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# School Climate Measurement and Analysis

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# School Climate Measurement and Analysis

# Abstract

This action research project examined the concept of school climate and measured and analyzed school climate data in a mixed methods study at an independent school in British Columbia. In this study, 341 students participated in a survey which included demographic questions and items from the School Climate Measure (SCM). The quantitative data from the survey measured the school climate in 10 different domains at the school and was used to compare and analyze different subgroups within the student population. Six students were also interviewed to collect qualitative data and analyze the school climate more comprehensively. The data and subsequent analysis were used by the researcher to make recommendations for improvement in the school climate at the school.

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### Comments

Action Research Report Submitted in Partial Fulfillment Of the Requirements for the Degree of Master of Education

School Climate Measurement and Analysis

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Action Research Report Submitted in Partial Fulfillment Of the Requirements for the Degree of Master of Education

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#### Abstract

This action research project examined the concept of school climate and measured and analyzed school climate data in a mixed methods study at an independent school in British Columbia. In this study, 341 students participated in a survey which included demographic questions and items from the School Climate Measure (SCM). The quantitative data from the survey measured the school climate in 10 different domains at the school and was used to compare and analyze different subgroups within the student population. Six students were also interviewed to collect qualitative data and analyze the school climate more comprehensively. The data and subsequent analysis were used by the researcher to make recommendations for improvement in the school climate at the school.

Schools are integral to the intellectual, emotional, and social aspects of child development. However, when we evaluate education, we often focus on the curriculum that is being administered rather than the actual learning environment. And yet, if you ask an adult about their high school experience, they will very rarely speak of the content they learned; rather, they will speak of their experiences. In the words of Dewey (1938), "experience does not occur in a vacuum. There are sources outside an individual which give rise to experience. It is constantly fed from these springs" (p. 40). For adolescents, a significant portion of these sources come from the school environment in which they spend a significant amount of their lives. Given this, when we evaluate schools, it seems appropriate that we look to the student experience, or school climate, as an underlying factor of their effectiveness.

According to the *National School Climate Center*, school climate "refers to the quality and character of school life." McGiboney (2016) said:

The quality of teacher-student relationships, student-student relationships, academic achievement and support for learning, how connected students feel to school, the safety and security students experience in school, and the physical surroundings of the school building and campus are dimensions of school climate. (p. 3-4)

While school culture refers to shared organization values and norms, school climate describes the actual experience in the school environment. And when the school climate is not healthy, all the stakeholders suffer. Freiberg (1999) said that "school climate is like the air we breathe—it tends to go unnoticed until something goes wrong" (p. 1). As such, it is very important that all stakeholders recognize the importance and influence of school climate from preschool all the way to post-secondary (McGiboney, 2016, p. 16).

Surrey Christian School Secondary is a school that has an ethnically and denominationally diverse student population and a reputation as a school that has a strong sense of community. However, from time to time a student or parent will share, either explicitly or implicitly, a school experience that does not reflect the culture idealized in the organizational values. A 2022 student support survey with 340 respondents attempted to quantify some of these experiences. It showed that in the past year, 6% of students had experienced harmful behaviors based on skin color, 7% based on faith background, and 4% based on sexual orientation or gender identity. While these numbers may seem small, they cannot be ignored—behind those numbers are real students who are being negatively affected by those experiences. It is also worth noting that each of these harmful negative experiences are at least doubled when phrased as witnessing these behaviors instead of experiencing them, and witnessing is an experience that affects one's perception of safety. Open responses included statements around hearing racial slurs, harmful things said about girls and women and sexual minorities, as well as certain spaces feeling unsafe, including classrooms.

In addition to these safety concerns noted in the survey, mental health issues were also significant. In the survey, 27% of SCS Secondary students reported that school makes them feel stressed most of the time, and another 20% reported that school makes them feel stressed all of the time. Mental health issues were also a theme in open response questions. This is not unique to Surrey Christian School Secondary; according to the British Columbia Ministry of Children and Family Development (2020), it is estimated 12.7% of British Columbian children (aged four to eighteen) will experience mental disorders causing significant symptoms and impairment at any given time.

Because the student support survey revealed some experiences involving discrimination, differences in experiences between the experiences of different subgroups within the population are also worth examining at Surrey Christian School Secondary. Invisible minorities also exist at this school and there are many different subgroups within our demographics. Sexual and gender minorities, new students, international students, and students from non-Christian families are examples of groups that find themselves in the minority within the school body in some way.

Surrey Christian School maintains a clear organizational culture or way of being that reflects its mission and vision, but the way it is experienced by individual students does not always reflect that culture. While anecdotal evidence from parent and student stories and the student support survey may help identify potential areas of dissonance between the SCSS culture and the school climate experiences of students, more specific and robust data will enable Surrey Christian School Secondary to identify and address issues more effectively. Measurement of school climate presents a way to collect and analyze this data.

In addition to examining some of the issues in the student experience at SCSS, collecting school climate data offers the opportunity for more insight into the demographics of the student population, how the student population is experiencing school, and how that experience might differ between segments of the student population. This data will help inform decision-making and support initiatives that will improve the experience at school for all students.

# **Purpose of the Study**

The purpose of this study is to examine the school climate at the secondary campus of Surrey Christian School to determine what improvements are merited to enhance the student experience in the areas of relationships, equality, engagement, and environment.

# **Research Questions**

- 1. What is the school climate at SCS Secondary?
- 2. How do the school climate results compare for different demographics at SCS Secondary?
- 3. How does school climate data inform steps for improving school climate at SCS Secondary?

#### Definitions

*School Climate-* The quality and character of school life (National School Climate Center, 2021). *Surrey Christian School Secondary-* The secondary (high school) campus composed of grade 8-12 students at Surrey Christian School, an independent school in Surrey, British Columbia.

#### **Literature Review**

The concept of school climate offers some insight as educational institutions seek to increase their ability to collect and analyze data beyond that of simply academic performance by looking more closely at the learning environment itself. Temkin et al. (2021) have noted that in the United States, part of this shift is due to the transition from *No Child Left Behind* (NCLB) and into the *Every Student Succeeds Act* (ESSA) implemented in 2015. The *Every Student Succeeds Act* shifted authority from a federal level to a state and district level and its focus on the broader set of skills necessary for college, careers, and life rather than just on academics creates room for a broader vision of student success (Holahan, 2017). Darling-Hammond and DePaoli (2020) also credited this shift in policy and focus on a whole-child approach for increasing interest in the learning environment. Faster and Lopez (2013) articulated this connection between environment, learning and skill development directly: "when children feel safe, supported, and engaged they are better able to learn and are more fully equipped with the skills they need to succeed in school and beyond" (p. 1).

