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## The Effectiveness of the Inquiry Based Learning Method in a Private Independent School Environment

Fred R. Eaves  
*University of Arkansas, Fayetteville*

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The Effectiveness of the Inquiry Based Learning Method in a Private Independent School  
Environment

A dissertation submitted in partial fulfillment  
of the requirements for the degree of Doctor of  
Education in Educational Leadership

by

Fred R. Eaves  
University of Tennessee at Chattanooga  
Bachelor of Science in Secondary Education, 2006  
Tennessee Technological University  
Master of Arts in Exercise Science, Health, and Physical Education, 2009  
Lincoln Memorial University  
Education Specialist in Administration and Supervision, 2011  
University of Missouri  
Master of Education in Educational Counseling and Psychology, 2013

May 2021  
University of Arkansas

This dissertation is approved for recommendation to the Graduate Council.

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Kevin P. Brady, Ph.D.  
Dissertation Director

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Kara Lasater, Ed.D.  
Committee Member

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Marcia Smith, Ph.D.  
Committee Member

## Abstract

The purpose of this study was to examine the effectiveness of an inquiry-based learning model (IBLM) in a small, independent school educational environment. Seisan Academy (SA) implemented a new teaching philosophy that centered around an inquiry-based learning approach with a focus on developing a more student-centered culture at the school. This new program was implemented with little feedback or measurement regarding the effectiveness of the approach. This study also looked to address the lack of formal evaluation regarding the implementation of the IBLM.

Multiple sampling strategies were implemented due to the mixed-methods nature of this study. Quantitative data collection included four years of American College Testing (ACT) scores and four years of school enrollment data from the years 2014 to 2017. This data was collected from four years of senior classes. The total number of ACT scores collected was for 309 students. SA's enrollment and attrition rates from 2014 to 2017 were obtained from SA's Blackbaud database. The quantitative data was used to identify trends or themes in ACT scores, enrollment figures, and attrition percentages and to measure the IBLM's impact on these particular measures.

The results of the research indicated an increase in student achievement scores during the school's shift to an IBLM. The results of the study also established an increase in student enrollment and a decrease in student attrition that could be attributed to multiple factors related to increased constituent satisfaction. The study also indicated constituents of the school generally hold positive perceptions of the IBLM at SA. Finally, the study indicated the positive perceptions by constituents of the school in regard to a more student-centered culture.

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tremendous friend, mentor, and role model. You are someone I admire greatly and thank you for your servant heart and leadership.

## Dedication

This study is dedicated in memory of my grandmother, Ruth Davis Eaves, who served as a mentor and role model for my educational and professional pursuits. My journey into higher education would not have been possible without her unending love and support.

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## Chapter One: Introduction

### Introduction

The purpose of this study was to examine the effectiveness of an inquiry-based learning model (IBLM) in a small, independent school educational environment. Uno (1990) describes the IBLM as:

A method of instruction in which students are led to an understanding of concepts for themselves, and the responsibility for learning rests with them. The teacher acts as a catalyst, directing student interactions, activities, and discussion rather than bearing all information. (p. 841)

According to The National Association of Independent Schools (NAIS) website defines independent schools with the following definition:

Independent schools are non-profit private schools that are independent in philosophy: each is driven by a unique mission. They are also independent in the way they are managed and financed: each is governed by an independent board of trustees and each is primarily supported through tuition payments and charitable contributions. They are accountable to their communities and are accredited by state-approved accrediting bodies. (2020)

Seisan Academy (SA) was in the process of switching from a direct instruction (DI) environment to an IBLM. SA's initial state was that of a college-preparatory school that relied heavily on traditional teacher-centered DI. This traditional method of instruction became very unpopular with SA students as well as the SA community. Unfortunately, the school began to experience negative consequences of using the DI model. These negative consequences were adverse community perceptions, low constituent satisfaction, and attrition of students.

SA's desired state is to utilize an IBLM that creates a student-centered learning environment, increases enrollment, decreases the attrition rate, and maintains the current academic standard while developing 21st century skills. The desired state of the school and the desired outcome of implementing an IBLM in an independent school environment led the

researcher to focus a problem of practice on studying the effectiveness of an IBLM in an independent school. For this study, effectiveness was defined as a student-centered culture with increased enrollment, decreased student attrition, and performance on ACT scores comparable to past years. This study was significant because there is limited research on independent schools, and the notion of student-centered learning is relatively new.

### **Problem Statement**

Several years ago, SA struggled with negative perceptions regarding their traditional college preparatory education that was centered around teacher-centered DI. Student engagement and parent satisfaction were at an all-time low, and this was corroborated through negative feedback from all constituencies, namely parents. A declining student enrollment accompanied the negative feedback the school received from parents. Constituents of the school felt the school's approach to education was overly teacher-centered, and students were not at the center of the educational experience. SA implemented a new teaching philosophy that centered around an inquiry-based learning approach with a focus on developing a more student-centered culture at the school. This new program was implemented with little feedback or measurement regarding the effectiveness of the approach. This study looked to address the lack of formal evaluation regarding the implementation of the IBLM at SA through its research questions.

