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An Analysis of Hope and Future Orientation in the Context of School Climate in Mongolian Secondary Schools

Jaime Diaz
Western Washington University, diazj008@gmail.com

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By

Jaime Diaz

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ADVISORY COMMITTEE

Dr. Diana Gruman, Chair

Dr. Barbara Lehman

Dr. Christie Scollon

Dr. Aaron Smith

GRADUATE SCHOOL

David L. Patrick, Dean
Master's Thesis

Jaime Alexis Diaz

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Abstract

Hope and future orientation are impactful aspects of adolescents' lives that are key in helping students to reach their goals. School climate is connected to the development of adolescents' sense of hope and future orientation. Additionally, the conceptualization of hope and future orientation has varied, with some researchers describing the two as separate but related constructs or one single construct that encompasses both. In Mongolia, school climate research and research on hope and future orientation are still in their early stages. Using data from Mongolian adolescents (N = 1,507) collected in schools in three major cities (Ulaanbaatar, Erdenet, and Darkham), we expand on these current gaps in the literature and discern whether support from school personnel may be a component of school climate. To examine the factor structures of hope and future orientation and then school climate we conducted EFA's and CFA's then used SEM to establish the school climate relationships to future thinking, a combined construct of future orientation and hope items. The results indicate that hope and future orientation did not represent two separate constructs for these Mongolian adolescents, but rather were singular factor of future thinking. Of the six school climate dimensions, Cultural Acceptance did not load as a school climate factor, but the newly introduced factor of school personnel support did. However, only four of the five loaded school climate factors were significantly related to future thinking. This study establishes a growing foundation of research for school climate, future thinking, hope, and future orientation.

Keywords: Mongolia, hope, future orientation, future thinking, school climate

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Developmental researchers within the field of positive psychology have placed a significant emphasis on adolescents' capacity to look towards the future (Greenspoon & Saklofske, 2001; Seligman & Csikszentmihalyi, 2000; Tennen et al., 2002). Adolescence is a sensitive period for growth and development typically between the ages of 10-19, wherein adolescents begin to deeply reflect on what they want in life. While personal dreams and future goals are something they have mulled over or at the least given some thought during childhood, it is during adolescence that these prospects begin to feel like possible realities. Adolescents assess their resources and try to discern their academic and career goals as well as planning the steps needed to achieve their goals. Whether or not these goals are objectively probable, this formed understanding of what they want most out of their future becomes a central source of motivation for their present and future prospects. Furthermore, every step taken to reach said goals further stokes their desire to succeed and eventually reach the end of their envisioned path. This perspective towards the future and goals is often referred to as hope.

For decades now, research on the subject of hope has established it is a positive factor for adolescents (Jiang et al., 2013; Valle et al., 2006). Some of the common advantages associated with hope include a higher likelihood of accomplishing personal goals and generally positive well-being (Snyder, 2002). On a tangible level, hope in adolescence has been linked with high grades in middle-school (Marques et al., 2011), high-school (Ciarrochi et al., 2007), and college (Gallagher et al., 2016; Snyder et al., 2002), interest in developing skills related to their academic- and career-interests (Kenny et al., 2010; Sung et al., 2012; Wilkins et al., 2014), and higher career motivation (Hirschi, 2013; Valero et al., 2015). Throughout the lifespan, but

especially during adolescence, hope is a significant factor contributing to positive goal-oriented outcomes.

Future orientation, a related goal-oriented construct, shares theoretical similarities to hope. Nurmi (1991) prefaced in their review of adolescents' future thinking that future orientation is a major aspect of young adult's lives as they are faced with a host of tasks and decisions that influence their lives as adults. How they expect their futures to play out affects the extent to which the commitments they make and the experiences they choose to explore are related to their future-oriented interests (Klimistra et al., 2009). All these actions then contribute to future outcomes (Johnson et al., 2014; Robbins & Bryan, 2004) either directly or indirectly through causal sequence of changes stemming from their future oriented-related thoughts and actions (Chua et al., 2014; Jackman & MacPhee, 2017; Stoddard et al., 2011). Furthermore, adolescents who exhibit high hope or future orientation share similar positive academic outcomes, such as high achievement (Ciarrochi et al., 2007; Fredrickson, 2001; Negru-Subtirica & Pop, 2015) and engagement, as well as positive mental and emotional skills, such as better coping skills.

Overall, research indicates that having more hope and future orientation during adolescence appears to be related to positive outcomes. Little research has been conducted on how these two constructs relate to each other or on how they may impact the lives of youth. Some studies have suggested that hope and future orientation are separate constructs (Shek et al., 2016) while other studies have referred to hope as a component of or contributing to a student's sense of future orientation (Archer et al., 2019; Bryant & Cvengros, 2004; Fowler et al., 2017). One of the aims of this study is to determine if hope and future orientation should be viewed as one or two separate constructs.

A majority of empirical research on adolescent hope, future orientation, and youth outcomes have been conducted in large, high-income Western countries such as the United States of America (USA; Bryce et al., 2019; Padilla-Walker et al., 2011; Van Ryzin, 2011), Canada (Pratt et al., 2001), or Australia (Atwell et al., 2009; Ciarrochi et al., 2015). However, in recent years, international empirical interest in hope and future orientation has grown. Examples of this increased interest include a variety of countries such as Spain (Pulido-Martos et al., 2014), Portugal (Marques et al., 2009), Croatia (Merkaš & Brajša-Žganec, 2011), Mexico (Piña-Watson et al., 2015), Serbia (Jovanović, 2013), South African regions (i.e., Northern Cape, Eastern Cape, Free State, etc.; Savahl et al., 2015; Savahl, Adams, et al., 2020; Savahl, 2020). In Asia, this includes countries such as China (Lei et al., 2019; Ling et al., 2016; Ling et al., 2021; Nazam & Husain, 2021), Hong Kong (Du et al., 2015), Korea (Choe et al., 2020; In, 2016), Japan (Kato & Snyder, 2005) Indonesia (Haroz et al., 2015), and Singapore (Bailey & Snyder, 2007; Chang, 2003). Mongolia, an East Asian country located between China and Russia is one country in which research on adolescent experiences and state of being, such hope and future orientation, have not been investigated. Another aim for the present study, then, is to shed light on the relevance of the presence of hope and future orientation for Mongolian youth.

Several contextual factors appear to influence how adolescents view their present circumstances and their future prospects (Ling et al., 2016; Parker et al., 2015; Seginer & Halabi-Kheir, 1998; Stevens et al., 2014). In addition to factors like country of origin or cultural upbringing, environmental contexts such as school can be a prominent and influential context in the lives of adolescents (Chen & Vazsonyi, 2013; Hui & Sun, 2010; Ling et al., 2016). Outside of the home, adolescents spend a considerable amount of their time at school and naturally the school environment plays a major role in either enriching or diminishing its students personal

and academic development (Van Ryzin, 2011). For example, prior research has shown that supportive relationships with teachers and peers and feelings of safety are imperative for positive development and adjustment to school (Aldridge et al., 2018; Jia et al., 2009; Wang & Degol, 2016; Way et al., 2007). Factors such as these are often referred to as school climate (Aldridge et al., 2018; Wang & Degol, 2016). Adolescent perceptions of the school climate appear to play a major role in their personal development and future success (Aldridge et al., 2018; Wang & Degol, 2016; Wilson, 2004).

Given these findings, exploring the relationship between different school climate factors such as teacher support, safety, peer acceptance, rule clarity, help-seeking behaviors, and student-school personnel relationships and adolescents' hope and future orientation is warranted (Shek et al., 2017). Several studies have explored select dimensions of climate such as school belonging (Dixson, 2020; Wong et al., 2019) and teacher-student relationships (Alm et al., 2019; Archer et al., 2019) but a comprehensive exploration of various dimensions of climate and student hope/future orientation has not been undertaken. Furthermore, even less is known about how these relationships play out in smaller, non-Western countries like Mongolia. Identifying the aspects of school climate with the strongest associations with students' hope and future orientation can inform the design of effective interventions to improve youth outcomes in schools and in life. As Wang and Degol (2016) noted, this work allows us to "improve our understanding of the complexity of student experiences in school, and informs the design of targeted and nuanced interventions" (p. 317).

In summary, this study has several aims. First, to contribute to our understanding of the relationship between the constructs of hope and future orientation in adolescence. Second, to contribute to the current gap in the literature regarding the relationship between school climate

dimensions and adolescent hope and future orientation. Third, to contribute to the research on students' experiences with these factors within Mongolian schools, a country that has received little attention from educational researchers thus far.

Hope

While the concept of hope has gained mounting interest over the years, the conceptual definition of hope has varied (Otis et al., 2016). Stephenson (1991) defined hope as a process of anticipation in which a person thinks, feels, and acts, in a manner that is oriented towards reaching a future that is meaningful to them. Dufault and Martocchio (1985) instead defined hope as being confident in one's own subjective expectations of future outcomes as motivated by one's own feelings, behavior, and cognition. However, while conceptual definitions of hope have varied, Snyder et al.'s (1991) theory of hope is currently the most widely explored and accepted conceptualization of hope to date (Otis et al., 2016).

Snyder et al.'s (1991) conceptualization of hope builds on previous definitions of hope. According to Snyder et al. (1991), hope is a cognitive-motivational state influenced by the interconnected factors of a person's subjective feelings, perception, and thoughts that continually adjust over time to form a person's goals. Furthermore, hope typically begins to form at a very young age. While previous definitions of hope have focused more so on the perception of whether personal goals can be reached, Snyder, Lopez, et al. (2002) believed that this view did not fully encompass the full gamut of what goes into goal-oriented thinking. Rather, they believed that hope and hopeful thinking include both the formation of positive goals and the ability to sustain motivation in the face of obstacles to reach our end-goals (Snyder et al., 1991; Snyder, 2002; Snyder, Lopez, et al., 2002).

In Snyder's (2002) view, hope is composed of two separate but intrinsically related components: pathway and agency thinking. Pathway thinking refers to one's ability to cognitively connect the present with the desired future while also strategically planning out possible routes and strategies to connect the present to the predicted, or rather desired, future (Snyder, 2002; Snyder, Lopez, et al., 2002). Agency thinking refers to the effectiveness of a person's capacity to sustain motivation through self-referential thoughts, to follow through with their planned pathways, as well their ability to remain resilient when faced with challenging obstacles in their set pathways (Snyder, 2002; Snyder, Lopez, et al., 2002). Essentially, where Snyder's theory of hope differs from past conceptualizations is that, while similar to past theories by means of being a cognitive process, Snyder's conceptual definition requires the utilization of both agency and pathway thinking to maintain an optimal state of effectiveness for people to both plan out their goals and remain motivated to reach their goals (Snyder, 2002).

Hope and Student Success Outcomes

Given that hope reflects a person's capacity to clearly envision their future goals and to develop strategies to reach their goals, hope is thus important for achieving current and future success (Hirschi et al., 2015; Snyder, Lopez, et al., 2002; Snyder, Shorey et al., 2002; Sung et al., 2011; Yotsidi et al., 2018). For example, adolescents understand that in order to be accepted into high-ranked colleges in the future (Espenshade et al., 2005) they need to achieve a higher grade point average (GPA) in their present-day classes. For adolescents to achieve their long-term goals of school graduation, college acceptance, acceptance into a graduate-level program (Gallagher et al., 2016; Rand, 2009; Snyder, Shorey, et al., 2002), and to be hired after graduation (Barr & McNeilly, 2002; Dixson et al., 2017), students establish minor present-day

goals on their path to reaching their higher end goals. Hope, typically then, represents this process of minor goal-setting and eventual achievement.

