies that are provided. A common language and consistent expectations create an environment where students can develop skills on their own. Guideline 9 also states that options for self-regulation must be provided. Self-regulation, or the ability to "to strategically modulate one's emotional reactions or states in order to be more effective at coping and engaging with the environment" ("UDL Guidelines," n.d.). Providing opportunity for self-regulation through consistent policy enforcement and common understanding of policy creates pathways for students to develop and manage healthy responses and interactions. Policies help to maintain equitable use of the residence life program overall. Policies exist so that all students can experience a safe, comfortable, academically supportive living and learning environment.

Use of Evaluation, Future Research, and Limitations

The stakeholders for this evaluation, the RAs, the professional staff and the leadership in the Residential Education program at Mines, as well as the upper administration in the Division of Student Life, understand that the Residential Learning Model is a work in progress. Only through assessment and incorporation of new knowledge into the formation of the model will it best serve the students in the residence

halls overall and the Autistic students at all. When I began researching Autism as a topic and learned more about the characteristics of Autism that many experience, and the challenges they face in higher education, some of the ableist approaches clouded my thinking and added to my bias. What I learned from the Autistic participants in this study, in addition to the data for the evaluation, is that each student was eager to share their story and grateful to be asked about their experiences. The level of trust and vulnerability that each Autistic student participant showed me made it clear that the desire to be known and understood was shared by all participants as it is by me. This will inform my practice and my research in the future. Reminding me to take the time to build relationships and to take the time to ask questions and get to know students, particularly students from marginalized backgrounds and identities. The relationships that I formed through this evaluation, showed me that this program can improve to serve all students better, I just need to take the time to listen and learn. This also informs all future research and future evaluation methods.

Universal Design and Universal Design for Learning can inform practice in residence halls as well as student affairs practices in general. They can also inform the evaluation methods and approaches that are taken to inform practice. This evaluation exemplifies that Universal Design and Universal Design for Learning approaches to evaluation in higher education can lend a social justice foundation to evaluation.

Considering Universal Design as a critical theory, that allows voices to be heard where they once were not (D'souza, 2004). A systematic approach to evaluation guided my evaluation theory, such as Utilization Focused Evaluation pairs with Universal Design

and Universal Design for Learning to create a more equitable approach to evaluation. The approach taken through this evaluation, following Universal Design principles and Universal Design for Learning guidelines allowed me to create a more equitable evaluation overall, accessible to all participants. The approach to this evaluation can be replicated in practice in higher education, in particular in residential life programs, where students may be compelled to live on campus. The use of Universal Design and Universal Design for Learning in residential life creates a more accessible environment for all students living in the residence halls.

This evaluation, specifically the findings and the recommendations in this chapter, help guide the formation of the Residential Learning Model for the future. Implications for content in the Residential Learning Model, context that needs to be shared, and additions to the RA training curriculum, can form the model into a better resource for RAs to follow to serve their Autistic students better, and therefore, using the Universal Design lens, all students better.

This evaluation answers some questions about the Autistic student experience with the Residential Learning Model, and whether the model influences student persistence. It also brings up more questions for research that, if answered may create a more supportive experience for Autistic students on residential college campuses.

Considerations for future research include expanding this evaluation into a wider study of Autistic students and their experiences in residence halls. While this evaluation specifically examined the Residential Learning Model at the Colorado School of Mines, the implications of this evaluation may be far wider reaching. Specific study of Autistic

student attitudes towards persistence may give insight into how those attitudes are formed and to what extent student experiences in the residence halls and interactions with RAs influence those attitudes. Another avenue for future research is the connection between Autistic student's relationships with peers, or lack thereof, and mental health. Mental health concerns are prominent for all college students, and often co-exist alongside characteristics of Autism. Any research that can lend to knowledge that combats suicidality in Autistic students is valuable to explore.

This evaluation informs the continued formation of the Residential Learning Model and the RA training model at the Colorado School of Mines. Its use will better inform the RAs and their supervisors on standards and guidelines of Universal Design that will help engage more thoroughly, all students living in the residence halls. This means that more students will meet the learning outcomes of the Residential Learning Model, more students will engage in relationship with each other and with their RA, and more students may feel less isolated and lonely. I can never be sure if the implications and use of this evaluation will save the lives of students like the student who motivated my engagement with this study, but it will facilitate a more informed program for residential students moving forward.

This evaluation has limitations that may inform future study. Five Autistic students agreed to participate in this evaluation. Those five students shared a great deal, showing trust in the process of the evaluation and me as the evaluator. While the data provided led to the findings and recommendations for this evaluation, increased numbers of Autistic student participants may have yielded richer data to build recommendations

upon. Similarly, six RAs participated in the evaluation. As with the Autistic college student participants, more RA data may have led to a richer pool of data to learn from and create more useable recommendations for the evaluation.