### ***Focus on Instructional and/or Systemic Issues***

The first dimension of this problem of practice focused on instructional and systemic issues of the school. These issues included: changing student demographics, an evolving educational market, and a lack of innovation in the classroom. SA is positioned in an area where its demographics were rapidly changing, and many of its current students did not fit the mold of traditional SA families. Legacy families had been the norm at SA throughout its history. SA is

notorious for enrolling students for generations; that is, families sent students to SA for five generations, for example. The city and county where SA is located had grown at an exponential rate over the last several years (Sturges, 2020). Beginning in 2010, SA experienced an influx of residents that were transplanted to the area. New residents in the area valued aspects of independent school education that SA was not in a position to provide. SA fell behind other area schools and the county public school system saw an increase in transfers from SA.

SA's student and community satisfaction between 2010 and 2013 took a downward turn. The dissatisfaction toward the school coincided with the last few years of the tenure of the previous upper school head. The upper school head had been at the school for 42 years and was considered rigid regarding his belief in a traditional college preparatory curriculum and direct instructional method for the institution. The last few years of his tenure were the genesis of difficult times for the school largely due to his refusal to adapt to a changing environment and changing clientele.

SA's administration turned over due to several retirements, and the new leadership team immediately began an assessment of the current state of the school. Exit interviews were conducted with students and parents, and the feedback cited a lack of confidence in multiple areas that included: instructional direction, student experience, and overall school satisfaction. Other measures that were looked at included admission numbers and student attrition rates. These findings led the new administration to search for another method to increase community satisfaction and prepare students for their future endeavors in both college and career. In 2014, the goal of implementing an IBLM was introduced into SA's strategic plan, and the administration worked to prepare its teachers and students to emphasize IBLM in classrooms.

The IBLM program has been in place since the 2015-2016 school year, but SA has never conducted a formal evaluation of the effectiveness of the program.

***Is Directly Observable.***

This problem was directly observable because SA was immersed in the implementation of an IBLM curriculum in its classrooms. The 2015-2016 school year was the first full year of IBLM implementation. The IBLM was directly observable in SA classrooms during this time. The school's goal regarding student achievement was for ACT scores to maintain similar marks while the student-centered culture improved, and enrollment increased. The school committed significant resources to professional development and time to the implementation of the program. It was important to determine if the IBLM is the appropriate instructional method for the school to achieve its desired goals. Comparing the current literature in the field to the data collected at SA provided useful data for SA's administration to use data-driven decision-making processes regarding the program.

***Is Actionable***

This problem was directly actionable because SA was collecting data during the IBLM implementation process at the school. This data was instrumental in decision-making for the school and other schools that share a similar structure to SA. The evaluation of the data allowed SA the ability to continue its current path or, if necessary, determine a suitable course of action to achieve its desired results. Four years of data enrollment and achievement data are available in this study, derived from previous high school seniors. The data from various internal sources, along with current research in the field, provided a reasonable amount of data to compare the school's progress during the study's chosen timeline, as well as aid appropriate decisions regarding curricular programming for the school.

### ***Connects to the Broader Strategy of Improvement***

A shift in the educational philosophy connected to SA's larger strategic plan and mission occurred because the IBLM and the development of a student-centered culture was the centerpiece of that strategic plan. This altered mission sought to create a student-centered culture by focusing on key attributes of IBLM implementation. As such, the implementation of the board's previous strategic plan was timely because it coincided with some of the crucial systemic issues the school was facing at the time. The school's board of trust and the head of school took those challenges as an opportunity to set a new course for learning and engagement at SA, and they collectively sought out methods to support their new mission and strategic plan. SA's board and the head of school believed the school's model of teaching and learning needed to represent and align to the new mission of the school. The IBLM was a critical component of the strategic plan, and it also had the opportunity to have the largest impact on its students' experience at the school.

### ***Is High Leverage***

The plan was high leverage in two areas. First, SA implemented the IBLM curriculum to develop a student-centered culture and distinguish itself from other schools in the area. With this intent, the goal was to provide an excellent educational experience and to improve stakeholder satisfaction, student experience, and enrollment trends at the school. SA was positioned in an extremely competitive educational market that included both public and independent schools. Next, the data collected from the study has provided valuable information regarding the IBLM at SA, and also for other schools, thus serves as an additional high leverage indicator. This information is valuable for SA as the first "true" evaluation of the program and is also valuable for schools with similar structures to evaluate their educational practices.