As well as providing a source of motivation, hope has been noted as a positive predictor for a variety of academic outcomes. Some of these outcomes include hope as a predictor for individual and total class grades in high school (Ciarrochi et al., 2007) and throughout college (Rand, 2009; Gallagher et al., 2016; Snyder, Shorey, et al., 2002). This remains the case even after adjusting for academic history (Gallagher & Lopez, 2008; Gallagher et al., 2016), engagement (Marques et al., 2015; Marques, 2016), and current grade level (Adelabu, 2008). When compared to other factors related to academic success like self-esteem (Snyder, Shorey, et al., 2002), optimism (Feldman & Kubota, 2015), and positive attributional style, hope has been found to be an even more reliable predictor (Ciarrochi et al., 2007). Hope is a powerful asset for adolescents that leads to a number of positive outcomes that contribute to higher likelihood of achieving academic goals (Dixson et al., 2017; Snyder, 2002; Svanum & Bigatti, 2006).

Aside from academic related outcomes, hope also predicts positive psychosocial outcomes. Hope has been found to predict self-esteem (Barnum et al., 1998; Snyder, 2002) and general well-being both in the present day and years into the future (Ciarrochi et al., 2015). Evidence also suggests that hope is tied to adolescents' feelings of self-worth as well as perceived life satisfaction (Ciarrochi, 2007; Lee & Reedy, 2013; Merkaš & Brajša-Žganec, 2011). Furthermore, hope may serve as a source of strength against the stress that naturally accompanies challenging obstacles, as adolescents with high hope are more likely to focus on their success rather than dwell on their failures (Luthar & Cichetti, 2000; Kim et al., 2005; Marques, 2016; Snyder et al., 1991). Taken together, these findings, along with the previously

mentioned outcomes highlight the significance of hope as an asset for reaching optimal outcomes (Van Ryzin, 2011).

Hope and Future Orientation

While both hope and future orientation share a host of similarities, theoretically there appear to be some important differences. Conceptually, the main difference between hope and future orientation is in scope (Seginer, 2009; Seginer & Shoyer, 2012). Future orientation is a broad and general understanding of both the positive life experiences and outcomes that someone would want in life for the future, as well as knowing what experiences and outcomes someone would not want in their life in the future (Crespo et al., 2013; Shek et al., 2016). Conversely, hope is more specific and requires a more concrete understanding of what goal one wants to accomplish in life, a clearer understanding of how to strategically plan out the steps needed to complete specific goals, and the motivational drive needed to pursue and reach set goals. Seginer and Shoyer (2012) and Shek et al. (2016) believed that both hope and future orientation are related to one another as subjective predictions of the future as influenced by external influence and a perceived sense of competency, values, social expectations, and the resources available to us (Leung et al., 2017; Lewin, 1939). In other words, future orientation is a general understanding of subjective positive and negative outcomes for the future while hope is central to goal setting and completion.

With that being said, the usage of hope and future orientation in relation to one another in the literature has differed. Shek et al. (2016) in their review of children and adolescents' aspirations and other related constructs, noted that the concept of belief towards the future has commonly been interchangeably referred to as both hope and future orientation in the context of both Western and Chinese literature. Chen and Vazsonyi (2013) sought to discern whether there

was a relationship between American adolescents' sense of future orientation and problem behavior and so developed a future orientation scale that treated future orientation as an umbrella term that incorporated constructs of future thinking such as hope. Similarly, Carvajal et al. (1999) found that Snyder et al.'s (1997) Children's Hope Scale was an indicator of global expectancy, general expectations of the future, bearing strong similarities to future orientation. Bryant and Cvengros (2004) also found that the future-related factors of hope and optimism served as separate but related constructs that predicted future expectations. They also suggested that researchers interested in examining globalized future orientation should treat future orientation as a central construct and that factors that like hope should be treated as sub-components to said construct. Essentially, thus far, there is a lack of consensus regarding the explicit relationship between hope and future orientation although the research veers more so towards an encompassing relationship, in which hope represents one significant aspect of future oriented thinking.

Hope and Future Orientation in Mongolia

We found that research regarding hope and future orientation as well as both in association with one another in Mongolia is, to our knowledge, nonexistent. However, one study provided valuable insight regarding the types of goals that young Mongolian adults may have. Bespalov et al. (2017) explored what life aspirations resonate most with young Mongolian adults from the ages of 17-25. The term life aspirations in this context refers to our autonomous, competences, and relatedness needs. Overall intrinsic life aspirations, related to development of personal growth (e.g., autonomy, psychological growth) and community relations (e.g., relationships with friends), was the more common source of motivation than extrinsic goal motivation. Although the construct of life aspirations shares conceptual similarities with hope

and future orientation, they differ from each other in function nonetheless as hope and future orientation is tied to specific goal setting and motivation while future orientation is tied to a general perspective of the future (Hill et al., 2004; Marjoribanks, 2002; Shek et al., 2016).

One might also look towards cultural background and values to assess the significance of hope and future orientation for Mongolian adolescents, however even this is unclear. In general, cultural research in Mongolia is limited (Rarick et al., 2014). Mongolia's culture and pride are strongly rooted to the nomadic herding lifestyle of their historical past, even though a majority of the population has moved closer to urban cities (Li and Huntsinger, 2011; Wang et al., 2013). Typically nomadic herding cultures and expectations have emphasized individualistic values (Nisbett et al., 2001), an expectation supported by Rarick et al. (2014) and Stojcic (2020) who found that Mongolian people rated highly on individualism. Snyder's (2000; 2002) theory of hope has been attributed as individualistic in nature, as it more so directed towards self-motivation and personal capacity to accomplish goals, and Mongolian adolescents may be more receptive to the construct of hope (Bernardo, 2010; Du & King, 2013). However, others such as Aramand (2013), Bespalov et al. (2017), and Tsoohuu (2014) have described Mongolian culture as collectivistic, influenced more towards family and relatives. In assessing whether hope and future orientation are significant constructs for Mongolian adolescents, along with Bespalov et al. (2017) we can further establish a foundation of understanding regarding how Mongolian adolescents look towards their future and what they hope to accomplish.

In addition to better understanding Mongolian adolescents' sense of hope and future orientation it is imperative to understand what influences them. While studies ascertaining what contextual factors may influence hope and future orientation are limited, the school environment may be a major contributing role (Johnson et al., 2014). Specifically, a school's climate, and its

associated factors, may significantly impact Mongolian adolescents' hope and future orientation (Callina et al., 2014; Johnson et al., 2016; Shek et al., 2016).

School Climate

School climate is a complex network of factors that encompass every aspect of the student's school experience (Cohen et al., 2009; Wang & Degol 2016). School climate incorporates many aspects of an adolescent's school experience, including the quality of social interactions at school, the quality of teaching and learning, and the types of services provided by a school. While school climate research has typically linked it to academic outcomes, it is seldom restricted only to that. Rather, the school experience is a major factor of academic outcomes as well as the adolescents emotional and mental state.

Although descriptions and definitions of school climate have varied, in a thorough review of the literature, Wang and Degol (2016) established that simple definitions of school climate with a limited number of elements do not accurately capture the complexity of the concept. School climate can encompass a variety of aspects of the school experience and constraining that to a singular interpretation denies that complexity. Instead, an encompassing construct of school climate composed of multiple dimensions of school climate is preferred. By examining various dimensions of school climate separately we are able to develop a more nuanced understanding of exactly which dimensions of school climate are relevant to a student and how these various dimensions may uniquely affect them. Dimensions such as quality of teacher support and the extent to which a student feels like they understand how to and feel comfortable enough to follow proper procedures when reporting about behavior issues, represent major aspects of the quality of a student's school experience. One such example of this approach involves Aldridge et al.'s (2016) study of six of specific parameters of school climate, all of which have been

empirically justified as integral components of school climate (Kutsyuruba et al.' 2015; Ramelow et al., 2015; Thapa et al., 2013; Wang and Degol, 2016; Zullig et al., 2010). The two main components we considered in this study are community and safety.

School Climate - Community

Community refers to the quality of relationships and interactions that students have with both other students and school personnel, a sense of general connectedness, and a sense of understanding and respect for diverse cultural backgrounds (Aldridge & Ala'i, 2013; Riekie et al., 2017; Wang & Degol, 2016). As community is primarily centered around the social interaction aspect of school climate, some of the most studied factors identified with this component include teacher support, peer connectedness, and cultural acceptance. Comparatively, these dimensions of school climate have been most strongly associated with students' outcomes (Aldridge et al., 2015; Wang & Degol, 2016)

Teacher Support

How supported students feel by their teachers is an invaluable aspect of the school experience (Aldridge & Ala'i, 2013; Aldridge et al., 2017; Riekie et al., 2017). Under optimal circumstances, teachers fulfill a variety of roles, including being a source of emotional support, providing useful schoolwork appraisal, and being able to find and provide information and resources helpful for future prospects (Colarossi & Eccles, 2003; Lei et al., 2019). As such, students who feel supported by their teachers find that their learning experiences at school are more enjoyable, feel inclined to work harder, and feel confident in overcoming challenging and stressful obstacles (Aldridge, 2013; Aldridge & McChesney, 2018; Aldridge et al., 2019; Cohen et al., 2019; King et al., 2012; Loukas & Robinson, 2004). Various longitudinal studies have found that academic outcomes are especially tied to high teacher support, such as higher

engagement in specific subjects (e.g., math, science, etc.; Hughes, 2001; Kelly & Zhang, 2016; Weyns et al., 2017), general school engagement (Weyns et al., 2017; Yu et al., 2016), and academic achievement (e.g., GPA, math, reading, etc.; Hughes et al., 2001; Kosir & Tement, 2014). Mental health correlates of teacher support include a stronger mitigation of both the severity and prevalence of anxiety (Yu et al., 2016) and depressive symptoms (Joyce & Early, 2014). Overall, teacher support is a highly influential and important factor in the lives of students and a variety of studies solidify its advantages. Given that teachers are a major resource of support for adolescents, especially in their academic career, it is important to establish their impact on hope and future orientation.

School Personnel Support

In addition to teachers, other adults in schools may serve as a significant source of personal and academic support (Conley et al., 2010). Depending on staffing levels and role definition in different buildings, school personnel such as social workers, principals, school counselors, psychologists, school nurses, librarians, and even part-time instructional aides may develop trusting relationships with students and, thereby, play a key role in adolescent development and wellness (Stoll & McLeod, 2020; Stone et al., 2013; Wood et al., 2017). Though not often included in studies of the effects of school context on student outcomes, these educational workers may engage students in important conversations about educational plans and career aspirations and thus serve as a catalyst for future thinking (Bryan et al., 2011; Gysbers, 2013). These studies suggest that a comprehensive appraisal of the school environment factors should include an assessment of the impact of school staff members, other than teachers, on student hope and future orientation.