Osher et al. (2020) noted that "school climate encompasses the social and emotional conditions for learning, teaching, and wellness—experience of safety, support, belonging, connectedness, engagement, academic focus, and individual and cultural respect" (p. 24). They suggest that because school climate is so consequential to schools, measuring climate is akin to checking vital signs such as heart rates and blood pressure in humans. State education departments are beginning to acknowledge the importance of school climate on learning and

recognize it as a strategy to enhance positive outcomes and reduce negative ones (Faster & Lopez, 2013). One example is the State of California, whose education department has created a suite of tools for use in its schools that include the *California Healthy Kids Survey* and *School Climate Index* (SCI), which is a state-normed index (California Department of Education, n.d.). In Canada, provincial Ministries of Education have also addressed the need for positive school climate. The British Columbia Ministry of Education (2008) created a *Safe, Caring, and Orderly Schools Guide* in which they say British Columbia schools are striving to develop positive and welcoming school cultures and are committed to fostering optimal environments for learning. One step further, the Ontario Ministry of Education (2022) has mandated that school boards must administer climate surveys every two years.

The connection between positive school climate and student achievement and attendance has been documented in numerous studies. Daily et al. (2020) completed a study comparing school climate and attendance and grades of 6839 middle school students and 7470 high school students. Using a school satisfaction Likert-type scale, items from the School Climate Measure developed by Zullig et al. (2021), and comparing them to self-reported grades and attendance, researchers determined that school climate and school satisfaction were associated with higher grades and lower levels of skipping classes. Another study (Macneil et al., 2009), showed that students achieve higher scores on standardized tests in schools with healthy learning environment while Jones and Shindler (2016) also showed a strong relationship between school climate and student achievement in their study of 30 urban public schools in California.

In addition to attendance and academic success, positive school climate has been linked to better mental health. Jessiman et al. (2022) found four overarching dimensions of structure and context, organizational and academic, community, and safety and support were perceived to have an impact on student mental health. In addition to reducing negative social-emotional

#### SCHOOL CLIMATE MEASUREMENT AND ANALYSIS

traits, Wong et al. (2021) found correlations between school climate and positive social emotional traits such as self-efficacy and grit in a longitudinal study over three years. Their study examined survey data from 1159 10<sup>th</sup> grade students and 1114 of the same students (87.8% retention) again at the end of 11<sup>th</sup> grade. School safety was determined to be a predictor for higher levels of self-efficacy and lower levels of depression, hopelessness, and stress at school and about the future. Respect for teachers was positively correlated with self-efficacy and grit, and negatively correlated with hopelessness, and stress at school and about the future.

Given the connections between school climate and positive outcomes for student achievement and wellbeing, a clear case has been created for schools to measure school climate and use the resulting data to improve school climate. Typically, this is done through a survey that examines several spheres or domains. The number of spheres may vary. For example, Jessiman, et al. (2022) used the domains of structure and context, academic and organizational, community, and safety and support and compared them to mental health in a qualitative study; whereas, other studies may use a formal tool such as the School Climate Measure (SCM) which comes in either an eight to ten domain version (Zullig et al., 2021). While the tools may vary, McGiboney (2016) noted that most of them essentially focus on one or more of the four main areas of relationships, institutional environment, teaching and learning, and safety.

One important aspect of measuring school climate is that its main purpose should not be to compare schools. Rather, the data collected should be used within schools for improvement and to identify gaps with specific demographics (Temkin et al., 2021). To do this, it is important to look at the variance to identify the extent to which students agree. It may be worth looking into particular trends, for example, a reduction in satisfaction in middle school and the first few years of high school (Kautz et al., 2021) or examining marginalized demographics such as the LGBTQ+ community (Colvin et al., 2019; Jessiman et al., 2022) or racial minority groups

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(McGiboney, 2016). Voight et al. (2015), examined climate survey results from 764 middle schools in California and found a racial gap in school climate when comparing black, Hispanic, and white students within schools and were also able to correlate the racial climate gap with racial achievement gaps in those schools. It is, however, cautioned that the level to which the school climate measure itself is culturally and racially responsive is important in interpreting results accurately (Whitehouse et al., 2021).

Certainly, the value of measuring school climate can only be realized if there is some confidence that school climate itself can be positively affected through intentional and targeted steps. The Aspen Institute ("Creating Conditions," 2021) suggested that results from climate measures should be integrated into school improvement plans and recommended steps in the form of developing the knowledge of school personnel as well as investing in resources and personnel to help build a healthy climate. The Aspen Institute also suggested using climate data as a constant feedback loop. Simply putting initiatives in place are not enough; for example, Colvin et al. (2019) studied 240 students who identified as a gender or sexuality minority and compared the effects of the presence of a Gay-Straight Alliance club and a safe and support school climate. They showed that both anxiety and depression symptoms were significantly negatively correlated (p<0.05) with the school climate measure while the presence of a Gay-Straight Alliance club was only correlated with the school climate, not anxiety and depression symptoms themselves.

Training of staff and continuous assessment and adjustment ensure fidelity of implementation of school climate initiatives (Osher et al., 2020). Therefore, school climate is improved not simply through its measurement but rather how the data collected informs intentional steps towards continual improvement. By continuing to collect and use school climate

data in an iterative way, schools can show commitment to forward movement in addressing the learning and wellbeing needs of students in their care.

#### Methodology

This mixed methods research study was completed using quantitative data from a student school climate survey and qualitative narrative data from interviews. The data collected from the survey was used to analyze school climate data at Surrey Christian School Secondary, particularly the differences between demographics within the school. The qualitative data from interviews was used to gain further insight into the student experience and help inform actions for promoting positive school climate at SCSS.

#### **Participants**

The sample in this study was from a population of 451 Grade 8-12 students at Surrey Christian School Secondary in the spring of 2023. The school is a Christian school with open enrollment, meaning families are not required to identify as Christian to attend. Approximately 18% of students who took the survey identified their family religious affiliation as something other than Christian. As an independent school, families pay tuition for their children to attend which results in an average population of students in a typically higher socioeconomic status than the average local population. The school is in a geographic region that is very ethnically diverse, which is reflected in the student population. Demographic results from the survey show breakdowns of 38% Asian, 31% Caucasian, 10% South Asian, 8% Black, with the remaining 13% being a mix of other ethnicities. Approximately 11% of the students surveyed identified as international students, mostly from China and South Korea.

The student survey was conducted with passive consent and administered to the entire secondary campus student body, with the exception of students whose parents declined their participation, were absent on the day or during the time it was completed, or individually declined to complete the survey. Of the student population of 451 students, 341 or 76% completed the survey. This included 72 Grade 8 students, 70 Grade 9 students, 82 Grade 10 students, 67 Grade 11 students, and 52 Grade 12 students.