The IBLM places the teacher in a facilitation role and empowers students to become active participants in their learning experience; therefore, the shift to the IBLM is a vessel to increase customer satisfaction, engage students, improve attitudes toward the student experience, and ultimately attract students to the school. Student achievement, as it relates to IBLM, has been proven to be an effective method of instruction if students feel empowered and engaged (Severiens et al., 2015). Conversely, Hattie (2018) found that the effect size (i.e., a valuation of the strength between two variables) of inquiry-based teaching (0.4) was less than some other instructional strategies including direct instruction (0.6). Hattie's (2018) research suggests that both have a positive effect size, but some methods have larger effect sizes than IBLM. SA specifically, increased academic performance was not a primary goal of the IBLM. The shift to IBLM was primarily centered on developing a student-centered culture and improving enrollment trends. The results of this study will help provide support or refute the implementation of the IBLM at SA.

### **Goals of the Study**

1. To determine if the IBLM has been an effective instructional method that promotes a student-centered culture that attracts and retains students to SA.
2. To provide information and data that may be useful to similar independent schools researching student-centered learning methods.

The examination of the effectiveness of this program will center around three research questions, discussed later in this chapter.

### **Overview of Methodology**

The purpose of this study was to examine the effectiveness of an IBLM in an independent school environment. Specifically, this study examined the effectiveness of the IBLM

implemented at SA. A convergent mixed-methods design approach was used based on the complex nature of the problem of practice. Creswell and Creswell (2018) provided a rationale for this type of method when they wrote, “the researcher converges or merges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem” (p. 15). This problem of practice was complex due to the unique nature of independent schools. There was limited research on private independent schools, specifically about successful practices of independent schools. SA is an independent school that exists as a non-profit based on a tuition driven model. That is, the school operates on net-tuition revenue and donations from its constituents. The school needs tuition paying families and donations to operate, pay its employees, and educate its students. The independent school model is in stark contrast to public schools that are funded by the federal government. The quantitative and qualitative data were collected concurrently and then merged to develop a more robust understanding of the data as it relates to the problem of practice (Creswell & Creswell, 2018).

This study incorporated quantitative and qualitative data sources to develop a robust picture of the effects of IBLM implementation at SA. Quantitative data was collected using archival data from SA’s Blackbaud database. Data included ACT scores from the senior classes, attrition rates, and enrollment numbers—all from 2014-2017. The quantitative data was used to identify trends or themes in ACT scores, enrollment figures, and attrition percentages to measure the possibility of the IBLM’s impact on these particular measures. Jeffrey Mitchell (2017) defines attrition as “the number of students who leave your school other than by graduation” (p. 1). Interestingly, a high attrition rate in a school can often be attributed to poor satisfaction with the academic program at an independent school (Mitchell & Galindo, 2002).

A survey was used to collect faculty, administrator, and parent perceptions. The survey utilized a 5-point Likert scale and open-ended questions. This survey also solicited information regarding general feelings, perceptions, experiences, and attitudes of those who experienced the IBLM at SA. Surveys were distributed electronically to faculty, administrators, and parents. Both random and purposeful sampling was utilized. Parents and faculty were selected using stratified random sampling randomly while administrators were selected using purposeful, expert sampling. All interviews were conducted virtually through Zoom Video Communications<sup>®</sup> software. The convergent mixed-methods approach is appropriate in this study due to the lack of observational evidence regarding the program. Etiken et al. (2016) commented, “this sort of sampling is useful when the research is expected to take a long time before it provides conclusive results or where there is currently a lack of observational evidence” (p. 3). The qualitative data collected was used to identify perceptions, attitudes, and experiences of administrators, faculty, and parents at SA who experienced the IBLM and the shift in the school’s educational philosophy. The open-ended narrative feedback portion of the surveys was evaluated, coded, and analyzed by coding and analyzing the survey’s feedback highlighted themes that were beneficial to the evaluation of this study. Qualitative data was also gathered from focus group interviews. These semi-structured focus group interviews were conducted with parents, faculty, and administrators. Data gathered from the interviews was analyzed, evaluated, and interpreted to identify themes and patterns that were valuable in answering the research questions of the study. Parents who had children that attended the school before the implementation of the IBLM and after its implementation were selected. Specific faculty, such as administrators, department chairs and other faculty, were chosen for focus group interviews based on their identified

specified knowledge of the IBLM—all selected with the intent to illuminate and understand the goals and posed research questions of this study.

Multiple sampling strategies were used due to the mixed-methods nature of the study. Quantitative data included American College Testing (ACT) scores and SA enrollment data. This data included four years of senior ACT scores of 309 students from the classes of 2014 through 2017. Qualitative data included surveys and focus group interviews for parent, faculty, and administrator participants. This study provided the unique opportunity to survey key constituents involved in the IBLM curriculum at SA.