Peer Connectedness

Peer connectedness represents the quality and rapport of the social interactions shared between students at school (Aldridge & Ala'i, 2013; Aldridge et al., 2018; Roffey, 2008). Peers, like teachers, represent another major aspect of the interrelationships experienced by students in the school environment (Crosnoe et al., 2004; Wang & Degol, 2016). Academically, peers who show an invested interest in both school and academic interests can be highly influential. Adolescents who develop relationships with such peers experience higher academic engagement (Weyns et al., 2017), motivation in their schoolwork, academic achievement, and decreased absenteeism (Rambaran et al., 2016). A pattern that becomes especially prominent in students who are interested in their schoolwork, as adolescents are naturally drawn to peers who are similar in interests, behavior, and academic adjustment. In sharing such similarities, pro-academic behavior is reinforced (Furrer & Marchand, 2020; Sussman et al., 2007; Wentzel, 1993; Wentzel & Caldwell, 1997)

General day-to-day behavior both at home and school are naturally influenced through peer interaction, but this influence becomes especially prominent during the stage of adolescence (Thapa et al., 2013; Wang and Degol, 2016). The desire for supportive relationships are tied to adolescents' desire for relatedness with the people around them which helps to facilitate the development of positive social and emotional skills (Maurizi et al., 2013). Cassidy et al. (2016) noted in their review that adolescents who form secure peer relationships are more likely to participate in prosocial behavior and become better informed on how best to form meaningful relationships (Brown & Larson, 2009), and they are more easily able to emotionally and personally adjust to their transition from high school into college (Swenson et al., 2008). As students establish positive peer relationships and are typically exposed to unfamiliar social processes around secondary school age (Lo et al., 2011), they develop positive prosocial skills

that are key in navigating negative feelings attributed to stressful social situations (Kilian et al., 2007; Stewart, 2007). Longitudinal studies have also shown that positive peer relationships facilitate the development of positive emotions while simultaneously deterring negative emotions (Adrian et al., 2015; Ju & Lee, 2018). Conversely, poor peer support or rejection has been linked to victimization and lower academic engagement, both of which subsequently contribute to lower grades (Buhs et al., 2006; Wang et al., 2014; You et al., 2008). As peer-based interactions significantly influence adolescents' academic interests and general behavior, which are tied to hope and future orientation, their sense of hope and future orientation may also be affected by peers.

Cultural Acceptance

The cultural acceptance dimension of school climate represents respect, support, and demonstrated awareness of students' backgrounds such as their cultural or religious backgrounds. (Chang and Le, 2010; Wang and Degol, 2016). While cultural acceptance can take different forms, one of the more commonly demonstrated examples include the quality and effort made by teachers to create a safe and understanding classroom-environment (Weinstein et al., 2004). A higher level of cultural awareness in schools promotes higher educational attainment (Mahatmya et al., 2016). However, studies on the effect of awareness regarding cultural backgrounds of students and their outcomes, such as their sense of hope and future orientation, are limited. As previously mentioned, the limited cultural research conducted in Mongolia makes it difficult to concretely determine whether Mongolian adolescents are likely to be receptive to their school's acceptance of diverse and cultural backgrounds (Rarick, 2014). By examining whether acceptance of diverse and cultural background at school is an important determinant of

school climate we may better understand whether acceptance in this form resonates with Mongolian adolescents.

School Climate - Safety

The second component of school climate identified by Wang and Degol (2016), safety, represents the emotional and physical security students feel while at school (Aldridge & Ala'i, 2013; Wang & Degol, 2016). A safe school climate is maintained through the fairness, consistency, and open communication of school regulations and the extent to which students trust school staff to enforce school rules (Kuperminc et al., 1997; Stewart, 2007; Way, 2003). Although the sub-components stemming from the component of community (e.g., Teacher support) have been more internationally explored, studies that explored safety and its sub-components have typically been restricted to Western countries but have also generally garnered comparatively less interest in comparison to the community sub-components (Bear et al., 2018; Jia et al., 2009; Liu & Lu, 2012; Varela et al., 2019; Zhang, 2016). While safety comprises a variety of dimensions, the dimensions of interest for the present study are rule clarity and reporting and seeking help.

Rule Clarity

Rule clarity refers to the extent to which a student both knows and recognizes school regulations and expectations (Aldridge & Ala'i, 2013; Cohen et al., 2015; Gottfredson et al., 2005). Compared to other aspects of school climate, rule clarity is focused on the perceived quality and structure of a school's regulations (Aldridge & Ala'i, 2013; Cohen et al., 2009; Låftman et al., 2016; Roeser & Eccles, 1998; Wang & Degol, 2016). In schools where rules are perceived by students as clearly communicated, fair in expectations, and fair in punishment, victimization and aggression amongst students becomes discouraged and is thus less prevalent

(Gottfredson et al., 2005; Guerra et al., 2011; Konishi et al., 2017; Elsaesser et al., 2012; Låftman et al., 2016). Aside from student-based victimization, rule clarity also extends to how well protected students feel from teacher-based victimization and unfair punishment from teachers with punitive attitudes (Gottfredson et al., 2005). Positive social and emotional outcomes associated with perceived rule clarity for students include lower depressive symptoms and behavioral problems in addition to higher self-esteem during their time at their school (Way et al., 2007). Additionally, perceived clarity of rules results in students placing a higher commitment towards their learning and studies subsequently followed by greater life satisfaction and academic achievement because of said commitment (Cohen et al., 2009; Lerner, 2009; Ma & Klinger, 2000; Pertegal & Oliva, 2017).

Although most research regarding rule clarity has been conducted in Western contexts, studies conducted with Chinese students offer a comparative look into the relevance of rule clarity. Zhang et al. (2016) found that schools with fewer safety issues supported by rules and consistent enforcement of said rules facilitate environments where Chinese adolescents developed higher self-esteem. Xie et al. (2016) found that students from Grades 6 to 12 were receptive to the fairness of their schools' rules. When comparing differences in effect size of perception of fairness of school rules between Chinese versus American students, Bear et al. (2018) noted that Chinese middle schoolers and high schoolers had a more favorable perception of the fairness of their schools' rules. The few Chinese studies that have examined the significance of the fairness and enforcement of rules, do seem to suggest that this dimension of school climate is important for Chinese students. However, the dearth of studies underscores the importance of assessing the influence of rule clarity on hope and future orientation in non-Western contexts and for Mongolian adolescents.

Reporting and Seeking Help

Students need to be informed on the procedures involved in reporting incidents at school as well as be made to feel comfortable reporting any issues they encounter without fear of reprimand or judgement from peers or school personnel (Aldridge & Ala'i, 2013; Aldridge et al., 2016). Generally, Aldridge and Ala'i (2013) believed that student's willingness to seek help and report misconduct are indicative of a school's sense of safety and security. If students find that their teachers are both approachable and supportive of their students for misconduct or concerning issues, the more inclined they are to reach out to teachers for personal or academic issues (Eliot et al., 2010). When students feel comfortable reaching out to their teachers, students are less likely to exhibit behavioral issues in class (Reinke & Herman, 2002) and are more likely to discourage aggressive behavior amongst their peers (Bandyopadhyay et al., 2009). Indirectly, if a school environment is perceived as safe, student's academic efficacy, mastery, and aspirations naturally flourish (Brand et al., 2003; Shim et al., 2013; Wang et al., 2010). Conversely, in a disorderly school environment wherein rules are likely to be frequently broken, students become unwilling to report or seek help (Eliot et al., 2010; Oliver & Candappa, 2007) and grow cynical of their school's wherewithal to implement conflict resolution strategies (LaRusso & Selman, 2011). Reporting and seeking help is multifaceted in interpretation, as not only does it indicate students trust in their school to handle reported issues but their willingness to reach out to teachers for other less extreme issues that then impact their emotional and academic outcomes related to their sense of hope and future orientation.

Hope, Future Orientation, and School Climate

As outlined above, hope and future orientation can play a major deciding role in the life trajectories of adolescents and is inherently tied to context (Callina et al., 2014; Shek et al.,

2016). For adolescents, the school environment represents one such major ecological context as they are likely to experience being in school on a near daily basis for a majority of their lives (Chen & Vazsonyi, 2013; Shek et al., 2016). Primary socialization contexts like schools are central zones where adolescents are introduced to differing perspectives about oneself, the world around them, and what the future holds (Crespo et al., 2013; Nurmi, 1991). While research examining school climate in association with hope and future orientation is limited, several articles suggest these concepts are related.

Studies that have examined future orientation in association with school climate or school climate-related variables suggest a clear positive relationship. Johnson et al. 's (2016) study involving academically at-risk students indicated that student's perceptions of a healthy school climate promoted students' sense of future oriented thinking. School climate in Johnson et al. 's (2016) study encompassed both emotional and school service support provided by school personnel and the degree of clarity of school rules. Crespo et al. (2013) similarly found that students' feelings of general school connectedness directly contributed to students' sense of future orientation over a two-year timespan. While not explicitly defined as school climate, Crespo et al. 's (2013) scale of school connectedness ascertained students' sense of school community and the quality of their relationships with teachers and peers.

Both Crespo et al. (2013) and Johnson et al. (2016) suggested that adolescents who feel that they occupy a meaningful place within their schools and in the lives of their teachers and peers are more likely to feel secure and emotionally cared for. Such support encourages adolescents to engage in future oriented thinking and planning (Hargrove et al., 2005). Malmberg (2001) found that, after family, peers and schools are prominent sources of information when planning for the future. Johnson et al. (2016) also noted that a safe disciplinary structure

promotes the formation of a healthy learning environment that encourages exemplary behavior which then contributes to students' motivation. Taken together, these findings suggest two things. First, perceived support from school personnel and peers are resources for student's own personal future endeavors. Second, the overarching feeling of a safe disciplinary school structure promotes the development of a safe school environment which allows adolescents to feel secure in pursuing their interests and options for the future.

Studies that have investigated hope show similar results. Merkaš and Brajša-Žganec's (2011) study comparing differences between high versus low levels of hope in adolescents noted that the high-hope adolescents perceived a higher presence of general social support. Nie et al. (2019) found that students who believed that the relationships they had with their teachers were positive tended to have a stronger sense of hope. This positive association subsequently contributed to stronger feelings of life satisfaction. Liu et al. (2020) found that both hope and perceived school connectedness, measured by the quality of relationships with adults at school and a sense of school belonging, successfully mitigated the harmful effect of adolescent's victimization to their overall life satisfaction and general emotional difficulties. From these findings we may be able to surmise that adolescents who feel supported by the people in their lives, such as teachers or peers, as well as those who feel a sense of inclusion in their school community become encouraged and motivated to reach their goals.

While these findings do indeed suggest a likely positive association between healthier school climate to hope and future orientation, there are some limitations to keep in mind. Few studies directly examine hope and future orientation together with school climate. Most studies we found on school climate, examined concepts such as social support and school connectedness. To our knowledge, studies examining the school climate dimensions related to

safety have rarely examined future orientation and have not considered hope. Our literature review also revealed no studies that included the effect of perceived acceptance or approval of cultural background at school. Thus, in developing a comprehensive analysis of varying school climate dimensions as possible contributing factors to hope and future orientation, we directly expand on the aforementioned gaps in the literature and help to tailor the school experience of Mongolian adolescents in schools to accommodate their needs.

Socioeconomic Status (SES)

In order to establish the magnitude of contribution of the various dimensions attributed to school climate to hope and future orientation, it is imperative to consider how socioeconomic status may account for adolescents' state of hope and future orientation. The higher a family's status, the higher the likelihood that students will have available resources to help them in their school or career goals. This may then result in more frequent instances of hope- or future orientation- relevant opportunities and thus improve the perception of their future goals (Griskevicius et al., 2011; Lei et al., 2019; Schröder et al., 2011; Yin et al., 2019). By taking SES into account, we are better able to definitively discern how the various school climate dimensions uniquely account for and contribute to adolescents' state of hope and future orientation.

Final Remarks

Based on our review of the growing literature as well as current gaps in the literature, this study has three objectives. We will first establish whether Mongolian adolescents discern hope and future orientation as two separate but related factors or whether they represent one singular construct of future thinking that combines both hope and future orientation. Our second objective is to expand on the burgeoning literature examining the relationship between school climate

dimensions to include hope and future orientation. Our third objective is to contribute to current gaps in Western research examining the relevance of school climate, hope, and future orientation from the perspective of Mongolian adolescents.