After the survey, participants from a variety of demographics were selected using convenience sampling to gain further insight into the results of the study through interview questions. Six students representing four different grades and four different ethnicities took part in the interviews. Active parental consent was required for minors participating in the interviews.

#### Materials

The survey used the 10-domain version of the School Climate Measure (SCM) developed by Zullig et al. (2021) (see Appendix A). The SCM has undergone five psychometric studies. It is publicly available free of charge and given its multidimensional nature is flexible in which domains the school would like to examine. According to its designers, the SCM "in all contexts... should provide a comprehensive and nuanced look at student' perceptions of their school environment" (Zullig et al., 2021).

For this study, questions preceding the SCM domains were designed and included to help define and quantify different demographic subgroups within the SCSS population (see Appendix B). These questions included self-reporting on the characteristics of sex, ethnicity, citizenship status, home situation, and religious participation. The SCM domain item responses in the SCM are framed on a 5-point Likert-type scale of *Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree.* For analysis purposes, responses were quantified on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree). The survey was completed digitally on Microsoft Forms, then exported to Microsoft Excel for data analysis.

Qualitative data was collected via interview using the questions outlined in Appendix C as a guide. Individuals with a range of representation of the subgroups denoted in the survey were purposefully selected and approached to request participation in the interviews. Parental and participant consent were obtained prior to the interviews.

#### Design

The quantitative data was collected using a student survey that included self-reporting demographic information and perceptions of school experience using a Likert-type scale. Collecting demographic information and connecting it to responses allowed for comparisons between subgroups. The qualitative data was collected through semi-structured interviews of individuals from identified subgroups after the survey was completed.

#### Procedure

Parents and guardians were contacted via an emailed letter five school days prior to the survey informing them of the nature of the study and directing them that they may respond to withdraw their child from participation (see Appendix D). Students who were present at school and whose parents did not withdraw consent were given the opportunity to complete the survey during school under the supervision of a classroom teacher on February 3, 2023. Students were informed that the study was voluntary, anonymous, and confidential.

After the data from the survey was collected, demographic statistics were used to identify the nature and size of subgroups within the population. Climate data across the entire sample was measured across the 10 domains of the SCM to determine the overall climate at the school. Mean and standard deviation for each domain were calculated and compared. Subsequently, data was sorted and compared for different demographics to identify anomalies that could be explored in interviews along with the general population results. Potential participants belonging to a variety of groups were identified and interviews were requested. Six interviewees from four different grades and with four different ethnicities participated. No requests were declined. Interviewees were required to sign a consent or, in the case of minors, submit a signed consent form from a parent or guardian (see Appendix E). Each interview was conducted individually, in person, on the school site in a private setting. Participants were assured of the anonymity, confidentiality, and voluntary nature of their responses. During the semi-structured interviews, participants were asked non-leading questions about their perceived experience in the areas of teacher-student relationships, learning and engagement, diversity and equality, relationships with peers, and parent engagement (see Appendix C). Digital recordings of each interview were made and then transcribed and connected to the individuals using pseudonyms and demographic labels. Recordings and transcripts were destroyed after the study was completed.

#### Results

The data was collected to determine the current demographics of SCSS, measure the school climate, compare subgroups, and identify areas of school climate that merited improvement. Quantitative demographic data and School Climate Measure data were collected through a survey for numerical analysis. Qualitative data was collected from six student interviews which were transcribed and coded for further analysis to augment and support the quantitative data.

## **Quantitative Results**

#### Understanding the Student Population

Demographic data was collected as part of the student survey to better understand the student population and so that the School Climate Measure results for different subgroups within the student population could be compared.

# Table 1

Student Self-Reported Sex and Grade

Sex	n
Male	182
Female	150
Prefer not to say	7
Grade	
Eight	71
Nine	69
Ten	81
Eleven	66
Twelve	52

Table 1 shows the total number of respondents broken down by sex and grade for respondents.

The term sex was purposefully chosen over the term gender for more clarity.

# Figure 1



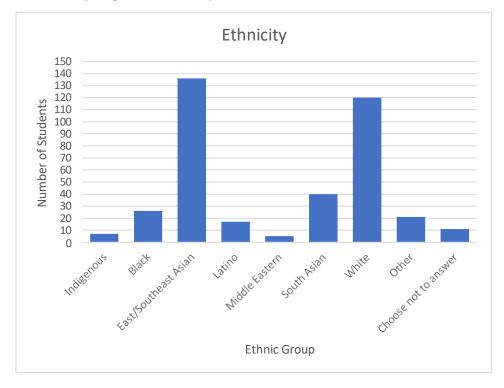
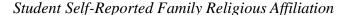


Figure 1 shows the self-reported ethnicity of students who completed the survey. Note that students may have selected more than one category to describe their ethnicity.

#### Figure 2



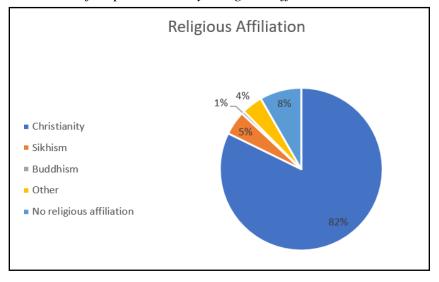


Figure 2 shows the self-reported religious affiliation of families. Although the school is a Christian school, it has an open enrollment policy, meaning a family does not have to identify as Christian to attend. Eighty-two percent of students reported their family as being Christian. The survey also asked about religious service attendance: Seventy-four percent of students attend a religious service at least once a month.

#### School Climate Measure (SCM) Results

The School Climate Measure (SCM) is a 40-item survey that measures school climate in ten domains. It was created and validated by Zullig et al. (2021). After translating the Likert-type responses on the SCM survey to a numerical scale of 1-5, the mean score for each domain can be calculated. In addition, the domain scores can be averaged to find the school composite score. The researcher began by first analyzing the survey results for the entire sample group to gain an understanding of the school climate for the student population as a whole. After

calculating the SCM scores for the whole group, the researcher used the demographic data collected as part of the survey to separate groups along the lines of grade, ethnicity, religious affiliation, and sex and compared their SCM scores to each other and to the general student population.

# Table 2

SCM Interpretation Scale for School Results

Score Range	Result	Interpretation
4.20-5.00	5	Very Positive School Climate
3.40-4.19	4	Positive School Climate
2.60-3.39	3	Neither Positive nor Negative School Climate
1.80-2.59	2	Negative School Climate
1.00-1.79	1	Very Negative School Climate

Table 2 shows the scale given by Zullig et al. (2021) for determining the overall school climate based on the quantitative results of the survey. After the scores are averaged, the ranges given in Table 2 can be used to express the score as a single numerical result and interpreted into a school climate descriptor.