Considering the population of students who participated overall in the study, there was a mix of genders, races, socio-economic backgrounds, and abilities. No first-year, Autistic students participated in this evaluation. This means that for most of the Autistic students, they shared stories that occurred more than six months (Phoebe and Michael), and up to three years (Dean) prior to the evaluation. The Residential Learning Model as it exists now, looked very different a few years ago, it has evolved over time, continually forming. Current student experiences would have given a more thorough picture of the model now. However, hearing student stories from the past painted a picture of how strongly they felt about what they shared. Many stories, even years later, were still very clear to the Autistic students, indicating that the strong impact they had on the student.

Finally, this evaluation was conducted in the spring of 2021, in the midst of the COVID-19 pandemic. A pandemic that impacted the way that students living in the residence halls interacted with peers, RAs, faculty and staff, as well as those outside of the campus environment. All programs in the residence halls, as well as Intentional Interactions were either conducted outside or virtually over Zoom or another platform. No outside guests were allowed in the residence halls, keeping students' communities smaller than they may be outside the circumstances demanded by the pandemic. Students could not gather more than three to a student room, study room and common spaces had occupancy limitations, which made it difficult for students to build relationships with

peers and their RAs. All the interviews for this evaluation were conducted over Zoom. I never met any of the participants in person. All these circumstances may have changed the way that the RA and Autistic student participants interacted within this evaluation, as well as the way they considered relationships, as well as their general attitudes about the residence halls overall. While these limitations certainly exist, the participants continued to respond to me throughout this evaluation and worked with me to make meaning of their stories.

Future evaluation of the Residential Learning Model is recommended as the model evolves to meet the needs of students. More widely, future study of the Autistic student experience living in residence halls at different institutions of higher education with the lens of Universal Design could lead to major changes to the work of residence life professionals, and student staff, like RAs. The application of Universal Design and Universal Design for Learning is just now occurring in higher education environments. The focus of these theoretical frameworks have traditionally only been applied to those with physical disability, it is only now that they are widening their focus to include intellectual, mental, and emotional disabilities, including Autism. Future study of neurodiverse students through this lens may have implications for higher education practice.

This evaluation yielded six findings leading to recommendations for the continued formation of the Residential Learning Model and the residence life program at Colorado School of Mines. The six findings shine a light on incongruent expectations of RAs and the Autistic students living in the residence halls and the importance of consistency in

policy enforcement and in RA outreach to residential students. Other findings include the importance of relationships with peers and RAs for Autistic students to feel safe engaging within their residential communities, in the mental health of Autistic students, and in their attitudes about their persistence at Mines. These findings also show that the Residential Learning Model, through Intentional Interactions and programs can facilitate relationship building. When approached with Universal Design and Universal Design for Learning principles and guidelines, intentionally and genuine interest in getting to know their students, the Residential Learning Model is an effective means of engagement with Autistic students. However, the absence of relationship and genuine outreach by RAs to their residents creates barriers to engagement, relationships, and trust. RA understanding of Autistic student needs, through relationship, opens doors to engagement with the Residential Learning Model, relationships, and learning in the residence halls.

These findings informed recommendations that can be incorporated into the Residential Learning Model and the training curriculum for the RAs. While I share some suggestions for strategies that could be followed by stakeholders as they incorporate the recommendations, they should consider those suggestions and not mandates as they work to incorporate this evaluation into their current practice.

This evaluation strives to incorporate the voices of Autistic students into the continued formation of the Residential Learning Model. The Autistic student participant stories reflected the diverse experiences of students with a shared diagnosis of Autism Spectrum Disorder. While their experiences differed, they all lent to a greater understanding of the Autistic student experience overall and to insights into how

Universal Design and Universal Design for Learning can be incorporated into the Residential Learning Model. Adjusting to life in the residence halls is challenging for Autistic students, but for the students in this evaluation at least, it led to learning and growth. Phoebe summed up her experience in the halls well, "it sucks, but I'm grateful."

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APPENDIX

IRB Exemption Letter and Email



December 4, 2020

Mary Elliott

Morgridge College of Education University of Denver

RE: Determination of Proposed Project

Project Title: Evaluation of the Residence Education Program at Colorado School of Mines with Specific Emphasis on the Autistic Student and the Resident Advisor Experience

Dear Mary,

Thank you for submitting the Human Subjects Research (HSR) Determination Form to the University of Denver's Institutional Review Board (IRB) for evaluation to determine if the above- referenced project qualifies as human subjects research. Based on the information provided, it has been determined that the proposed project does not require IRB review. This determination is based on whether this proposed project is research with human subjects defined by the federal regulations.