### **Positionality**

Jafar (2018) defines positionality as “The recognition and declaration of one’s own position in a piece of academic work” (p. 578). Ultimately, my positionality is shaped and formed by my education, career, and life experiences. I am an insider, in one respect to this study, through my employment at the institution of my problem of practice. As a member of our senior administration team, I participate in meetings that discuss the program monthly. Although I have an insider position regarding employment at the school, I am also in an outsider position specifically regarding the implementation and evaluation of the IBLM academic program. I am not directly involved in the implementation of the program, teaching classes using the IBLM method, or directly supervising or evaluating anyone involved in the IBLM at SA. Understanding my position in this study allowed me to be cognizant of any potential biases or limitations I may experience, as well as aiding me to produce safeguards to protect the integrity of the study.

### ***Researcher's Role***

My role at SA is a non-academic role as the director of athletics. I assumed this role four years ago with the hope that I would be able to have a greater impact on the experience of students at SA. I spent five years as the director of wellness, wellness department chair, and assistant football coach. This time was formative for me and allowed me to develop deep and meaningful relationships with students, colleagues, and members of our community. I am immersed in the SA community in large part due to the deep and meaningful relationships that I have forged over the last seven years. I am also a member of the SA senior administrative leadership team which is involved in all major decisions that impact the school daily. I was in an incredibly unique situation with this study because I was not directly involved with the academic program, and I chose to evaluate it. My relationship with department chairs who lead our faculty should lend credibility to this study through the eyes of the faculty. I had strong professional relationships built upon mutual respect with the leaders of our teaching faculty. Also, because I was in a unique position to evaluate the effectiveness of the IBLM because I was not in a threatening position with the teaching faculty of SA, and I carry a leadership position that is not directly involved in academics, my role was disconnected to processes occurring in the classroom. However, I did participate in multiple leadership groups charged with the implementation of the IBLM program.

### ***Assumptions***

There were four distinct assumptions regarding this problem of practice. The first assumption was the IBLM curriculum at SA needed to be properly evaluated to determine its effectiveness. There are sources that support IBLM as an instructional strategy, and there is also research that supports the idea that IBLM is not the most effective means for educating students

(Hattie, 2009). SA believed that the IBLM was the instructional method that will produce the highest yield for the school to foster customer satisfaction and student preparedness.

Next, it was assumed that schools need to prepare students for both higher education and career readiness beyond secondary education. Research has shown that true open inquiry yields significant learning outcomes that are crucial in the development of 21<sup>st</sup> century students. Summerlee and Murray (2010) found in a qualitative and a quantitative study that students participating in an IBLM experience a higher level of engagement, build confidence, and change their approach to research, as well as their use of resources. Developing 21<sup>st</sup> century scholars who possess the skills to think critically and problem solve is a top priority at SA, and this type of research supports this goal.

The third assumption was that our world is rapidly changing, and we must implement the most effective teaching and learning methods to best prepare our students for future success. Student-centered instruction models have been theorized to support a higher level of engagement from the students who participate in this type of learning. Summerlee and Murray (2010) cited that students in their study who participated in an IBLM model compared to a non-IBLM control group reported a higher level of engagement than their peers. Engagement is significant because a high level of engagement has also been tied to academic achievement. Carini et al. (2006) reported that student engagement is positively correlated with desired learning outcomes, such as developing critical thinking skills and improved grades. Additionally, a high level of satisfaction has been associated with predicted student success. Smallhorn et al. (2015) reported a measurable positive impact on student outcomes and satisfaction when they shifted their biology labs to an IBLM curriculum for first year undergraduate students. The shift toward student-centered learning seems to be gaining traction in education circles; it was important to discover if

this was a warranted move or just another effort to reform for the sake of reform. The initial results regarding the IBLM at SA were positive in anecdotal discussion regarding engagement, but the researcher had specific interest in digging deeper and determining if the IBLM correlates toward meeting program goals. Summerlee and Murray (2010) reported that students who come from lower academic standing tend to see better results than students who are already performing at a high level. The researcher was able to observe this in this environment because the school admitted more students that do not fit its usual academic profile over the last few years. Some of these students needed remediation upon entry at SA. SA also had a large population of students who were already high achievers to cross-reference outcomes with students who may be at a lower level academically.

The final assumption regarded the importance of competent and confident educators providing quality instruction to their students. Teachers are the most important piece of implementing any successful academic curriculum because they put educational theory into practice and influence outcomes at a high level. Teachers must be confident and competent in what they are teaching to be effective. These are the basic expectations for any instructor, and it should come as no surprise that these two factors would be predictors of the successful implementation of an IBLM in a school. Teachers' confidence in their ability to facilitate IBLM instruction seems to be a significant factor regarding perceptions and attitudes of the model as well. Kang and Keinonen (2016) reported that "IBLM implementation in lower secondary schools can be strongly predicted by teachers' confidence in teaching science" (p. 41). This study supports the notion that confidence and competence play a significant role in the successful implementation of an IBLM in a school district. An area of interest that could also shed some light regarding teacher confidence is preferences by instructors regarding teacher-centered

instruction and student-centered instruction. The formal training of an educator could also play a factor regarding instruction preferences. Furthermore, Ramnarain (2013) cited professional development as a critical component to develop confident and competent teachers. For the IBLM program to be successful, SA's teachers need proper training and support to develop the desired learning outcomes for their students.