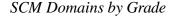
# Table 3

SCM General School Results: Domain Scores and Composite Score

Domain	Score		
Academic Support	3.78		
School Physical Environment	3.57		
Positive Teacher-Student Relationships	3.54		
<b>Opportunities for Student Engagement</b>	3.54		
Order and Discipline	3.51		
School Social Environment	3.49		
School Connectedness	2.89		
Academic Satisfaction	2.89		
Perceived Exclusion/Privilege (negative)	2.86		
Parental Involvement	2.71		
Composite	3.28		

Table 3 outlines the scores for the 10 domains, ranked from highest score to lowest score for the entire group of respondents. The domain of *Perceived Exclusion/Privilege* was negatively weighted in the survey, so the number was adjusted inversely. After calculating the score for each domain, the 10 domain scores were averaged to calculate an overall or composite school score. Using the official SCM scale as described in Table 2, the school's composite score of 3.28 would be described as having a *Neither Positive nor Negative School Climate*. The top six domains as shown in Table 3 show a *Positive School Climate* and none of the domains are in the *Negative School Climate* or *Very Negative School Climate* ranges. However, Zullig et al. (2021) suggested that any domains near or below a score of 3 should be a concern and warrant further evaluation. The domains of *School Connectedness, Academic Satisfaction, Perceived Exclusion/Privilege*, and *Parental Involvement* meet these criteria.

#### Figure 3



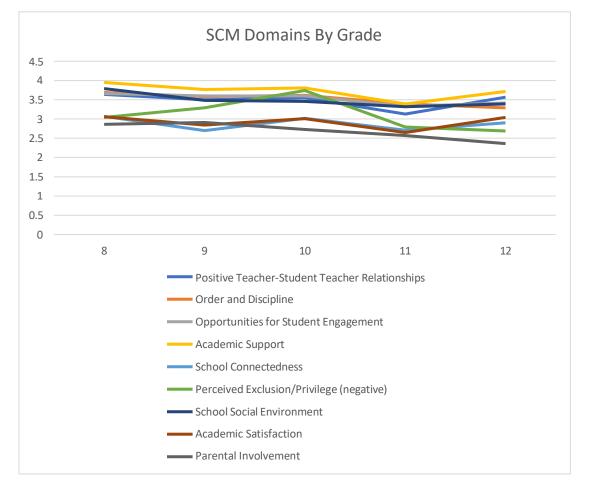


Figure 3 shows the scores across key domains for Grades 8-12. Grade 9 shows a decrease in every domain except for *Perceived Exclusion/Privilege* from Grade 8. While most domains increase again for Grade 10, Grade 11 shows a decrease from Grade 10 to Grade 11 in every domain. All domains except for *Perceived Exclusion/Privilege* and *Parental Involvement* increase again from Grade 11 to 12. The domain of *Parental Involvement* decreases steadily as students get older.

#### Figure 4



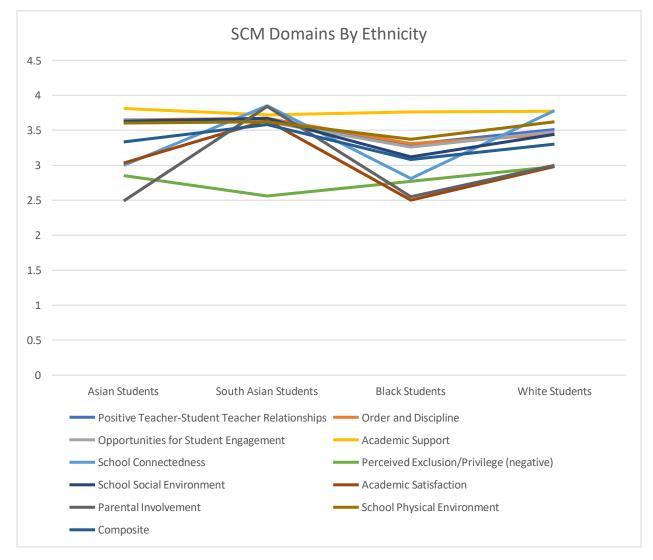


Figure 4 shows the scores for all domains across the four largest ethnicities noted in Table 2. The results are quite consistent for South Asian students (generally higher) and Black students (generally lower). The domain of *Academic Support* was rated consistently high (between 3.30 and 3.65) for all four ethnicities while categories such as *School Connectedness* and *Parental Involvement* were significantly lower for Asian students (3.00 and 2.49) and Black students (2.81 and 2.55) than they were for South Asian students (3.85 and 3.84) and White students (3.78 and 3.00).

#### Table 4

### SCM Domains by Other Subgroups

	General Population	New Students	Christian church attenders	Non-Christians	Female	Male
Positive Teacher-Student Relationships	3.54	3.72	3.54	3.61	3.50	3.56
Order and Discipline	3.51	3.68	3.55	3.58	3.48	3.55
Opportunities for Student Engagement	3.54	3.71	3.57	3.70	3.48	3.60
Academic Support	3.78	3.89	3.80	3.75	3.77	3.80
School Connectedness	2.89	3.08	2.87	3.12	3.82	2.94
Perceived Exclusion/Privilege (negative)	2.86	2.96	2.99	2.83	2.95	2.91
School Social Environment	3.49	3.67	3.47	3.70	3.31	3.66
Academic Satisfaction	2.89	3.16	2.98	2.77	2.98	2.86
Parental Involvement	2.71	2.71	2.73	2.75	2.72	2.72
School Physical Environment	3.57	3.71	3.56	3.52	3.63	3.50
Composite	3.28	3.43	3.31	3.33	3.26	3.31

Table 4 shows other subgroups the researcher chose to analyze. New students made up 13% of respondents. Their composite score (3.43) is noticeably higher than the general population score (3.28) which may lead to some inference that SCSS has a more positive school climate than other schools in the area. Students from non-Christian families (about 18% of respondents) were compared to students from Christian families who regularly attend services. The researcher hypothesized this might be an area of perceived privilege/exclusion given the school is a Christian school with open enrollment but with composite scores of 3.31 (Christian church attendees) and 3.33 (non-Christians) there is not a significant difference (<1%). The subgroups of female and male students were also examined. While they had mostly similar scores (within 10%), there was a significance difference in scores (3.82 for female students and 2.94 for male students) in *School Connectedness*, which included questions centered around excitement about

schoolwork, enthusiasm, and positive reinforcement. Inspection of the raw data from the survey shows that 23.5% of respondents disagreed or strongly disagreed to the statement "Males and females are treated as equals at school." This warranted further exploration.