The HSR Determination Form was evaluated, and it was assessed that the proposed program evaluation project does not qualify as human subject research. This project will involve conducting a qualitative evaluation of student experiences with the Residential Learning Model at the Colorado School of Mines, specifically the experiences of Resident Advisors and autistic students. This proposed project does not meet the regulatory definition of research with human subjects.

The Regulatory Definition of Research and Human Subject

Federal research regulations define **research** as "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge."

During the review of this proposed project, it was noted that the primary intent is to evaluate the Residential Learning Model at the Colorado School of Mines, with a particular focus on the experience of students with autism. This project's intended

outcome is to create a report to be distributed to stakeholders at the School of Mines. This project does include a systematic investigation, however it is not intended to develop generalizable knowledge; therefore it does not qualify as research.

Per the regulations, **Human subject** means a living individual about whom an investigator (whether professional or student) conducting research obtains 1) data through intervention or interaction with the individual, or 2) identifiable private information. This project does involve interactions with human subjects through the use of interviews and conversations, therefore it does qualify as "human subject" per the regulatory definition.

In order for a project to require IRB review, the proposed research must qualify under **both** definitions of being research and involving human subjects. This research project DOES NOT fulfill the regulatory definition of research but DOES involve human subjects per the federal regulation definition.

My evaluation, based only on the information provided, determined that the proposed project does not require IRB review.

If you have questions regarding this determination or believe that this proposed project does qualify as human subject research, please feel free to contact me directly at 303-871-4051 or via e-mail at: Ashleigh.Ruehrdanz@du.edu.

Sincerely,

Ashleigh Ruehrdanz

Research Compliance Monitor

Office of Research and Sponsored Programs University of Denver

Dec 4, 2020, 3:03 PM

Hello Mary,

Thank you for submitting your Human Subjects Research (HSR) Determination Form for your project, Evaluation of the Residence Education Program at Colorado School of Mines with Specific Emphasis on the Autistic Student and the Resident Advisor Experience, to our office for review.

Based only on the information you have provided, our office has determined that your oral history project does not meet the federally regulated definition of human subjects research. Therefore, your project does not require IRB review.

A formal letter regarding this determination is attached for your records.

Should you have any questions, please contact our office.

Sincerely,

Ashleigh Ruehrdanz, MPH | Research Compliance Monitor (she, her, hers)

University of Denver | Office of Research Integrity & Education

Cell Phone (303) 888-1478 | Ashleigh.Ruehrdanz@du.edu

https://www.du.edu/orsp/research-compliance/

Informed Consent Agreement

The study, preliminarily entitled "Informing Practice Through Understanding: Autistic Student Experiences in the Residence Halls" is an evaluation of the current Residence Life Program at Colorado School of Mines from the perspective of Autistic students who have lived in the halls and been a part of the Residence Life Program. The goal of this research is to inform practice and improve the residence life program for Autistic students who live in the halls.

Participation in this evaluation is entirely voluntary, there are no consequences for not participating. Participation in this study will be kept completely anonymous, only the evaluator will know that each participant is involved in the study. Participants will choose a pseudonym by which they will be known throughout the study and in any writings associated with the study. All data collected from participants will be kept password protected by the evaluator.

Participation in this study will last 2-3 months, and require 5-6 hours of participation, during that time participants will:

- Participate in an introductory meeting with the evaluator, during which
 prompts for Photo Elicitation will be shared with participants and the
 evaluator and participants will get to know one another.
- Over the period of 1 month participants will take photos (or illustrate in a way
 that is comfortable to them) following various prompts given by the evaluator
 to help illustrate their experience living in the residence halls.
- Participants will submit their photos or other work to the evaluator

- A follow-up meeting with the evaluator will be held so that the participant can
 explain to the evaluator the meaning behind their work and for the evaluator
 to ask questions about the pictures.
- Another interview may be needed for follow-up as determined by the participant and evaluator together.

Risks of participating in this study could be a feeling of discomfort in taking pictures or describing participant's experiences in the halls to the evaluator. Other students may ask about photos you are taking or the study overall, which participants may or may not disclose themselves. The evaluator is an administrator at Colorado School of Mines and is the Director of Residence Life. Nothing that you, as a participant in this study say or portray in any way will be used against you or ever mentioned outside our meetings together and the written evaluation based on your input as a participant.

Benefits of participating in this study is having a voice in the improvement of the residence life program and helping future Autistic students have a positive experience in the halls.

Participants in this study are required to:

- Live or have lived in the residence halls at Colorado School of Mines
- Have been diagnosed with Autism Spectrum Disorder or similar
 (Asperger's Syndrome) disorder by a physician or other clinician.