### **Definition of Key Terms**

**Direct Instruction:** Direct instruction is a traditional method of academic instruction that is teacher-centered and is characterized by mostly lectures from the central authority figure in the classroom.

**Inquiry Based Learning Model:** Uno (1990) describes the inquiry-based learning model (IBLM) as:

A method of instruction in which students are led to an understanding of concepts for themselves and the responsibility for learning rests with them. The teacher acts as a catalyst, directing student interactions, activities, and discussion rather than bearing all information. (p. 841)

**Retention Rate:** The percentage of students eligible for return that re-enroll in the school each year.

**Attrition Rate:** The percentage of students eligible for return each school year that do not re-enroll in the school for various reasons.

**Independent School:** A private school that does not receive any type of federal or state funding. This school is considered private in nature, and it is governed by its board of trust.



## Chapter Two: Literature Review

### Introduction

For this study specifically, there is not an extensive amount of research that has been conducted on independent schools. There is scant existing literature particularly as it refers to independent schools. The notion of student-centered learning is also relatively new in education. This is an evaluation of a new program at an independent school that is positioned around student-centered learning. SA has been in a static state for the majority of its existence. SA's static state was characterized by decades of unchanged traditional DI from the teacher. The transition to an IBLM learning environment at SA was spurred by community dissatisfaction, enrollment loss, and a changing education market. The development of a student-centered curriculum that fosters the development of 21st century learners was a significant factor in the decision to switch to an IBLM at SA.

The idea that students are leaving their secondary schools ill-prepared for higher education and the workforce is at the center of the problem with our current educational system (Ravitch, 2016). Students who have the ability to succeed in a changing educational and business landscape need to be equipped with "soft" skills that are considered essential to success. Individuals who exhibit "soft" skills are often described as having the ability to self-manage, think critically, communicate well, exhibit emotional intelligence, and problem solve (Bhagra & Sharma, 2018).

Since the IBLM program was implemented at SA in the 2015-2016 school year, there has been no formal evaluation of the program. This study was an initial attempt to evaluate the effectiveness of the shift from DI to IBLM. This study hoped to satisfy two major goals:

1. To determine if the IBLM has been an effective instructional method that promotes a student-centered culture that attracts and retains students to the SA community.
2. To provide information and data that may be useful to similar independent schools researching student-centered learning methods.

The examination of the effectiveness of this program will focus on three research questions:

1. What is the relationship between IBLM and student achievement scores?
2. What impact has the IBLM had on student enrollment and attrition at SA?
3. Has the shift from DI to IBLM resulted in a more student-centered culture?

A detailed review of the research literature was examined to better inform this problem of practice. This literature review utilized various search engines and search terms. Databases such as the University of Arkansas Library, Google Scholar, ERIC, and ProQuest were used. Terms, keywords, and phrases used in the review of literature include educational reform, effective teaching methods, learning methods, inquiry-based learning, 21st century learning, 21st century skills, student engagement, student achievement, direct instruction, student motivation, learner agency, student-centered culture, and COVID-19 pandemic.

### **Review of the Literature**

Several research areas of the literature informed this problem of practice including the areas of educational reform, teaching and learning, 21st century skills, inquiry-based learning, student achievement, and student engagement. Relatedly, these research areas were examined in the context of private independent schools. These topics were selected to provide greater insight into the history of educational reform, effective teaching and learning methods, student

achievement, and student engagement. These areas provided appropriate context to understand and evaluate this unique problem of practice within an independent school setting.

### ***Student Achievement***

SA's shift to the IBLM method was directly correlated with the desire to promote a more student-centered learning environment that actively engages students in their learning process. Improving student achievement was not a primary goal of the shift due to the school's desire to develop a more student-centered culture. The shift was a response to falling enrollment and high attrition rates as well as constituent feedback detailing the teacher-centered nature of the school. SA's average ACT scores are significantly better than neighboring public schools. With that stated, teachers at SA were concerned the shift from DI to IBLM may adversely affect traditional student achievement scores at the school. For the shift to an IBLM to be considered effective, there needed to be similar performance to past student achievement scores to justify the move to teaching faculty. For the context of this study, student achievement was measured by ACT scores from SA senior classes from a four-year period. There are studies that show a relationship between increased student achievement and IBLM instruction (Maxwell et al., 2015). Maxwell et al. (2015) suggest IBLM had a positive effect on students when they wrote, "By the end of the six-week unit of study, students in the IBL group showed an increase in academic achievement, attitudes, and engagement" (p. 24). Although there were positive effects from IBLM in this study, the tests were not statistically significant to the traditional instruction group. A study involving science students by W.N. Nasution (2018) also found IBLM to be more effective than traditional instructional methods. Although both IBLM and conventional methods increased achievement in the study, IBLM was more effective. Nasution (2018) wrote, "In light of the results, it can be concluded that inquiry based-learning and conventional learning approaches