### **Qualitative Results**

Six students were selected and asked to participate in interviews using convenience sampling. The students represented four different grades and four different ethnicities. The interviews were semi-structured interviews and asked non-leading questions (see Appendix C) and, where appropriate, follow-up questions about their experience as a student. Transcripts of the interviews were coded using descriptive coding and then organized into themes. The themes were used to analyze the student experience in the areas of teacher-student relationships, diversity and equality, relationships with peers, learning and engagement, and parent engagement. The six interviewees were labelled with the pseudonyms Student A through Student F.

### **Teacher-Student Relationships**

The interviews supported the positive survey results in the areas of *Teacher-Student Relationships* (3.54) and *Academic Support* (3.78). Five of the six interviewees used the words "good" or "pretty good" to describe their teacher-student relationships. The sixth interviewee used the phrase "pretty engaging." A common theme emerged that teachers were approachable: it was mentioned numerous times that students felt they could ask their teachers for help. Student B said, "if I'm struggling with something I can always go to them and talk to them about it" (personal communication, March 3, 2023). Student C said that "if I were missing an assignment or something I can easy just walk up to them and they're nice and I can ask them...and they're pretty nice and kind and open with student like myself or others" (personal communication, March 3, 2023). Students felt that teachers, for the most part, are inclusive, and "recognize everyone as a person" (Student E, personal communication, March 7, 2023).

#### Diversity and Equality

Because the domain Perceived Exclusion/Privilege scored below 3 in the SCM, the researcher chose to explore this further in the interviews. Students were quick to point out that there is significant diversity at this school: "our school is pretty diverse and that's pretty cool" said Student B (personal communication, March 3, 2023). Student F said: "our school has a very, very diverse culture and all the staff and faculty treat everybody equally-there's not barriers in every sort of way." Other students felt that, in general, groups of students are treated equally by teachers along the lines of gender and ethnicity. It was mentioned that students from similar backgrounds tended to interact or form groups along those lines. Two of the students who were visible minorities mentioned that there was a difference between diversity among staff compared to the students, in that the staff population is less diverse. Student A did note some observation of teachers treating genders differently: "there is a preference for one or the other where sometimes teachers will only pick on guys or something to be quiet or something or perhaps maybe the girls if they're just talking to each other" (personal communication, March 3, 2023). One thing that was mentioned by two students (Student B and Student F) was that sometimes students will feel or appear to be targeted by teachers, not based on ethnicity but rather on the basis of whether the teacher likes them. Student B described it like teachers "will treat me like nicer but someone else in the class they might treat them like (in) a little harsher tones when they're speaking to them" (personal communication, March 3, 2023).

While student interviewees generally felt that students were treated equally based on ethnicity, two of them mentioned that more diversity among staff would be welcome. Student B said "I feel like the head staff could hire some more diverse teachers from different groups of people (personal communication, March 3, 2023) and Student C said, "I would like people that look like me in the leadership roles so I would encourage more people to be able to step up into those roles" (personal communication, March 3, 2023). Student A also mentioned that more representation or examples of people who struggle with mental health issues might be helpful to students. She said, "probably the same with how we have Black History Month, having it (mental health) more involved in all of our classes where we can find something ...highlighting people and professionals who have struggled with these things" (personal communication, March 3, 2023).

#### **Relationships With Peers**

All interviewees reported generally positive relationships with friends and peers. They expressed they were able to make friends and find a group to fit into. Two students noted that having friends was important for their wellbeing: Student B said, "I can feel a little lonely and I can remind ourselves that I have good friends at this school" (personal communication, March 3, 2023). Student A said that "I went through a hard time so socially it was very helpful to have friends at our school" (personal communication, March 3, 2023).

While overall students reported that they had generally positive relationships with peers, there was some reference of harassment and microaggression of students they had observed or experienced. This fits with some of the student support survey data referenced in the introduction, where 6% of SCSS students had experienced harmful behaviors based on skin color, 7% based on faith background, and 4% based on sexual orientation or gender identity. Students may not perceive these as systemic issues, but clearly, they are a part of the student experience.

There were also numerous references to defined groups along different lines. Student E mentioned some competition between students from different feeder schools, and Students A, B,

and F also mentioned that people tend to stick to their groups, whether that be along grade lines, gender lines, or ethnic lines.

#### Learning and Engagement

To learn more about the low SCM score of 2.89 in the domain of *School Connectedness* (Table 3) and engagement to learning, interviewees were asked about the types of learning activities they did in class. While there was some variance in the types of activities they tended to like or dislike, it became clear that students enjoyed and preferred activities that required discussion, interaction, or hands-on learning over independent seat work. Student D described her preferred activities this way:

Things where I'm like in groups and we're in the classroom talking with other people rather than just me sitting down and doing it myself. Things that I get up to do and not just sitting down staring at the teacher talk for 3 hours. Like where we actually get to get out of our seats and do something. (personal communication, March 7, 2023)

Student B said she liked activities "when we get to communicate as a class and I like discussion assignments" (personal communication, March 3, 2023). Fieldwork or getting off campus were mentioned by three students as the types of learning activities they looked forward while five of the six interviewees mentioned some kind of independent seat work as the kinds of activities they least looked forward to. Two of the female students mentioned they were okay with some independent seat work if there was a balance. Student B said "I think sometimes the guys in my grade feel like they don't have to try as hard or that the girls put more energy into learning. But I wonder if that's because they just want to play around or something" (personal communication, March 3, 2023). These difference between genders and preference of activities and engagement correlate with the difference in the SCM scores of male and female students (2.84 and 3.92, respectively) in the domain of *School Connectedness*. It is possible to conjecture that it is the type of or balance of activities that create less engagement for male students rather than their gender.

### Parent Involvement

The researcher also chose to examine parent involvement with the school and student learning in the interviews given the domain of *Parental Involvement* scored the lowest (2.71) of all 10 domains (Table 3) and decreased throughout the high school years (Figure 3). The interviews revealed that there is a desire for parents to be connected to school and student learning. All the interviewees said they regularly have conversations about their learning with their parents and the students spoke positively about these conversations. Student E said: "they often ask me how my day is and often I want to tell them" (personal communication, March 7, 2023). Student F mentioned his father will look at his grades online and "they will talk to me if something's going on and they want to help" (personal communication, March 7, 2023). While there were mixed responses to whether parents had genuine interest in their learning and how they were doing at school. Student D summed it up as "my parents have this thing going on where I just tell them my grades and we talk about it" (personal communication, March 7, 2023).