I	_ agree to participate in the study entit	led,
"Informing Practice Through Understanding	ng: Autistic Student Experiences in the	e
Residence Halls". I understand the risks ar	nd benefits of participating in this stud	ly and am
choosing to engage as a participant.		
Signed		
Print your name		
Date		

Statement of agreement

Evaluation Participant Questionnaire

This document is meant to gather demographic information as well as confirm your eligibility in the study. I appreciate your thorough completion of this questionnaire. Please bear in mind that no identifying information about you will be shared in any way. This information will be seen only by me as the evaluator of this study, and has no bearing on your status as a student or resident in Residence Life housing. Your information will be respected and kept confidential.

•	Name that	you	wish to	be	known	as	in	this	study	/pseuc	lonym	for	yours	self	•
---	-----------	-----	---------	----	-------	----	----	------	-------	--------	-------	-----	-------	------	---

- Age:
- Race:
- Sexual orientation:
- Gender Identification:
- Socio-economic status: Circle one

Upper-class Middle-Class Working-class Poor

- Please state any disabilities that you may have here:
- Do you have a history of mental health disabilities or challenges?
 - o If so please describe those here:
- Year at Mines:
- Major of study:
- Contact information:

Cell: Email:

• How do you prefer that I contact you?

Journal Entry Prompts

Follow these prompts. The idea behind this process is that you interpret for yourself how best to share your response to these prompts with me. There is no right answer to the prompts. I am genuinely interested in what your perspective is and how you will describe, through your words, what you think, feel, appreciate, dislike, etc... I would appreciate it if you would address each prompt in some way, the most thorough way that you are able to share with me.

Prompt 1: Q1, Q2

Describe your time living in the residence halls with one word or phrase. Explain why this describes your experience living in the residence halls.

If more than one word or phrase comes to mind please write those down also and explain why again, just as you did the first time.

Prompt 2: Q1

Describe a time when you wish you'd done something related to living in the halls (attended a program, accepted an invitation, reached out to someone to talk, etc...) but did not. Why did you not do the thing you wished you'd done? Please explain thoroughly.

Prompt 3: Q1

If you are able to, describe a relationship that you built with at least one other person during the time you lived in the residence halls? If you did not build any relationships that you can describe, please describe what barriers kept you from doing so.

Prompt 4: Q1, Q2

Describe at least one thing that you liked about living in the residence halls. Please explain thoroughly why you liked what you did.

What feelings come up now when you think about this?

Prompt 5: Q1, Q2

Describe at least one thing that has been or was challenging about living in the residence halls. Please explain thoroughly why you disliked what you did.

What feelings come up now when you think about this?

Prompt 6: Q1

Describe three things you learned either about yourself, the world, other people, etc.

(NOT having to do with your classes or academic pursuits) from living in the halls.

Describe how this learning came about.

Prompt 7: Q2, Q3

What has your experience been with the RA staff in the Residence Halls? Please describe.

Prompt 8: Q2

Describe how you feel about your college experience here at Mines as a whole. What contributes to this way of feeling? What detracts from it? Please describe.

Prompt 9: Q2

How have your goals changed in the time you have lived in the residence hall?

Has living in the residence halls changed your perception of Mines?

Prompt 10: Q1

What did you learn from living in the Residence Halls? Please share how you learned these things. Have these lessons impacted your overall experience at Mines?

Prompt 11: Q2

Why have you decided to stay at Mines?

Interview Questions for Autistic Students

- 1. What is it like to live in the residence halls on campus?
- 2. If applicable: You describe some challenges with mental health in the questionnaire I asked you to complete. What is it like to manage those challenges while living in the residence halls?
- 3. What have you learned as a result of living in the residence halls?
- 4. What has your experience been like with the RAs you have had in the Residence Halls?
- 5. What has your experience been meeting people and building relationships in the residence halls?
- 6. Looking back before you came to college, how are you different now than before college? What do you think made these differences come about?
- 7. What are the reasons you continue to stay at Mines?

Interview Questions for RA staff

- 1. What is it like to live in the residence halls on campus?
- 2. Looking back on your experience living in the residence halls, what were some of the things that you learned that have stuck with you?
- 3. Looking back before you came to college, how are you different now than before college? How do you think these differences came to be?
- 4. Why did you decide to stay at Mines?
- 5. What made you want to become an RA?
- 6. What is it like to be an RA here at Mines?
- 7. Talk about the diversity of residents that you have had. What was your experience working with students that were different from you?
- 8. Please consider the Residential Learning Model, the outcomes that it hopes to achieve, the requirements for the staff to implement. As an RA it is your job to implement the RLM, what has that experience been?
- 9. What have you learned from being an RA? What lessons have come from your residents themselves?
- 10. Reflecting on your role as an RA and what you know now, what made you want to continue in the RA role?
- 11. What do you hope your residents learn from you?
- 12. Is there anything else you think is important for me to know or that you wish I'd asked you about?