significantly impact the students' science learning achievements, in fact, the inquiry-based learning approach seems to have highly influenced students' learning outcomes" (p. 111). An interesting finding in this study revolved around the emotional intelligence of the students who participated. Students with high emotional intelligence performed better with IBLM than students with low emotional intelligence, whereas students with low emotional intelligence responded better to conventional instructional methods. Nasution (2018) continues by stating that, "This means that using a conventional learning approach is more effective for the students with low emotional intelligence because this approach does not require teamwork, giving learning responsibility to the students, and challenging to science learning" (pp. 110-111). These results have interesting implications for the IBLM at SA. There has been little discussion regarding the impact of emotional intelligence on student achievement. Aktamis et al. (2015) wrote, "Therefore, it can be suggested that the inquiry-based learning method should be preferred in primary education science courses in order to improve student achievement, science process skills, and attitudes toward science" (p. 111). Severiens and Schmidt (2009) found that student-centered programs and academic achievement have a positive relationship with each other. Severiens et al. (2015) explained this phenomenon when they stated, "This positive relationship can be explained by the constructivist principle that student-centered learning environments invite students to actively engage with the learning material" (p. 2). This type of research suggests that engaged learners are more likely to experience success in an academic program. Ultimately, this research supports the thought process SA's administration used in implementing that IBLM at the school. Conversely, Lea et al. (2003) warned the lack of definition for student-centered learning makes it difficult to draw definite conclusions regarding the effectiveness of this method. This research warrants further investigation of SA's IBLM to

determine the nature of student-centered learning at the school, and the impact it has had on enrollment figures and perceptions of the program and school.

### ***Independent School Enrollment and Student Attrition***

Student enrollment numbers and attrition trends are significant factors in determining the strategic direction of an independent school. Independent schools are different from their public-school counterparts in many ways. One major area of difference is governance. Independent schools are governed by a head of school and a board of trust. Most of the federal mandates do not apply to independent schools. There is tremendous flexibility for independent schools in curriculum, fiscal, and policy changes. Because an independent school does not receive federal money to sustain itself, the school is driven by its mission, tuition revenue, and annual giving from constituents of the school. This creates a unique environment when evaluating the health and success of a school. Independent schools are non-profit entities, but it still has a market that consists of parents, faculty, and board members (Jorgenson, 2006). This market is a delicate entity, and the administration of the school has a unique challenge in pushing the school forward and satisfying the needs and desires of its constituency groups.

There have been fundamental changes to the independent school market over the last decade. Corbett and Torres (2019) report:

The market for independent schools continues to shift. During the last decade, schooling options--including charter schools, for-profit schools, virtual schools, and homeschooling-- have proliferated. The American economy has largely rebounded from the Great Recession of 2007-2009, but the newest generation of parents-- millennials-- have lower wealth and income levels than previous generations of parents. (p.18)

This quote illustrates one of the key challenges facing independent schools in today's market.

Independent schools need to provide a quality experience for their students and differentiate themselves from both public and private school competitions. Corbett and Torres (2019) stated

that, “an analysis of admission funnel, enrollment, and attrition rates shows dramatic changes between 2008-2009 and 2018-2019. However, these changes are not uniform across the country” (p. 18). Some independent school landscape changes included tuition increases, increased competition from highly rated area public schools, increased competition from other independent schools in the area, and poor customer satisfaction. NAIS member schools’ median attrition rates by division are listed in Table 1.

**Table 1**  
*NAIS Median Attrition Rate by Division Level*

Division	Attrition %
Elementary/Middle	10.3
Middle/Upper	6.8
Upper	3.8
Elementary/Middle/Upper	7.8

*Note:* NAIS 2019-2020 Trendbook

These challenges set the stage for SA to reinvent its educational philosophy to enhance the student experience and differentiate itself from other schools in the area. With affordability becoming an issue for many independent schools, it has become increasingly important for independent schools to demonstrate their value compared to other educational options around them (Corbett & Torres, 2019). With less than 10% of the total student population attending private schools, there is heated competition for private school families in every private school market (Murnane et al., 2018). Traditionally, families have elected to go to private schools thinking they were safer, the educational experience was superior, and class sizes were smaller (Sonstelie, 1979). The traditional reasons families choose to attend private school have dramatically shifted, and now families are looking for a distinct return on investment from the invested finances they spend on their children’s education. Lamb and Mbekaeani (2017) wrote,

“Families will choose private school if it yields a higher utility than the alternative choices, or if the benefits of enrolling outweigh the costs” (p. 7). This quote illustrates the dilemma independent schools with high price tags face in demonstrating their value to combat competition and maintain or increase enrollment. SA’s tuition is close to \$24,000 a year which makes attendance at the school a significant barrier for many families. The free option for families who live in SA’s county happens to be one of the highest performing school systems in the state (Niche, 2020). This presents quite the challenge for SA in attracting families to attend the school as well as retaining them. The school believes the IBLM program is a step toward differentiation from competition and added value to the SA educational experience that resonates with parents.