Regarding direct involvement at school, most of the students mentioned their parents have a desire to be connected and that they try to be connected where possible. There were, however, some barriers to involvement identified: two students mentioned parent time as a barrier for their involvement and one mentioned language as a barrier. Lack of opportunity or invitation were also mentioned by two students – they expressed that their parents would probably do more to be involved if someone reached out to invite them or there were more opportunities. Student C said: "if someone would reach out to her to come to the school to help out with some events or something like that, I think she would, like, pick that up" (personal communication, March 3, 2023). With regards to the language barrier, Student F said that having someone on staff who spoke his parents' language who reached out to invite them to help out with an event made the difference: "there is staff here that knows my language in particular...so that was one of the reasons they were able to help out" (personal communication, March 7, 2023).

These results reveal that parents are involved with their children's learning, but their involvement is more indirectly through their children rather than through their connection and involvement with the teachers and the school. The latter correlates with the individual SCM survey questions in the *Parental Involvement* domain, which particularly reference direct involvement with the teachers and school rather than involvement with learning at home.

#### Discussion

#### **Overview of the Study**

The purpose of this study was to examine the school climate at Surrey Christian School Secondary to determine what improvements are merited. Positive school climate has been shown to have a positive effect on attendance (Daily et al., 2020), academic achievement (Daily et al., 2020; Macneil et al., 2009), mental health (Jessiman et al., 2022), and social emotional traits in students (Wong et al., 2021). By measuring and analyzing school climate data, the school can begin to target various areas for improvement in the school environment. In this study, various tools were utilized to create a complete picture of the current state of school climate at Surrey Christian School Secondary: the student survey quantified some of the key demographics of the student population in order to identify its diverse nature more clearly, the School Climate Measure survey items measured the student experience in 10 domains, and follow-up interviews were conducted to gain more insight into the perceived student experience. While the school achieved a neutral (*Neither Positive nor Negative*) score overall, the SCM and the student interviews revealed a generally positive experience for students across most of the ten domains. For example, the domains of *Academic Support* (3.78), *Positive Teacher-Student Relationships* (3.57), and *Opportunities for Student Engagement* (3.54) scored positively in the quantitative data and were confirmed by students in the qualitative data. While these are encouraging results, improvement in the domains of *Academic Support*, *Positive Teacher-Student Relationships*, and *Opportunities for Student Engagement* should not be ignored. However, for the purpose of this study, recommendations are given that address specific areas for targeted improvement based on the quantitative and qualitative results outlined in this study.

#### Recommendations

#### Increase Cultural Awareness for Student and Teachers

SCSS is very diverse. The survey revealed that there are at least seven ethnicities represented with at least five or more students in the student population and another 6% of students identifying as an ethnicity not optioned. Students know and notice this about our school. However, the makeup of leadership and staff do not reflect the same kind of ethnic diversity. One recommendation is for the school to intentionally recruit and hire more staff from a variety of ethnic backgrounds as teacher-student racial congruence has been shown to have a positive influence on academic achievement (Dee, 2004; Joshi & James, 2022).

Secondly, more work could be done around culturally responsive teaching so that students feel represented. Gay (2002) noted that valuing diversity is not enough:

The knowledge that teachers need to have about cultural diversity goes beyond mere awareness of, respect for, and general recognition of the fact that ethnic groups have different values or express similar values in various ways. Thus, the second requirement for developing a knowledge base for culturally responsive teaching is acquiring detailed factual information about the cultural particularities of specific ethnic groups (e.g., African, Asian, Latino, and Native American). This is needed to make schooling more interesting and stimulating for, representative of, and responsive to ethnically diverse students. (p. 107)

Schools and staff need to do more to increase their specific knowledge related to student ethnicities represented in the school community (Ross, 2013). One recommendation would be to invite parents from a few different ethnic groups represented in the student population to come share at a staff professional development day about their culture including food, family practices, and social norms. This type of event would also promote an opportunity for parental involvement.

In the interviews, it was mentioned that students appreciated opportunities to learn about each other's cultures in class settings. These types of activities should be promoted and celebrated so that teachers can learn from the success and creativity of each other's work in this area. Another way that students could learn more about other cultures would be to celebrate important calendar days from other countries and cultures, rather than exclusively days from the Western calendar. Diwali, the South Asian festival of lights, and Lunar New Year, a highlight for Asian cultures are two specific celebrations that could become school-wide events that would help more students feel seen and heard. While the school acknowledges and highlights Black History Month, more intentional integration of BIPOC achievements in subjects year-round will help continue to move it forward with cultural awareness. Continued authentic integration of First Peoples Principles of Learning in BC is another way to promote cultural awareness in the learning setting. In addition to creating more cultural awareness for all students, these kinds of cultural socialization practices could increase student engagement for minorities similar to the longitudinal study by Del Toro and Wang (2021), in which they noted a positive relationship between opportunities for cultural socialization at school and school engagement in African-American students.

#### Student Equality

The results of the study suggest that while students do not perceive systemic issues around inequality, there are situations in the classroom where they perceive inequality. They notice that not all teachers treat all students in the same manner. Alerting teachers to this perception is one place to start, but perhaps there are opportunities with classroom practices that could promote more of a sense of equity. One recommendation is to incorporate more practices around random grouping. Liljedahl (2014) suggested that Visually Random Grouping can be used to eliminate social barriers and promote knowledge mobility between students. Methods such as giving students a playing card on their way in the classroom or lining them up by birthday and numbering them off to form discussion groups or lab partners could be a way for students to know that grouping is random and promote a culture of collaboration with all peers.

Coaching is another way that teachers can become more aware of equity in their classroom. Aguilar (2020) noted that some organizations use the term SMARTE goal in the contest of coaching, with an E added to represent the descriptor *equitable*. An equitable goal seeks to bring focus on students who may need additional support (p. 126-127). By having an objective observer record data about the types of students called upon or the types of questions being asked to particular students, a teacher could become more explicitly aware of their own subconscious biases.

### Student Engagement

*School Connectedness* was a domain that scored low (2.89) in the quantitative data. It was also a category in which there was a significant difference between male and female students. During the interviews, students clearly noted that they enjoy fieldwork (off-campus

work), hands-on work, and interactive discussions. They also tended to dislike independent seat work and found it less engaging. Teachers should work to promote interaction between students by using or increasing their use of protocols and learning activities that give students the opportunity to have voice and learn from each other.

Increasing student interaction is not simply beneficial on a social level. There are also learning benefits: Doucette and Singh (2022) conducted a study of physics lab group work and found that while students preferred to split the work by assigning tasks, there was more benefit to structuring it such a way that they shared the tasks involved in the work. Sharing the work increased their physics interest and improved their sense of self-efficacy, particularly for women.