Method

Study Context

This study originated from a research partnership initiated by David Sattler, Oyundelger Enkhtur, and Boldsuren Bishkhorloo and funded by the Jack Street Fund for Mongolian Studies, at the Western Washington University (WWU) Center for Global Engagement (Principal Investigator: Dr David Sattler) in 2018-2019. The present study represents the third collection of data in Mongolian secondary schools in September 2019 which was funded by a second grant from the Jack Street Fund for Mongolian Studies at the WWU Center for Global Engagement (Co-Investigators: Dr. David Sattler and Dr. Diana Gruman). Mongolian researchers Oyundelger Enkhtur and Boldsuren Bishkhorloo recruited schools, identified research assistants, and coordinated the data collection efforts.

Participants

There was a total of 1,507 participants with 679 identifying as male (45.1%), 818 identifying as female (54.3%), 1 who neither identified as male or female (.1%), and 9 students who did not select either of three options (.6%). Ages ranged from 11-19 with the average age being 14.97 (*SD* = 1.48). Students belonged to grades 7-12 with the average grade being 9.93 (*SD* = 1.42). Three major ethnic groups were represented with 1,162 Khalka (77.11%), 58 Kosak (3.85%), 24 Dövöd (1.59%). The remaining 263 students (17.45%) selected “Other” or did not respond to the ethnicity question. In terms of city of origin, 393 (26.08%) students originated

from Ulaanbaatar, 562 (37.29%) from Erdenet, and 552 (36.63%) from Darkhan. See Table 1 for demographics.

Table 1

Demographics

Variable	N	%
Gender	1498	99.4
Male	679	45.1
Female	818	54.3
Other	1	.1
Missing	9	.6
Age	1444	95.82
11	1	.07
12	27	1.79
13	229	15.20
14	380	25.22
15	276	18.31
16	214	14.20
17	291	19.31
18	25	1.66
19	1	.07
Missing	63	4.18
Ethnicity	1453	100
Khalka	1162	77.11
Kosak	58	3.85
Dövöd	24	1.59
Other	209	13.87
Missing	54	3.58
Grade	1485	98.54
7th Grade	1	.07
8th Grade	259	17.19
9th Grade	452	29.99
10th Grade	227	15.06
11th Grade	221	14.66
12th Grade	325	21.57
Missing	22	1.46
City	1507	100
Ulaanbaatar	393	26.08
Erdenet	562	37.29
Darkhan	552	36.63

Material

The Children's Hope Scale

To measure hope, we utilized Snyder et al.'s Children's Hope Scale (CHS, 1997) which consists of six items on a 5-point Likert scale (1=*Almost never*, 5=*Almost always*) designed for children aged 8 to 16. Three questions represented the agency aspect of hope (e.g., "I think the things I have done in the past will help me in the future.") while the other three questions represented the pathway aspect of hope (e.g., "When I have a problem, I can come up with lots of ways to solve it."). See Appendix A for other included questions.

Given that Snyder et al. (1997) had noted that hope theory requires the utilization of both agency and pathway components and should not be used separately, we chose to examine hope in total rather than distinguish by agency and pathway. Snyder et al. (1997) reported alpha coefficients ranging from .72 to .86 across numerous samples for the six-item initial hope scale. Additionally, researchers like Ling et al. (2021) reported a total hope alpha coefficient of .81 for Chinese adolescents and Yang et al. (2021) reported values of .80 for Chinese adolescents and .85 for American adolescents. A Cronbach's alpha coefficient was also calculated for each measure of this study. For this study, the Children's Hope Scale was found to have acceptable reliability ($\alpha = .72$) See Table 2 for the mean and standard deviation of each hope item.

Table 2

Item Mean and Standard Deviation

Items	M	SD
Hope		
1. When I have a problem, I can come up with lots of ways to solve it.	3.41	.92
2. I can think of many ways to get the things in life that are most important to me.	3.33	.98
3. I am doing just as well as other kids my age.	3.88	.96
4. I think the things I have done in the past will help me in the future.	3.99	1.02
5. I think I am doing pretty well.	3.52	.93
6. Even when others want to quit, I know that I can find ways to solve a problem.	3.42	.99
Future Orientation		

1. I often think about my future and what I want to do with my life.	4.15	.96
2. I work hard now to create a better future for myself.	4.18	.82
3. I am the type of person who sets goals and works hard to achieve them.	3.99	.91
4. I am serious about working hard now so I will have a good future.	4.42	.75
Teacher Support		
1. My teachers try to understand my problems.	3.05	1.13
2. My teachers listen to me.	3.31	1.09
3. My teachers support me when I have problems.	3.13	1.08
4. Teachers go out of their way to address my needs.	3.01	1.19
5. My teachers are willing to listen to my problems.	3.05	1.18
Peer Connectedness		
1. I get along with other students at school.	3.92	.97
2. Students talk to me.	4.16	.90
3. Students support me.	3.73	1.01
4. Students help me.	3.76	1.00
5. I feel accepted by other students.	3.80	1.02
Cultural Acceptance		
1. I can express myself freely at this school.	3.32	1.07
2. If I talk or dress differently than others, students will not judge me.	3.13	1.24
3. My cultural background and beliefs are valued at this school.	3.38	1.10
4. Students at this school accept me for who I am.	3.74	1.03
5. When my personal preferences differ from others, I still feel respected at this school.	3.37	1.20
Rule Clarity		
1. The rules at school are clear to me.	3.79	1.10
2. The school rules help me to feel safe.	3.63	1.16
3. The school rules make it clear to me that certain behaviors are unacceptable.	3.75	1.12
4. I understand why the school rules are in place.	4.05	1.02
5. I know the school rules.	3.74	1.09
Reporting and Seeking Help		
1. I can report bad behavior to school officials.	3.05	1.28
2. I am confident to talk to a teacher if I am bullied.	3.17	1.35
3. I know how to report problems to school officials.	3.30	1.27
4. I can report incidents at school without others finding out.	3.20	1.27
5. It is okay to tell a teacher if I feel unsafe.	3.44	1.30

School Personnel Support		
1. School workers assist me with a crisis or emergency.	2.85	1.11
2. School workers help me do well in my classes.	3.05	1.21
3. I discuss my strengths and goals with a school worker.	2.16	1.18
4. School workers support me with family problems or conflicts with other students.	2.20	1.19
5. School workers help me plan my future.	2.68	1.33

Future Orientation Scale

Future orientation was measured using Crespo et al.'s (2013) Future Orientation scale, comprised of four items on a 5-point Likert scale (1 = *Almost never*, 5 = *Almost always*), designed to measure a globalized understanding of future-orientated thinking based on self-directed action. The questions that were included were, "I often think about my future and what I want to do with my life," "I work hard now to create a better future for myself," "I am the type of person who sets goals and works hard to achieve them," and "I am serious about working hard now so I will have a good future." The measure was found to have an acceptable to good reliability for adolescents with the reported alpha coefficients ranging from .74 to .81 across all three time points in Crespo et al. 's (2013) study. For this study, the future orientation scale was found to have acceptable reliability ($\alpha = .77$) See Table 2 for the mean and standard deviation of each future orientation item.

The What's Happening In This School (WHITS) Measure of School Climate

The WHITS school climate measure is a 48-item scale validated by Aldridge and Ala'i (2013) to measure dimensions of school climate. The WHITS was validated for use in Mongolia by Sattler, Gruman, et al. (2021). For the present study, a smaller set of 25 WHITS items were chosen based on high factor-loadings from the first Mongolian school study, (Sattler, Gruman, et al., 2021) thereby developing a more economical survey instrument (Aldridge et al., 2018). Another modification from the original WHITS, was a change in the wording of the items in the

cultural acceptance scale. Based on participant feedback during a prior administration of the survey, the items were adapted from the original WHITS scale to better capture what acceptance might look like for Mongolian students (Sattler, Gruman, et al., 2021). For example, rather than focus on religious or spiritual diversity (e.g. "Religious days that are relevant to me are recognized as being important") the new items emphasized a broader definition of culture (e.g. "My cultural background and beliefs are valued at this school").

For the present study, five items were used for each of the following dimensions: teacher support (α=.88) (e.g. "My teachers try to understand my problems"), peer connectedness (α=.88) (e.g. "I get along with other students at school"), cultural acceptance (α=.78) (e.g. "My culture is understood"), rule clarity (α=.82) (e.g. "The rules at school are clear to me"), and reporting and seeking help (α=.84) (e.g. "I can report bad behavior to school officials'). Students responded on a 5-point Likert scale (1 = *Almost Never,* 5 = *Almost Always*). See Appendix A for questions belonging to each school climate dimension and Table 2 for the mean and standard deviation of each school climate item.

School Personnel Support

The school personnel support was exclusively designed for this study. The scale was designed to include the educational planning, mental health, and wellness-based assistance students receive from general school staff rather than just teachers. The scale consists of five items and utilizes a 5-point Likert scale (1 = *Almost there*, 5 = *Almost always*). The included questions were: "School workers assist me with a crisis or emergency," "School workers help me do well in my classes," "I discuss my strengths and goals with a school worker," "School workers support me with family problems or conflicts with other students," and "School workers help me plan my future." School personnel support had good reliability (α = .84).

Socioeconomic Status

Socioeconomic status was assessed using a single item adapted from the Macarthur Scale of Subjective Social Status (Adler et al., 2000; Goodman et al., 2001). The ladder-like scale is designed to assess participants' perception of family social status based on general resources available to them. The students were presented with a line with eight points and asked the following question, “Think about your family’s resources, such as food, housing, money, animals, and transportation. Circle a point on the line to show how many resources your family has.” Participants circled one of eight points on the line with the lowest possible option being, *A small amount*, and the highest possible being, *A very large amount* ($M = 5.16$, $SD = 1.44$).

Procedure

We followed Van de Vijver and Leung (1997) and Matsumoto and Van de Vijver’s (2011) committee approach to translate the survey materials from English to Mongolian. This approach has been used to translate measures used to assess psychological functioning after catastrophic events into Bahasa Indonesian, Mongolian, Spanish, Tagalog, Thai, and Tongan (Sattler et al., 2014; Sattler et al., 2020; Sattler, Bishkhorloo, et al., 2021). Two of the researchers were bilingual English and Mongolian instructors from the Education and Psychology Department at the National University of Mongolia and translated each of the scales. One translated the survey scales and met with the other author to review and revise the survey translations. Afterwards, advanced students from the Education and Psychology Department of the National University of Mongolia were enlisted to form a committee to further review stage of each survey item to establish their face validity when translated as well as their fit in a Mongolian context. Finally, the two bilingual researchers made final revisions dependent on

committee feedback. Four advanced education and psychology students attended workshops to train to become research assistants and administer the questionnaires.

Students from six schools within three of the most populated cities in Mongolia participated in the study and completed the instruments. The research sites included: Ulaanbaatar (two schools; city population: 1,615,094), Erdenet (two schools; city population: 97,814), and Darkhan (two schools; city population: 83,883). School directors at each of the sites approved the data collection protocol. However, due to an employee strike occurring at the time, true random sampling was not able to be used. Data was collected in individual classrooms during the beginning of the school year in September with teachers present. Students were asked not to include their names or any information that could be used to identify them and that their answers would be anonymous. Research assistants shared the purpose of the study and provided students with informed consent, and instructions for completing the questionnaire.

Results

Data Analysis

To examine our research questions three types of analyses were conducted: exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM). First, EFA using maximum likelihood and promax oblique rotation were used to examine the model structures of hope with future orientation. Hope and future orientation were allowed to correlate with one another to discern whether both hope and future orientation represent two separate factors or whether they represent one single factor of future thinking. For school climate, a second EFA was performed to examine the factor loadings of the school climate dimensions to determine whether they are relevant to the Mongolian students. Additionally, school personnel support was introduced to determine whether it would load as a

school climate factor along with the other school climate factors. Afterwards, CFA was conducted to determine the viability of the final models for hope and future orientation and school climate.