### ***Educational Reform***

SA’s shift from DI to an IBLM environment shared commonalities with educational reforms that have been implemented throughout the history of education in the United States. SA was searching for an instructional method that promoted a student culture and fostered 21st century skills in its students. Students who lack 21st century skills have been described as ill prepared for higher education and the workforce because of a lack of higher order skills (Campbell & Kreysman, 2015). Presenting the history of educational reform in the United States will provide valuable insight into how past reform efforts relate to and impact current reform efforts in schools. Specifically, this section will look to provide context on the history of educational reform in the U.S. and how the history of education reform intertwines with the educational reforms that have taken place at SA in the last five years. The shifts in SA’s educational philosophy and policy today share many similarities with those from over a century ago. Educational reforms of the past have shaped and molded the way we view our educational

system today and have had a direct impact on the decision-making processes of decision makers at SA.

Murphy (2016) describes two distinct time periods of education in the United States: the industrial period and postindustrial schooling. Similar to today's debate on educational reform, the industrial time period was characterized by strong debates regarding how children should be educated to properly prepare them for the future... Murphy explained that:

Although public education started out as a practical endeavor, by the end of the 19th century, it was dominated by college interests. Preparation for college largely determined what was taught. Agreement on the central aim of public education was short-lived, however. By 1920, the purpose of schooling would be radically redefined. (p. 6)

This quote illustrates the focus on college preparation in educational pre-reform during the industrial period. This focus on college preparation was ironic because most people in this period were not attending college. Most American students were going to work in industry as opposed to study in higher education (Murphy, 2016). Furthermore, the prevailing thought amongst education decision makers pre-reform was that intellectual development was the key to future success for students. This was in stark contrast to what reformers of the period felt regarding the education of America's students. Industrial Age educational reformers held similar attitudes as today's educational reformers in believing the nation's educational system was not adequately preparing students for future career readiness (Murphy, 2016). Educational reforms were put in place from 1890-1920 address this issue. Murphy continues by stating that:

Those who believe the aim of education was intellectual development were not able to hold the high ground. Between 1890 and 1920, a new agenda--education for social control-- buttressed by a new science of learning known as social efficiency, gradually came to dominate education. (p. 7)



The development of the intellect, although important, was not the emphasis in this new era of social efficiency. Students were also presented with paths that would more closely align with probable career paths. Murphy (2016) writes:

Education for social control included the introduction of new ideas (such as specialization) and a reformulation of older ones (such as equal opportunity). It represented a rejection of the prevailing position on the academic function of education and provided an affirmation of the practical aims of schooling. (p.7)

The concern for career readiness is an entity we also struggle within our modern system of education. Bushaw and Lopez (2012) found in a Gallup poll that only 18% of respondents believed students were leaving high school prepared for the workforce.

Dramatic changes in education were implemented to prepare students for an industrial economy, but even more, changes were on the horizon. The second half of the 20th century was a period of rapid technological change (Murphy, 2016). The sweeping reforms that were put in place in the early 20th century became obsolete as the 21st century approached. Murphy explained that:

The perception that the level and quality of education in schools is less than many desire was buttressed by data on a wide variety of outcomes. Specifically, critics argued that data assembled in each of the following performance dimensions provided a not very-flattering snapshot of the current performance of the American educational system: (1) academic achievement in basic subject areas--compared to student performance in other countries; (2) functional literacy; (3) preparation for employment; (4) the holding power of schools (dropout rates); (5) knowledge of specific subject areas such as geography and economics; (6) mastery of higher-order skills; and (7) initiative, responsibility, and citizenship. (p. 10)

Many of these concerns still plague the United States Educational system two decades into the 21st century. SA's shift to an IBLM is the school's answer to addressing three specific issues mentioned by Murray: (1) Mastery of higher-order skills, (2) initiative and responsibility, and (3) preparation for future employment. SA's decision makers believed that all three of these areas

are intertwined and the IBLM will help develop these core competencies in SA students moving forward.