Regarding fieldwork, there can be barriers or perceived barriers for teachers in designing and executing fieldwork. Remmen and Froland (2014) made several recommendations for making fieldwork accessible and effective including: a field setting within walking distance, inquiry-based learning activities, one field-task involving several possibilities, and including a follow-up phase. One recommendation for SCSS is for more resources to be devoted to equipping staff for planning and executing these types of learning activities using researchinformed practices.

#### Parental Involvement

*Parental Involvement* scored the lowest (2.71) of all 10 SCM domains. While it may be easy to dismiss decreased connection as normal or natural at the high school level, parental involvement has been shown to have a positive influence on achievement from K-12 (Jeynes, 2012) as well as across different minority groups (Jeynes, 2003). It is also significant that the student interviews revealed that it is not a lack of desire that results in low involvement. Barriers such as time, family situation, language, and opportunity were mentioned. The latter two are ones that could certainly be reduced. One suggestion around the language barrier would be to

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work towards translating school communications into some of the more common first languages spoken by parents, especially communications requesting help or involvement. It may also help to identify key parents in ethnic demographics who could become leaders in reaching out directly to others in that group to help or volunteer at school (Macphee, 2021).

It was also revealed through the interviews that parents initiate connecting with their child's learning and that students and parents both enjoy conversations about learning. This is something that could be leveraged into both learning activities and cultural awareness. Teachers could create and give assignments that involve students connecting with their parents through asking them questions about their experiences or having students teach their parents about something they learned. Providing opportunities for these connections at home can have a positive effect on student perceptions of school: Shochet et al. (2007) found that parent-adolescent attachment had a positive relationship with students' perceptions of the school environment and in their school connectedness.

The school should also continue to look for opportunities to invite parents to school events and promote awareness of and attendance at the new annual Celebration of Learning event. It could also be helpful to consult with culturally diverse members of the school community to help plan it and other school events with more sensitivity and awareness (Macphee, 2021).

#### **Professional Development**

None of the recommendations outlined specific policy changes for the organization. Rather, these recommendations outline shifts in awareness, posture, and practices that administration and staff can make to improve in targeted areas that are factors in school climate. For these types of changes to be effective, it is important to note that any implementation of initiatives should involve resources and teacher training (Osher et al., 2020). By investing in these changes through time and other resources, SCSS can show commitment to positive change in the experience of the students it serves and acknowledge the valuable role that data can play in organizational improvement.

#### **Suggestions for Future Research**

The purpose of this study was to identify improvements that are merited to create a more positive school climate at SCSS. To further excavate and explore some of the issues revealed in this study, it is recommended that future research include parent and staff surveys to gather more comprehensive data. Since school climate data is most effective when it is addressed in a cyclical way, it is also recommended to make the SCM or another school climate measure a biannual practice to measure improvement as recommendations are implemented ("Creating Conditions," 2021). This would help promote a long-term process for improvement as well as create a clearer picture of the root of experiences of students as to whether there are internal factors (such as developmental) or external factors (such as particular courses or teachers) influencing the experience in a specific grade. For example, in this study, subsequent data collection could determine whether the decreases in student experience in Grade 9 and Grade 11 were connected to the age and grade level or to that particular group of students.

There are also some invisible minorities whose demographics were not measured and analyzed in this study. Students on IEP's would be an important demographic to measure to see how they experience the school. The school has a strong inclusion policy, but it would be valuable to see how those students report their experience to know how to serve them more effectively. It is also important that the school include gender and sexual minorities in this data in the future. Approximately 20% of British Columbian high school students identify as gender and sexual minorities—a significant statistic when combined with the fact that lesbian, gay, and bisexual youth were seven times more likely to attempt suicide than heterosexual youth

(British Columbia Ministry of Education and Child Care, 2017). Surrey Christian School Secondary recently created a Safe Space club to address the issues of discrimination, harassment, and mental health issues for struggling students in this demographic but data collection and analysis could help quantify this demographic and examine the student experience for this group including any improvement connected to initiatives.

One aspect that was lacking in the SCM was robust connection to academic satisfaction. There were only two items in total, and they connected satisfaction to the number of tests and the amount of homework that students were given. Assessment is an evolving area of teaching and learning that goes far beyond tests and homework and has significant implications for how students feel in their experience in school. Stiggins and Chappuis (2005) said "our students draw life-shaping conclusions about themselves as learners on the basis of the information we provide to them as a result of their teachers' classroom assessments." They also state that sound assessment practices can reduce achievement gaps for low performers and promote student equality. By expanding the question set in this area, the school can evaluate its assessment practices and the effects those practices have on students.

#### Limitations

There were some limitations to this study. These results are specific to this particular place and time. For example, the timing of this study was purposefully chosen to take place at the beginning of the second semester rather than the final weeks of the first semester. It is possible that students would feel more positive at the beginning of a course than when they are preparing for final assessments or that they may feel more known at the end of a course rather than at the beginning. It was also administered during a block in which several Grade 12 students did not have a scheduled class so several students in that demographic were not at school and did not take the survey, causing that grade to be less represented than other grades.

Another limitation is that while the SCM is designed to be very universal, it is possible a more specifically tailored survey would have been more revealing for the particular situation of the school in this study.

Furthermore, the interviews were not free of bias. They were conducted by the researcher who is a teacher and administrator at the school. Most of the interviewees had a prior or current teacher-student relationship with the interviewer so there was a power imbalance present, and students may have felt compelled to answer a certain way or to filter their responses. Other sources of biases included choices the researcher made regarding the particular demographics that were measured and analyzed as well as the focus of the interview questions.