Afterwards, SEM was conducted to examine how and whether the school climate factors directly relate to the final factor structure of hope and future orientation. SES was introduced after the previous model was identified to determine if its introduction would lessen the relationship to hope and future orientation or future thinking and whether its inclusion would lessen the relationships between the school climate factors and future thinking. Additionally, a measured cultural acceptance variable was introduced to assess whether cultural acceptance would predict future thinking.

Exploratory Factor Analysis (EFA)

Hope and Future Orientation

Following Pohlmann's (2004) recommendation, the dataset was randomly split in half into two data sets to estimate our final models twice to assure the patterns in one dataset could be replicated in the second. EFA was conducted on the first half using the program JASP while CFA was conducted on the second half using R. Six EFA's were used to examine whether hope and future orientation represented two separate factors or were only one factor. For all EFAs we utilized maximum likelihood extraction, a promax rotation method, and a factor loading cutoff of .30 as recommended by Costello and Osborne (2005). By using maximum likelihood analysis, we were able to obtain unbiased and efficient parameter estimates (Zhong & Yuan, 2011). Promax rotation is a form of oblique rotation method that is useful for larger data sets and allows for factors to be correlated (Hendrickson & White, 1964).

The first model included all six of the Hope items and all four of the Future Orientation items and utilized parallel analysis. Parallel analysis is a method of analysis that assesses how many factors to retain by creating a randomized dataset that integrates the numbers of observations and variables from the originally sourced dataset; parallel analysis is recognized as one of the more accurate methods to assess factor solutions (Çoklul & Koçak, 2016; Horn, 1965; Zwick & Velicer, 1986). If the eigenvalues of factors from the random simulated data are larger than the eigenvalues of factors from that of the observed data, then we can assume that said factor should not be retained. The eigenvalue for factor 1 was large and exceeded the simulated factor 1 and so was retained. Factor 2 had also exceeded past the simulated factor 2 however the eigenvalue of factor 2 of the observed data reached an eigenvalue lower than 1 and was not theoretically warranted, suggesting factor 2 should not be retained. All four of the future orientation items as well as hope item four, one of the three hope items measuring the sub-component of agency, loaded onto factor 1 while the five other hope items loaded onto factor 2. Hope item three, which loaded onto factor 2, had the lowest loading compared to every other item while also sharing the highest uniqueness with a value of .75, with uniqueness being the amount of variance unique to a variable that is not shared with other variables. See Appendix A for hope and future orientation item wording.

Other measures similarly suggested the data and results were sufficient for an EFA. Specifically, the Kaiser-Meyer-Olkin (KMO) test, which measures how appropriate the data is for factor analysis, revealed a value of .863 suggesting a meritorious sample (Kenny, 2020). Bartlett's test of sphericity, which determines whether the data fulfills the assumption of equal variance for every sample, was found to be statistically significant (X^2 (45) = 1957.64, $p < .001$). The root mean square error of approximation (RMSEA) score, which determines how different a

perfect model would be from our hypothesized model, was .067 ranging between an acceptable to good score. The chi-square test, used to test whether there is a difference between our hypothesized factor model compared to the actual observed data, was significant (X^2 (26) = 115.37, $p < .001$) suggesting that the hypothesized model did differ from the actual observed data. However, the chi-square test is sensitive to larger sample sizes higher than 200 resulting in an unreliable significant outcome that typically rejects the model output and so more attention should be placed on other fit indices (Fan et al., 1999). Finally, we received an acceptable Tucker Lewis Index (TLI) score of .92, which is an incremental measure of goodness-of-fit.

The viability of a one-factor solution was then tested by manually requesting JASP to load all items into one factor. Though only one of the hope items had loaded into factor 1, the Children's Hope Scale was found to have an acceptable Cronbach's alpha of .72, suggesting that all the hope items are closely related. Items with low factor loadings and high uniqueness were removed in order, with smallest loadings removed first. In the end, hope items 1, 2, 3, and 6 were removed and hope items 4 and 5 were sustained. This model was selected because it had the best overall fit. The KMO test revealed a meritorious value of .84, suggesting an adequate sample. The Bartlett's test of sphericity was found to be significant (X^2 (9) = 1155.45, $p < .001$). The RMSEA score was .056 ranging between an acceptable to good score. The chi-square test was significant (X^2 (9) = 31.05, $p < .001$). Finally, we received a good TLI score of .97.

School Climate

To examine the factor structure of school climate and to determine whether school personnel support would load as a factor of school climate, three EFAs were conducted. Every analysis utilized parallel analysis, maximum likelihood estimation method, and promax rotation using a loading cutoff of .30. The first EFA produced five factors. Factor one included all the

peer connectedness items as well as items 1 and 4 of the cultural acceptance items. Factor 2 included all the teacher support items. Factor 3 included all the reporting and seeking help items. Factor 4 included all the rule clarity items. Factor 5 included all the school personnel support items. See Appendix A for items. The eigenvalues for factor 1-5 each exceed the simulated factors 1-5 and so were retained. Cultural acceptance items 2, 3, and 5 however did not load on any factor in Model 1. The KMO test revealed a marvelous value of .932. Bartlett's test of sphericity (X^2 (435) = 11312.72, $p < .001$) was found to be significant. We received an acceptable RMSEA score of .052. The chi-square test was significant (X^2 (295) = 891.68, $p < .001$). Finally, we received an acceptable TLI score of .92.

Next the cultural acceptance items were removed including the two items that loaded on to the peer connectedness factor. Although one of the items had loaded onto the peer connectedness factor, the items did not directly pertain to the relationship with or support of their peers. Rather, the items pertained to students' sense of expression at school and acceptance of cultural background by peers and therefore seemed inappropriate for inclusion in the peer connectedness measure. After removing the two cultural acceptance items, the teacher support items loaded onto factor one and the peer connectedness items loaded onto factor two. The KMO test revealed a marvelous value of .92. Bartlett's test of sphericity (X^2 (300) = 9517.90, $p < .001$), was found to be significant. We received a good RMSEA score of .046. The chi-square test was significant (X^2 (185) = 484.84, $p < .001$). Finally, we received an acceptable TLI score of .95.

Confirmatory Factor Analysis

Future Thinking

A CFA was conducted to determine whether the measure of future thinking loaded through the EFA, which included all of the future orientation items and hope items four and five.

Hope items four and five were allowed to covary as both items belonged to the Children's Hope scale and all other items were from the future orientation scale. This CFA model reached a comparative fit index (CFI) value of .995 (Hooper et al., 2008), which compares the null hypothesis model with no correlations between variables to our proposed model, suggesting a great fit. The TLI reached a score of .99 suggesting a good fit. We received a RMSEA value of .031, suggesting a good fit. The standardized root mean square residual (SRMR), an absolute measure of fit which notes standardized differences between the observed versus predicted correlation, resulted in a value of .02 suggesting a good fit (Kenny, 2020). Finally, we received a nonsignificant Chi-square value (X^2 (8) = 13.44, p = .098). The final future thinking model was retained.

School Climate

A CFA was also conducted to confirm the EFA factor structure of school climate. The model reached a CFI value of .95 suggesting a great fit. The TLI value reached was .95, suggesting a near-great fit (Hooper et al., 2008). The SRMR resulted in a value of .04, suggesting a good fit. We received a RMSEA value of .047, suggesting a good fit. Finally, we received a significant Chi-square value (X^2 (265) = 630.01, p < .001). All of these indicators suggest that the model was consistent with the data. See Table 3 for final EFA and CFA factor loadings for Future Thinking and School Climate.

Table 3

Final Factor Loadings for Future Thinking and School Climate Items

Item	Exploratory Factor Analysis	Confirmatory Factor Analysis Loadings (Standardized)
Future Thinking		
H4.I think the things I have done in the past will help me in the future.	.505	.461
H5. I think I am doing pretty well.	.464	.468

F1. I often think about my future and what I want to do with my life.	.535	.478
F2. I work hard now to create a better future for myself.	.770	.781
F3. I am the type of person who sets goals and works hard to achieve them.	.735	.761
F4. I am serious about working hard now so I will have a good future.	.672	.674
Teacher Support		
1. My teachers try to understand my problems.	.790	.746
2. My teachers listen to me.	.766	.733
3. My teachers support me when I have problems.	.834	.808
4. Teachers go out of their way to address my needs.	.720	.754
5. My teachers are willing to listen to my problems.	.776	.744
Peer Connectedness		
1. I get along with other students at schools.	.687	.703
2. Students talk to me.	.712	.760
3. Students support me.	.853	.856
4. Students help me.	.831	.801
5. I feel accepted by other students	.807	.799
Rule Clarity		
1. The rules at school are clear to me.	.768	.743
2. The school rules help me feel safe.	.691	.748
3. The school rules make it clear to me that certain behaviors are unacceptable.	.596	.643
4. I understand why the school rules are in place.	.767	.678
5. I know the school rules	.654	.608
Reporting & Seeking Help		
1. I can report bad behavior to school officials.	.621	.669
2. I am confident to talk to a teacher if I am bullied.	.726	.765
3. I know how to report problems to school officials.	.819	.749
4. I can report incidents at school without others finding out.	.738	.695
5. It is okay to tell a teacher if I feel unsafe.	.647	.717
School Personnel Support		
1. School workers assist me with a crisis or emergency.	.451	.772
2. School workers help me do well in my classes.	.441	.736
3. I discuss my strengths and goals with a school worker.	.852	.720
4. School workers support me with family problems or conflicts with other students.	.836	.745

5. School workers help me plan my future.	.692	.689

Note. For Future Thinking items, H = hope and F= future orientation

Structural Equation Modeling (SEM)

We examined the correlations among the dimensions of school climate to note whether there are any issues of multicollinearity before continuing with the SEM. School personnel support had a notably high correlation value of .67 with teacher support. School personnel support also had a moderately high value .58 with reporting and seeking help and .54 with rule clarity. The high values suggest an issue of multicollinearity with school personnel support and that may affect the reliability of the regression estimates. Thus, although school personnel support did load as a school climate of dimension it was not included in subsequent analyses. Please see Table 4 for school climate factor correlations.

Table 4

SEM School Climate Factor Correlations

Factors	1	2	3	4	5
1. Teacher Support	1	-	-	-	-
2. Peer Connectedness	.296	1	-	-	-
3. Reporting & Seeking Help	.495	.386	1	-	-
4. Rule Clarity	.519	.320	.484	1	-
5. School Personnel	.668	.314	.580	.543	1

SEM was used to examine the structural relationships between the school climate dimensions and future thinking. To conduct our SEM and to examine the standardized regression values, we used R along with R packages lavaan and psych.

As shown in Figure 1, the final CFA models for School Climate and Future Thinking were included as latent factors. For Model 1, Future Thinking was regressed onto all four School Climate factors. We received a good CFI fit value of .96. We received a good fit RMSEA value of .042. R is also able to provide a p-value for RMSEA as well as a 90% confidence interval (CI

= .039, .045, p = 1). These results indicate the likelihood that the RMSEA is lower or equal to 0.05, a good RMSEA value, is very high. We also received a good SRMR value of .041. The chi-square test was significant (X^2 (288) = 944.21, p < .001) and is thus the exception to the pattern of results indicating a very strong fit. However, as mentioned earlier, the chi-square test is sensitive to larger sample sizes (Fan et al., 1999). Model 1 resulted in a good fit overall.

Most of the school climate factors had statistically significant and positive relationships with future thinking in Model 1. The coefficient leading from peer connectedness to future thinking was both positive and the strongest relationship (β = .363, p < .001), suggesting that students with a strong sense of connectedness to their peers reported that they were more likely to engage in future thinking. The coefficient leading from rule clarity to future thinking was positive (β = .174, p < .001), suggesting that students who perceived their schools' rules to be clear and contribute to a safe school environment reported that they were more likely to engage in future thinking. The coefficient leading from reporting and seeking help to future thinking was positive (β = .127, p < .001), suggesting that students who are knowledgeable of and confident in reporting issues reported that they were more likely to engage in future thinking. Teacher support, however, was not statistically significantly related to future thinking (β = -.023, p = .555).

For Model 2, teacher support was removed from the model because it had a nonsignificant relationship with future thinking in Model 1. This model received a good CFI fit value of .96, with a good fit RMSEA value of .043 (CI = .039, .047, p = .999), and a SRMR of .04. The chi-square test was significant (X^2 (182) = 635.91, p < .001). Model 2 resulted in a good overall model and had a slightly better fit of CFI, TLI, and SRMR than Model 1. Peer connectedness was statistically significantly and positively related to future thinking (β = .353, p

< .001), as was reporting and seeking help (β = .130, p < .001), and rule clarity (β = .164, p < .001).

For Model 3, teacher support was retained and rule clarity was removed from the model. The purpose of this model is to further isolate the effects of teacher support by removing rule clarity. This was important because they share a correlation value of .52. By removing rule clarity, this model allowed us to discern whether the lack of statistically significant link between teacher support and future thinking was due to either issues of multicollinearity or whether it simply is not related to future thinking. We received a good CFI fit value of .97, a good fit RMSEA value of .040 (CI = .036, .044, p = 1), and a SRMR value of .04. The chi-square test was significant (X^2 (182) = 574.73, p < .001). Model 3 had resulted in a good fit overall and had a slightly better fit of CFI, TLI, and RMSEA than Models 1 and 2 but a slightly weaker SRMR. Peer connectedness was significantly and positively related to future thinking (β = .372, p < .001) as was reporting and seeking help (β = .178, p < .001). However, even after removing rule clarity, teacher support was still not significant (β = .032, p = .372).

For Model 4 teacher support was removed again and rule clarity was retained once more. These changes were made as teacher support was not significantly related to future thinking when included in both Models 1 and 3 while Rule Clarity did predict future thinking when included in Models 1 and 2. Model 4 also included SES as an observed variable. As SES has been found to impact students' sense of hope and future orientation (Griskevicius et al., 2011; Lei et al., 2019; Schröder et al., 2011; Yin et al., 2019), introducing SES allowed us to determine whether its inclusion would reduce the strength of the relationships between peer connectedness, rule clarity, and reporting and seeking help to future thinking. We received a good CFI fit value of .95, and a RMSEA value of .045 (CI = .042, .049, p = .986). We received a good SRMR value

of .05. The chi-square test was significant (X^2 (202) = 729.57, $p < .001$). Although Model 4 had a good fit overall, SES did not significantly relate to Future Thinking (β = .033, $p = .243$).

For Model 5, SES was removed due to not being significantly related to future thinking in Model 4 and cultural acceptance was introduced. As mentioned in the EFA section, the scores of the five cultural acceptance items were averaged together to create an observed mean score. Although cultural acceptance did not load as a school climate factor in our EFA, cultural acceptance was still a reliable scale (α=.78) that may have a possible relationship to future thinking that we were not able to examine in the previous models due to not being included as a factor relevant to school climate. We received an acceptable fit RMSEA value of .067 (CI = .064, .070, $p < .001$), but an unacceptable SRMR value of .10. The chi-square test was significant (X^2 (231) = 1421.37, $p < .001$). In addition to having an overall bad fit, cultural acceptance did not significantly relate to Future Thinking (β = .047, $p = .090$).

In selecting our final model, we examined both the fit indices of the models as well as what factors had significantly related to future thinking. Models 1-4 each had an excellent overall fit while Model 5 had a bad overall fit. Teacher support when included in Models 1 and 3 was not significantly related to future thinking nor was SES in Model 4 or cultural acceptance in Model 5. Thus, Model 2 was selected as the final model both for having an excellent overall fit and for having all included factors of school climate (i.e., peer connectedness, reporting and seeking help, and rule clarity) significantly related to future thinking. Please see Figure 1 for the Model 2 path diagram. See Table 5 for the fit indices for all SEM models and Table 6 for the regression coefficients and p values for each SEM model.

Figure 1

SEM Model 2

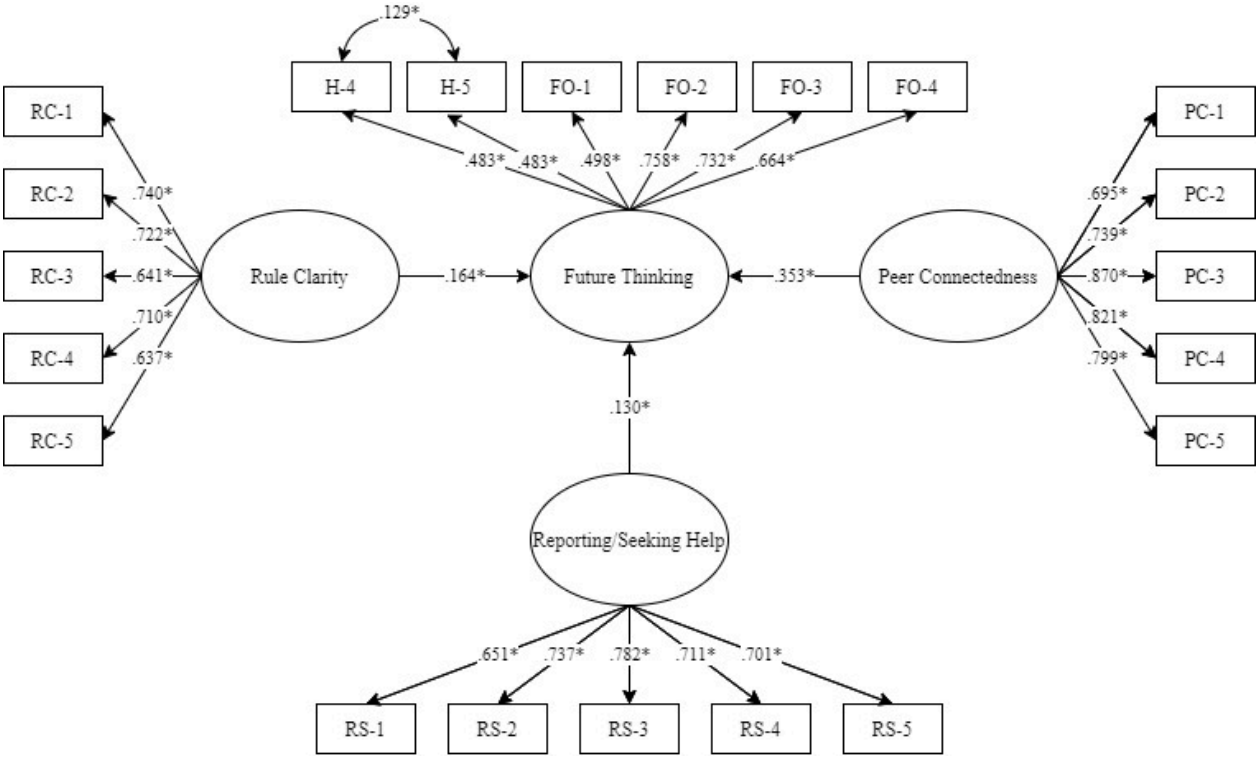

Table 5

SEM Model Fit Indices

Fit Indices	Model 1	Model 2	Model 3	Model 4	Model 5
Chi-square					
X^2	944.211	635.911	574.733	729.566	1421.366
df	288	182	182	202	231
p	<.001	<.001	<.001	<.001	<.001
RMSEA					
X^2	.042	.043	.040	.045	.067
Lower 90%	.039	.039	.036	.042	.064
Upper 90%	.045	.047	.044	.049	.070
p	1	.999	1	.986	<.001
CFI	.955	.959	.967	.951	.898
TLI	.949	.953	.962	.944	.883
SRMR	.041	.036	.039	.051	.104

Table 6

Regression Coefficient and p Values Towards Future Thinking

	Model 1		Model 2		Model 3		Model 4		Model 5	
Items	β	*p*	β	*p*	β	*p*	β	*p*	β	*p*
Teacher Support	-.023	.555	-	-	.032	.372	-	-	-	-
Peer Connectedness	.363	<.001	.353	<.001	.372	<.001	.351	<.001	.338	<.001
Reporting/Seeking Help	.127	<.01	.130	<.01	.178	<.001	.126	<.01	.121	<.01
Rule Clarity	.174	<.01	.164	<.001	-	-	.163	<.001	.158	<.001
SES	-	-	-	-	-	-	.033	.243	-	-
Cultural Acceptance	-	-	-	-	-	-	-	-	.047	.090

Discussion

This study had three primary objectives. We were interested in establishing whether hope and future orientation represent separate but related factors or whether both represent one single factor of future thinking. We sought to contribute to the growing research examining how factors like hope and future orientation are related to students' perception of their school's climate. Finally, we were interested in establishing an understanding of how hope and future orientation are related to Mongolian secondary school students' perception of their school climate as one of the first studies to pursue this line of research in Mongolia.

Hope, Future Orientation, and Future Thinking

Contrary to research suggesting that hope and future orientation are two separate constructs (Seginer, 2009; Seginer & Shoyer, 2012), for the Mongolian students who participated in this study, hope and future orientation merged into one single construct which we termed, future thinking. Specifically, all four of the future orientation items and two of the six hope items comprised the construct of future thinking (Snyder, 2002). Additionally, the two hope items that partially contribute to future thinking represent the agency component of hope proposed by

Snyder (2002), while the three "pathway" items from the Children's Hope Scale did not contribute.

These results align with prior research indicating that hope and future orientation do not represent separate constructs. Chen and Vazsonyi (2013), for example, developed a future orientation scale that incorporated aspects of both future orientation and hope. Similarly, Bryant and Cvengros (2004), found that future orientation should be treated as a central construct and aspiration-related constructs like hope should be treated as a sub-component. However, unlike researchers like Chen and Vazsonyi (2013) and Bryant and Cvengros (2004), we opted to title the single factor "future thinking" rather than future orientation. Future orientation, the prediction and anticipation of one's own future, involves a general perspective of the future. In the present study, the agency aspect of hope, or the motivation and belief that keeps us moving forward to reach the goals we set for ourselves (Seginer, 2009; Seginer & Shoyer, 2012; Snyder, 2003; Tong et al., 2010), combined with the future orientation items. As both constructs fulfill different uses, future thinking is a broader term that allows for the incorporation of both future orientation and agency thinking.

The relevance of future thinking as a construct of importance to Mongolian adolescents may be interpreted in a number of ways. First, future orientation seems to represent the most salient aspect of future thinking for the Mongolian adolescents in the study. Second, agency thinking also appears to be connected to Mongolian adolescents' interest in reaching for the predicted future. Third, pathway thinking, the capacity to define and set pathways to reach goals, seemingly does not play a pertinent role when planning for the future for this group of participants.