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# Appendix A

#### School Climate Measure (SCM) Survey Items

#### **Domain 1: Positive Student-Teacher Relationships**

Teachers and staff seem to take a real interest in my future

Teachers are available when I need to talk with them

It is easy to talk with teachers

Students get along well with teachers

Teachers at my school help us children with our problems

My teachers care about me

My teacher makes me feel good about myself

#### **Domain 2: Order and Discipline**

Classroom rules are applied equally

Problems in this school are solved by students and staff

The rules of the school are fair

School rules are enforced consistently and fairly

My teachers make it clear to me when I have misbehaved in class

Discipline is fair

#### **Domain 3: Opportunities for Student Engagement**

Students have same opportunity in class to speak, and be listened to, in class

Students can express feelings and thoughts about school work and life

Students "different" in any way are treated with respect

Nobody in my school is excluded from being successful

Females and males treated as equals at school

I can participate in a lot of interesting activities at school

#### **Domain 5: Academic Support**

I usually understand my homework assignments

Teachers make it clear what work needs to be done to get the grade I want

I believe that teachers expect all students to learn

I feel that I can do well in this school

#### **Domain 7: School Connectedness**

My schoolwork is exciting

Students can make suggestions on courses that are offered

This school make student enthusiastic about learning

Students are frequently rewarded or praised by faculty and staff for following school rule

#### **Domain 8: Perceived Exclusion/ Privilege**

At my school, the same person always gets to help the teacher

At my school, the same people get chosen every time to take part in after-school or special activities

The same person always get to use things, like a computer, a ball or piano, when we interact

#### **Domain 9: School Social Environment**

I am happy with the kinds of students who go to my school

I am happy, in general, with the other students who go to my school

#### **Domain 10: Academic Satisfaction**

I am happy about the number of tests I have

I am happy about the amount of homework I have

#### **Domain 6: Parental Involvement**

My parents talk with teachers about what is happening at home

My parents are involved in school activities

My parents are involved in discussions about what is taught at school

#### **Domain 4: School Physical Environment**

The school grounds are kept clean

My school is neat and clean

My school buildings are generally pleasant and well maintained

My school is usually clean and tidy

## Appendix B

# **Demographic Survey Items**

# School Climate Survey Items

Thank-you for your participation in this study. All responses are anonymous and confidential. Please do your best to fill out this form accurately.

# Demographics

- 1. What grade are you in?
  - 8
  - 0 9
  - 0 10
  - 0 11
  - 12

2. What is your sex?

1	~	1.000		
1	1	N /		
×.	1	M	d	ie.
~	1			



Prefer not to say

3. Do you identify as a gender or sexual minority?

0	Vee
U	Yes
~	

- O No
- Prefer not to say
- 4. Are you new to the school (SCS) this year? If you came from Fleetwood or Cloverdale select "No."
  - O Yes
  - ) No
- 5. What race category best describes you? Select all that apply.

Indigenous (First Nations, Metis, Inuk/Inuit
Black (African, Afro-Caribbean, African Canadian/American descent, etc.)
East/Southeast Asian (Chinese, Korean, Japanese, Taiwanese, Vietnamese, Indonesian, Filipino, other Southeast Asian descent)
Latino (Latin American, Hispanic descent)
Middle Eastern (Arab, Persian, Afghan, etc)
South Asian (East Indian, Pakistani, Bangladeshi, Sri Lankan, etc.)
White (European descent)
Other
Choose not to answer

- 6. What is your citizenship status?
  - Canadian
  - Permanent Resident
  - International (student visa)
- 7. Who do you live with most of the time?
  - Foster Parents
  - Homestay family
  - One Parent
  - Two parents (same household)
  - Two parents (separate households)
  - I prefer not to say
- 8. How would you describe your family's religious affilliation?
  - Christianity
  - Sikhism
  - O Buddhism
  - Other
  - No religious affiliation

9. How often does your family attend religious services?

O Weekly

1-3 times a month

- Less than once a month
- ) Never

# Appendix C

# **Interview Questions**

- 1. How would you describe your relationships with teachers?
- 2. How do you feel about the types of in-class learning activities and work you do in school?
- 3. How would you describe how different groups of students are treated and served at this school?
- 4. How would you describe your social experience and relationships with other students at this school?
- 5. How would you describe your parents' involvement in school and your learning?

# Appendix D

# **Survey Passive Consent Form**

Spring, 2023

Dear Surrey Christian School Secondary Parents and Guardians,

As part of an action research project related to graduate work, I am conducting a mixed methods research study of the school climate at our secondary campus. School climate describes the student experience in a number of different areas. The hope for this study is that the data collected will help analyze how students in different demographics are experiencing our school and to use that analysis to identify areas for growth and make create targeted actions towards improving the student experience.

The study will collect quantitative data from a student survey, which is anonymous and confidential. In no way will responses be connected back to your child. The survey will include demographic information and as well as questions from a comprehensive tool called the School Climate Measure (SCM), which has been validated by research. The SCM survey covers domains such as school connectedness, safety and support, order and discipline, and student engagement. The survey will be administered online through Microsoft Forms during school hours on February 4, 2023 with teacher supervision.

The survey has been reviewed by school administration and the research study has been approved by the university through which it will be published. You can view a copy of the student survey at (link shared). If you do not want your child(ren) to take the student survey, please notify Mr. Adrian Vandenberg at <u>avandenberg@surreychristian.com</u>. If you have questions or concerns, please also feel free to reach out. The survey is voluntary and no action will be taken against you or your child if they do not participate.

Thank-you for your support and cooperation in this study that will yield important and helpful information for improving the student experience at our school.

Sincerely,

Adrian Vandenberg Surrey Christian School

#### Appendix E

# **Interview Consent Form**

Spring, 2023

Dear Surrey Christian School Secondary Parents and Guardians,

Thank-you for your consideration of your child's participation in this research study, which is being conducted by me, Adrian Vandenberg, through my graduate work in the Education Department at Dordt University. The faculty supervisor is Dr. Patricia Kornelis, Education Department, Dordt University. The study has been approved by Dordt University and Surrey Christian School administration. The purpose of the research I am conducting is to measure the school climate or student experience at our school and to explore differences between subgroups within the student population. My hope is that the work done in this study will have a future impact on improving the student experience at our school.

This particular aspect of the study involves connecting to individual students through interviews in order to explore some of the results of the school climate survey students participated in recently. The interview will be approximately 20-30 minutes long and will be recorded as audio or in some cases video and audio and then transcribed. The recordings and transcripts will be destroyed when they are no longer necessary for the study (less than one year). Synonyms or alternate names will be used in the study and all reasonable steps will be taken to ensure that the results remain anonymous and confidential. Any data that is included and shared in the study will be de-identified.

Participants will be asked open-ended, non-leading questions by me around their experiences at school in areas such as school connectedness, safety and support, order and discipline, and student engagement in a private setting at school. All questions will be answered voluntarily and at any time if they do not feel comfortable they may withdraw their participation.

There are no anticipated associated risks with participating in this study. The main benefit of participation is in the student knowing they contributed indirectly to research intended to make their school a better place for future students. As a token of appreciation and compensation for their time, participating students will be entered in a draw to win a \$50 gift card chosen from a select list of merchants.

If you have any questions or concerns feel free to reach via email: <u>avandenberg@surreychristian.com</u> or phone: 604-581-1033.

By signing this form you give consent for your child's participation in the focus group interview in this study as described in this letter.

Name of minor participant

Name of parent/guardian

Signature

Date

Name of researcher

Signature

Date