According to Snyder's (2002) theory of hope, to optimally benefit from hope requires the integration of both agency and pathway thinking. Agency thinking alone is beneficial as a source of self-motivation, however it becomes ideally advantageous as a means of helping adolescents to follow through on the paths to set goals. Following Snyder's (2002) theory, pathway thinking is a necessary sub-component of hope that increases children's likelihood of reaching their goals as it represents the capacity to set and strategize specific paths that should lead them to their goals. That being the case, while studies examining the unique effect of agency versus pathway thinking are sparse, some studies have found agency thinking rather than pathway thinking to be a reliable predictor for school grades (Ciarrochi et al., 2007) as well as leading to a decrease in depression and anxiety (Arnau et al., 2007; Wong & Lim, 2009). These studies suggest that agency thinking may generally play a more prominent role when thinking about the future, somewhat contrary to Snyder's (2002) belief that both agency and pathway thinking are needed together.

It is unclear why pathway thinking was not a salient factor for Mongolian adolescents. It may simply be that these students place less emphasis or interest in forming paths to reach their goals, or it could be that their school or school system does not provide students with the guidance, tools, or information to support the setting of goals for their future careers or academic interests, or their perceived pathways to success may be limited. Given that goal setting has been shown to be a valuable tool for students (Sun & Yuen, 2012), future research should examine what may lead to a lack of use of pathway thinking, what can be done to nurture their pathway thinking, and the effectiveness of hope and future thinking when pathway thinking is less apparent when goal setting.

School Climate

The final factor structure of the school climate dimensions was largely consistent with that of Aldridge and Ala'i (2013) WHITS dimensions of school climate. Specifically, teacher support, peer connectedness, rule clarity, and reporting and seeking help loaded into the final factor structure. However, of those four school climate dimensions only peer connectedness, rule clarity, and reporting and seeking help were found to be related to students' sense of future thinking. School personnel support and cultural acceptance were not significant in this study. Below, we discuss the implications of these findings, including the relationship between some of the school climate dimensions to future thinking, the lack of significance between teacher support and future thinking, the correlation between teacher support and school personnel support, and the general lack of significance of cultural acceptance.

Peer Connectedness

Of all the dimensions of school climate, peer connectedness had the strongest relationship to future thinking. When considering what contextual factors seem to contribute most strongly to adolescent future thinking, socialization-based context such as peer interaction are what primarily contribute to perspectives of oneself and the future (Crespo et al., 2013; Nurmi, 1991). Peers serve as a significant support network for adolescents as they transition through school and into eventual adulthood (Crespo et al., 2013). Adolescents will periodically talk to their peers about their dreams and future plans (Malmberg, 2001). Given their importance to adolescents, it follows that peer connectedness would facilitate future thinking. In building a strong sense of connection with their peers, adolescents build a security net of sorts that help them to feel cared for and secure, and this security may help them to feel comfortable enough to explore the world and consider their future prospects (Crespo et al., 2013). Archer et al. 's (2019) study found that peer support was a significant predictor of hope in the first point of data collection and over time.

Further, peer connectedness may facilitate future thinking because adolescents tend to establish connections with peers and peer groups who share similarities with one another such as having higher educational expectations and intrinsic motivation (Parker et al., 2015). Taken together, it makes sense that these peer support factors would contribute to adolescents' future thinking (Furrer & Marchand, 2020; Sussman et al., 2007; Wentzel & Caldwell, 1997; Weyns et al., 2017).

In terms of implications, there may be ways for schools to integrate programs designed with peer interaction in mind. Peer tutoring is one such example of a collaborative program wherein students work with other students from a higher grade or from postsecondary schools to form an enjoyable, effective, and interactive learning experience. Students who participate in such programs have been found to have improved class grades (Moliner et al., 2020), improved mathematics skills (Fantuzzo et al., 1992; Yang et al., 2016), and improved overall academic achievement from primary to postsecondary school (Leung, 2019). Peer tutoring, along with other peer interaction programs (e.g., cooperative learning, affinity groups, college alumni visits, etc.), can serve as means to encourage students to discuss their classes, career- and academic-based goals, and to develop a support network of like-minded peers.

Reporting/Seeking Help and Rule Clarity

Both safety dimensions of rule clarity and reporting and seeking help had a significantly positive yet weak relationship to future thinking. Past studies on the safety dimension of school climate have placed a large focus on how feelings of safety contribute to things like lower behavioral issues and academic efficacy (Brand et al., 2003; Kawachi & Berkmann, 2000; Reinke & Herman, 2002; Wang et al., 2010), but to our knowledge this study was the first to examine the safety dimensions of school climate related to hope and future orientation. The

results, then, suggest a minor contribution of rule clarity and help-seeking behavior to the development of future thinking. School structures that are secure and provide clear avenues for students to report problems may increase a feeling of safety in the learning environment, which may contribute to students' capacity to consider their future life trajectories.

Safety in the school environment may contribute to students' sense of future thinking in a number of ways. For example, in schools where bullying is more prominent or perceived to be more tolerated it may be less likely students will seek out help (Williams & Cornell, 2006). Regarding rule clarity, schools that fail to make school rules clear as well as inconsistently enforce them, may contribute to higher discipline issues that can lead to bullying and thus higher instances of student victimization (Gottfredson et al., 2005; Gottfredson & Gottfredson, 1985). Indirectly, students who are victimized by bullies experience lower feelings of hope (Atik, 2009; Zhang et al., 2019) as well as developing a generally pessimistic future orientation (Låftman et al., 2018). While bullying represents only one such hypothetical circumstance, a safe and orderly school environment is dependent on consistent as well as clear school rules and student's capacity to feel comfortable enough to seek help when needed.

There are some practices and options that schools may consider exploring to develop an environment that feels safe and structured for students. To build an environment that nurtures future thinking, schools might consider having teachers and school personnel meet to ensure all parties are well-aware of established school rules and best practices for enforcing rules to ensure they are consistently maintained (Gottfredson et al., 2003; Gottfredson et al., 2005; Riekie et al., 2017). Additionally, staff members should ensure that school rules and punishments are fair in judgement. If students feel that the rules or enforcement are not fair, they should be encouraged and taught how to reach out to school personnel to suggest improvements if their suggestions are

reasonable (Kawachi & Berkmann, 2000). Students must also be made aware that teachers and school personnel are available to provide academic and behavioral support and provide guidance for any issues they have at school as well as being able to put a stop to harassment from other students at school (Bandyopadhyay et al., 2009; Brand et al., 2003). Safe environments encourage student learning and subsequent success in their schoolwork (Kutsyuruba et al., 2015; Rumberger & Palardy, 2005; Smith et al., 2005). This in turn gives students the space and security to think about their future and feel confident that they can successfully reach said future.

Teacher Support

Although teacher support was identified as a significant school climate dimension in the initial model, it was not related to future thinking in the final SEM model. While studies such as those conducted by Alm et al. (2019) and Nie et al. (2019) found that an amiable and supportive relationship between students and teachers predicted future orientation and hope, other studies did not. For example, Wong et al. (2019) found in their study of adolescent Hong Kong students that student-teacher relationships did not significantly contribute to student's higher career expectations. Similarly, Archer et al.'s (2019) longitudinal study found that teacher support was initially a significant predictor of hope but did not remain a significant predictor over time.

Within the present study, it is difficult to explain the lack of significance of teacher support for students' future thinking. Interactions with and perception of teachers can differ from country to country (Chen et al., 2000; Jia et al., 2009; Seth, 2005) Traditionally, students in Asian countries show relatively higher respect for and have stronger relationships with their teachers in comparison to Western countries (Shim, 2008; Shin et al., 2009; Sung, 2000). However, it may be the case that Mongolian students do not feel comfortable or feel it is inappropriate to reach out to their teachers for non-class related questions such as future career

planning. Future researchers should further assess the teacher-student relationship dynamics in Mongolia to better understand why teacher support may not contribute to students planning for the future.

Though teacher support has been found to be related to constructs like future orientation and hope in prior studies, it was not a related factor for the participants of this study. However, given that teacher support was still a significant school climate dimension within the EFA and CFA, teacher support may yet be related to other aspects of Mongolian students' lives. For example, students who have reported feeling perceived themselves as greater support from their teachers have exhibited a greater sense of resilience and experienced lower instances of bullying victimization (Aldridge et al., 2016; Aldridge, McChesney, & Afari, 2018). As school climate research conducted in Mongolia is still in its early stages, future research should also continue to explore the contributions teachers make towards youth development and school experience.

School Personnel Support

Our results revealed that school personnel support initially identified as a dimension of school climate however, in the final model, it was rejected due to sharing a notably high correlation with teacher support. Though the scale was designed to measure the perceived support from and interactions with school personnel, it is not clear why school personnel support shared such high correlation with teacher support. It is possible that students had interpreted school personnel support as being similar in function to teacher support. Although we provided a broad definition of school personnel to encompass a range of adults that might support Mongolian youth, it may be that the questions measuring school personnel support did not distinctly differentiate between teachers versus other personnel working at their school. Further

researchers might consider reexamining and building on the school personnel support scale designed for use for this study.

As well as being a fairly unexplored topic, studies that have suggested that certain school personnel support may be of great benefit to students may not be as applicable to Mongolian secondary schools. In the United States, it is common for schools to employ personnel such as school counselors, whose responsibilities are tied to students' academic and socio-emotional needs (Carey & Dimmitt, 2012; Carrell & Hoekstra, 2014). In this context, advising from counselors has been tied to higher rates of college application and acceptance and are found to be especially impactful for low-income and disadvantaged students (Bryan et al., 2011; Coleman, 1988; Hurwitz & Howell, 2014). For Mongolian students, however, school and career guidance counselors and services are uncommon in schools (Sattler et al., 2021).

Regarding the relationship between school personnel support and future thinking, it is possible that the lack of information from school personnel such as school counselors may leave students feeling unaware or uninformed on how best to proceed to succeed in reaching their future goals (International Labour Office, 2017; Oyunbaatar, 2014; Tsetsegmaa, 2016). It is also possible that the support from school personnel regardless may be of benefit to students even without the inclusion of counselor-like figures. However, as social support research in school has typically focused on support from peers and teachers the possible relationship between school personnel support and future thinking is unclear. As such, further assessment is necessary to better establish both the possible viability of school personnel support as a school climate dimension and its possible relationship to future thinking.

Cultural Acceptance

In the current study, cultural acceptance did not appear to be a school climate dimension, nor did it relate to future thinking. Prior research has indicated that a positive climate of diversity and acceptance of other cultures and backgrounds is related to greater life satisfaction and satisfaction with one's own school (Helm et al., 1998; Lin et al., 2019). It may be in this case that our measure of cultural acceptance did not capture what Mongolian students feel best represents the acceptance of their cultural background and self-expression. Or it may be possible that acceptance of cultural background and self-expression of said background as defined in our study is simply not a point of interest and so does not represent a key aspect of school climate. Given the importance of schools' cultural awareness for students' educational attainment and adaptation to school life (Kim, 2014; Mahatmya et al., 2016), the validation of a measure of cultural acceptance for Mongolian students is an important avenue of research to explore in future research

Socioeconomic Status

SES, as measured in this study, did not appear to significantly contribute to students' sense of future thinking. These findings were unexpected and run contrary to prior research (Conger and Donnellan, 2007; Schröder et al., 2011). Lei et al. (2019) reported that adolescents who come from high SES backgrounds are more likely to engage in hopeful thinking in comparison to students from low SES backgrounds. Khattab (2005) and Lee et al. (1998) also reported that being socioeconomically-advantaged provides benefits for students such as higher educational and status expectations. Further, Dixson et al., (2018) found that SES may mediate the relationship between hope and academic achievement. These findings suggest that students from a high SES background develop stronger future thinking because their families are able to afford more resources and have more access to better opportunities for their children (Conger &

Donnellan, 2007; Schröder et al., 2011). It is unclear why the scale of perceived status did not significantly relate to future thinking given the prominent use of the scale in prior research and the notable role that SES plays in student success (Choi et al., 2015; Giatti et al., 2012, Kim et al., 2018; Michelson et al., 2016). Perhaps a different measure of resources for Mongolian adolescents would be more appropriate to register the impact of family SES more accurately.

Limitations and Future Directions

There are a few prominent limitations to keep in mind when considering the generalizability of these findings to other Mongolian youth. Students in this study were not randomly selected to participate. Rather all students present on the day of data collection participated in the study. Further, though anonymity was emphasized during data collection, students filled out their surveys seated in their classroom in near proximity to their classmates, which could have impacted their willingness to answer candidly. Finally, students who participated in the study originated from some of the largest cities in Mongolia and, as such, the applicability of these results may be less relevant for Mongolian students in non-urban schools.

While we explored the significance of social relationships through peers, teachers, and school personnel, we did not assess the effect of parental support. Though adolescents' relationships at school significantly contribute to their perspective of the world and what they expect in their future, positive and supportive relationships with their parents also matter (Malmberg, 2001; Trommsdorff, 1983). Adolescents who have established a supportive relationship with their parents are optimistic of what's to come in their future as well as being more likely to engage in school, career exploration, and career planning (Furrer & Skinner, 2003; Hargrove et al., 2005; Kracke, 1997). As prior studies suggest that parental support represents a

powerful positive force in the lives of students and how they engage in their future, future researchers could ascertain whether this pattern remains consistent for Mongolian students.

Conclusions

Past research has shown that hope, future orientation, and school climate are important aspects of adolescents' lives which benefit them emotionally and contribute to positive academic outcomes. This study's findings can help to contribute to such outcomes for Mongolian secondary students. This study was conducted to ascertain how Mongolian secondary students perceive hope and future orientation in relation to one another, to identify which aspects of school climate are most important to them, and to understand which aspects of school climate are related to students' sense of their future. As research regarding these topics in Mongolia are currently limited, these findings can be used to direct future school programs and school reforms in Mongolian secondary schools to form an optimal school climate for its students.

Secondary schools interested in nurturing students' sense of future thinking might be interested in developing programs directed at encouraging positive student interaction and discussion directed towards future academic and career planning. Schools might also be interested in placing extra effort in developing a school environment that feels safer to students by ensuring that rules are clearly taught and fairly enforced and that school personnel respond to student concerns when they arise. For future studies, these findings can lead to a growing comprehension of the context that is school climate in Mongolian secondary schools to further establish how the significant school climate dimensions from this study impact their lives by means of their emotional health, behavioral health, and academic achievements through further assessment.

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Appendix A

Mongolian Secondary School—Fall Survey 2019

Items used for the present study are colored in yellow. The questions measuring hope and future orientation were included together in the same set of questions, those being questions 1-10. Questions 1-6 are from the hope measure while questions 7-10 are from the future orientation measure. Questions 1, 2, and 6 represent the agency sub-component of hope while questions 3, 4, and 5 represent the pathway sub-component.

Please do not write your name on this survey. Please answer all the questions on this survey.

Part 1: Questions about goals. **INSTRUCTIONS: Circle a number to the right of each item that describes you best.**	**Almost never**		**Not often**	**Sometimes**	**Often**	**Almost always**
1. When I have a problem, I can come up with lots of ways to solve it.	1		2	3	4	5
2. I can think of many ways to get the things in life that are most important to me.	1		2	3	4	5
3. I am doing just as well as other kids my age.	1		2	3	4	5
4. I think the things I have done in the past will help me in the future.	1		2	3	4	5
5. I think I am doing pretty well.	1		2	3	4	5
6. Even when others want to quit, I know that I can find ways to solve a problem.	1		2	3	4	5
7. I often think about my future and what I want to do with my life.	1		2	3	4	5
8. I work hard now to create a better future for myself.	1		2	3	4	5
9. I am the type of person who sets goals and works hard to achieve them.	1		2	3	4	5
10. I am serious about working hard now so I will have a good future.	1		2	3	4	5
Part 2: Questions about school. **INSTRUCTIONS: For each item, indicate your answer by circling a number to the right of each item.**	**Almost never**		**Not often**	**Sometimes**	**Often**	**Almost always**
Teachers at your school						
11. My teachers try to understand my problems.	1		2	3	4	5
12. My teachers listen to me.	1		2	3	4	5
13. My teachers support me when I have problems.	1		2	3	4	5
14. Teachers go out of their way to address my needs.	1		2	3	4	5
15. My teachers are willing to listen to my problems.	1		2	3	4	5
Students and Friends at your school						
16. I get along with other students at school.	1		2	3	4	5
17. Students talk to me.	1		2	3	4	5
18. Students support me.	1		2	3	4	5
19. Students help me.	1		2	3	4	5
20. I feel accepted by other students.	1		2	3	4	5
GO TO NEXT PAGE						

		Almost never	Not often	Sometimes	Often	Almost always
	School					
21. I look forward to coming to school.		1	2	3	4	5
22. I enjoy being at school.		1	2	3	4	5
23. I feel included at school. .78		1	2	3	4	5
24. I am part of a community. .84		1	2	3	4	5
	Diversity and acceptance at your school NEW ITEMS CREATED FOR Fall 2019					
25. I can express myself freely at this school.		1	2	3	4	5
26. If I talk or dress differently than others, students will not judge me.		1	2	3	4	5
27. My cultural background and beliefs are valued at this school.		1	2	3	4	5
28. Students at this school accept me for who I am.		1	2	3	4	5
29. When my personal preferences differ from others, I still feel respected at this school.		1	2	3	4	5
	Rules at your school					
30. The rules at school are clear to me.		1	2	3	4	5
31. The school rules help me to feel safe.		1	2	3	4	5
32. School rules protect me.		1	2	3	4	5
33. The school rules make it clear to me that certain behaviors are unacceptable.		1	2	3	4	5
34. I understand why the school rules are in place.		1	2	3	4	5
35. I know the school rules.		1	2	3	4	5
36. I am required to follow the rules at school.		1	2	3	4	5
	Assistance at your school					
37. I can report bad behavior to school officials.		1	2	3	4	5
38. I am confident to talk to a teacher if I am bullied.		1	2	3	4	5
39. I know how to report problems to school officials.		1	2	3	4	5
40. I can report incidents at school without others finding out.		1	2	3	4	5
41. It is okay to tell a teacher if I feel unsafe.		1	2	3	4	5
	GO TO NEXT PAGE					

Support and assistance from school workers For the next questions, think about school workers at your school (who are <u>not</u> teachers) such as the social worker, school director, custodian, and other staff members.	**Almost never**	**Not often**	**Sometimes**	**Often**	**Almost always**
42. School workers assist me with a crisis or emergency.	1	2	3	4	5
43. School workers help me do well in my classes.	1	2	3	4	5
44. I discuss my strengths and goals with a school worker.	1	2	3	4	5
45. School workers support me with family problems or conflicts with other students.	1	2	3	4	5
46. School workers help me plan my future.	1	2	3	4	5
HOW YOU HAVE BEEN FEELING IN THE PAST TWO WEEKS?					
47. Happy	1	2	3	4	5
48. Calm	1	2	3	4	5
49. Have had a positive attitude about myself	1	2	3	4	5

NEW SCALE

Part 3. School experiences in the past six months. **INSTRUCTIONS:** Think about what has happened at school **in the past six months**. How often have you **experienced** each of the following:	**Never**	**Once or Twice a month**	**More Than Once or Twice a Week**
50. I was called mean names, made fun of or teased in a hurtful way.	1	2	3
51. Other students excluded me from groups or completely ignored me.	1	2	3
52. I was hit, kicked, pushed, or shoved.	1	2	3
53. Other students told lies about me or tried to make others dislike me.	1	2	3
54. I had money or other things taken away from me or destroyed.	1	2	3
55. I was threatened or forced to do things I did not want to do.	1	2	3
56. I was bullied with mean names about my physical appearance.	1	2	3
57. I was bullied with mean names or gestures with a sexual meaning.	1	2	3
58. I was bullied with mean or hurtful messages or pictures on the phone or computer.	1	2	3

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Part 4. School behavior in the past six months. **INSTRUCTIONS:** Think about how you have acted at school **in the past six months.** How often have **you done** the following **at school**:	**Never**	**Once or Twice a Month**	**More Than Once or Twice a Week**
59. I called another student mean names, made fun of or teased him or her in a hurtful way.	1	2	3
60. I excluded a student(s) from groups or completely ignored them.	1	2	3
61. I hit, kicked, pushed, or shoved a student(s).	1	2	3
62. I told lies about a student or tried to make others dislike them.	1	2	3
63. I took money or other things away from a student or destroyed his or her belongings.	1	2	3
64. I threatened or forced a student to do things he or she did not want to do.	1	2	3
65. I bullied a student(s) with mean names about their physical appearance.	1	2	3
66. I bullied a student(s) with mean names or gestures with a sexual meaning.	1	2	3
67. I bullied a student(s) with mean or hurtful messages or pictures on the phone or computer.	1	2	3

Part 5: INSTRUCTIONS: Please place a check mark to indicate your answer for each question.

68. Your gender:

_____ Boy
_____ Girl
_____ Other

69. Which best describes you:

_____ Khalkh/Halh _____ Dövöd
_____ Kosak _____Other

70. Your age:

_____ years

71. Your year in school:

_____ grade

72. How long have you attended this school?

_____ I am new to the school this year
_____ 1 year
_____ 2 years
_____ 3 years
_____ More than 3 years

73. How many schools you have attended since Grade 1?

_____ 1 school
_____ 2 schools
_____ 3 schools
_____ 4 schools
_____ 5 or more schools

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74. On an average day, how many hours do you spend on homework?
_____ Less than 15 minutes
_____ 15-29 minutes
_____ 30-59 minutes
_____ 60--119 minutes
_____ 120-180 minutes
_____ More than 180 minutes

75. Where do you live when you are in school?
_____ With my family
_____ At the school dormitory
_____ Other

76. How would you rate your grades in school?
_____ Needs significant improvement
_____ Needs some improvement
_____ Adequate
_____ Very good
_____ Outstanding

77. On an average day, how much time do you spend on a computer, tablet or phone for **entertainment, social interaction and/or gaming?**
_____ Less than 15 minutes
_____ 15-29 minutes
_____ 30-59 minutes
_____ 60-119 minutes
_____ 120-180 minutes
_____ More than 180 minutes

78. When you are at school, how often does being hungry bother you when you try to focus on your schoolwork?
___Never ___Once a week ___Several days a week ___Almost every day

79. How often do you get 8 or more hours of sleep each night?
___Never ___Once a week ___Several nights a week ___Almost every night

80. How often do your parents or guardians attend the teacher meetings at school?
___Once a year ___Twice a year ___Three times a year ___Four or more times a year

81. At your school, how often do you feel physically and emotionally safe?
___ Never ___Rarely ___Some of the time _____ All of the time

82. Think about your family's resources, such as food, housing, money, animals, and transportation. Circle a point on the line to show how many resources your family has:

A small amount I____I____I____I____I____I____I____I____I A very large amount

GO TO THE NEXT PAGE

LAST PAGE

83. What is your father's highest education level?
Completed elementary school
___ Completed secondary school
___ Completed some university or a training program
___ Completed university

84. What is your mother's highest education level?
___ Completed elementary school
___ Completed secondary school
___ Completed some university or a training program
___ Completed university

Thank you for completing the survey. We are interested in your suggestions for improving the safety and support for students at this school. Your responses are anonymous and teachers will not see your handwriting. Please share your ideas in the space provided.

_____
_____
_____
_____
_____
_____
_____