Educational reform continued into the 2000's with the passage of the No Child Left Behind (NCLB) and most recently the Every Student Succeeds Act (ESSA). Since the 1950s, the federal government has expanded its role in education (Heise, 2017). Increased federal involvement in education has significantly changed dynamics. Steinberg and Quinn (2017) wrote, "Indeed, the 2011 No Child Left Behind Act codified for the first-time accountability standards for all U.S. public schools, requiring that all students perform at academic proficiency levels by 2014" (p. 191). A focus on accountability, standards, and assessment has drastically changed the way education is being delivered in the United States (Steinberg & Quinn, 2017). Many teachers have been forced to "teach to the test" to avoid penalties that are associated with these federal education reform acts. To illustrate this assumption, Erskine (2014) writes:

I followed a trail of test ribbons to my daughter's classroom. Her teacher explained that since the school did not make adequate yearly progress, they were in danger of losing funding. As a result, their school wide improvement plan explicitly outlined interventions all classrooms must make to be in alignment with NCLB mandates. All fourth and fifth grade students were required to take reading, and math high stakes tests, some of which included the Oregon Assessment of Knowledge Skills (OAKS), three times a year and demonstrated growth each time. That works out to nine test sessions of five days each; or 45 days of testing involving 1–2-hour sessions, depending on test takers' speed. (p. 2)

This narrative is an example of the "teaching to the test" complaint and a prime example of how an inordinate amount of instructional time was spent preparing for a specific test. The emphasis on high stakes testing as opposed to cultivating student growth has been characteristic of education in the United States throughout the last 20 years. According to Smyth (2008):

High stakes testing is forcing instruction to change from exploratory, lifelong learning to teaching to the test through drill and kill. Teaching to the test has dramatic effects on the validity of the exam. Drilling students on specific methods to achieve high scores on standardized tests is ethically inappropriate conduct for teachers. (p. 134)

In addition to the impediment of curiosity and lifelong growth, the emphasis on testing created by acts such as NCLB and ESSA also has several unintended consequences. These acts have directly impacted the well-being of students and teachers. Smyth (2008) continues:

Negative side effects are associated with teacher decision-making, instruction, student learning, school climate, and teacher and student self-concept and motivation. The tests have turned into the objective of classroom instruction rather than the measure of teaching and learning. (p. 134)

Negative feelings and anxiety can be difficult factors for both teachers and students to overcome to produce quality results in educational environments (Smyth, 2008). Teacher perceptions regarding NCLB's impact are especially interesting. A study by Milner et al. (2011) cited mixed reviews when interviewing science teachers regarding NCLB's emphasis on required science testing's impact on teaching and learning. Milner et al. (2011) wrote:

It is evident through the analysis of the phone interviews that the categories that emerged show a complex learning environment with which elementary science teachers deal. Although there were certain examples of effective science teaching, the data suggest a number of reasons why effective science teaching is not more prevalent in the elementary schools. These reasons are underscored in the many contradictory responses to the interview questions. For example, more than two-thirds of the teachers interviewed (n=15) reported using inquiry methods, experiments, discovery, research, and hands-on activities to teach; however, 73% (n=16) of these teachers declared that lack of time for quality science is the biggest challenge NCLB has imposed on elementary classroom teachers. As one teacher stated, "NCLB has taken away from all other things school is about; science, art, music..." (124).

The contradictory statements in this quote are indicative of the confusion that recent federal education legislation has caused in American classrooms. The concerns regarding teaching to the test and the unintended consequences that result from that singular type of focus were concerns that SA's administration articulated regarding the school's previous model of DI. The curriculum was very lecture centric and focused primarily on the instructor. There was little opportunity for the students to practice or exhibit skills that place them at the center of the educational experience or equip them with 21st century skills.

SA's shift to an IBLM shared parallel themes that were also prevalent in past educational reform efforts in the United States. The reforms at the turn of the 20th century happened due to a prevailing sense that schools were not adequately preparing students for future career endeavors (Murphy, 2016). SA's constituents expressed concerns that SA's traditional instructional model was not adequately preparing students for the skills they were going to need to be successful in future college and career endeavors. SA's main concern related to the idea that the school had become very teacher-centered and focused on standardized testing scores to prove the value of the SA educational experience. The school wanted to redefine itself with an educational philosophy that moved from being teacher-centered to student-centered. The IBLM aligned well with this goal. IBLM offers the school the opportunity to develop a program that will put students at the center and driver seat of their learning.

Although SA is not required to implement much of the federal legislation that has been discussed due to its private school status, many of the reform efforts of the past and present have impacted the educational philosophy of the school. Both public and private schools are searching for ways to best educate their students to properly prepare them for their future endeavors. SA's implementation of the IBLM was the school's attempt to reform its efforts to fulfill its mission. The school's new mission is in line with developing what is currently described as 21st century skills in its students.

### ***21st Century Skills***

Metz (2011) gave an extensive list of 21st century competencies such as core subject knowledge, flexibility, adaptability, innovation, critical thinking, creativity, complex communication, collaboration, self-direction, and systems thinking. Many of these competencies align well with the IBLM. Part of SA's shift to an IBLM is centered around twenty-first century

skill acquisition as opposed to enhanced standardized testing scores (Coffman, 2017). Coffman (2017) stated:

Within education, when we consider twenty-first century skills and student preparation for the outside of a school's traditional four walls, the emphasis is on developing creative thinkers and self-directed risk-takers who ask thoughtful questions and seek good answers that go beyond mere surface understanding. (p. 4)

Preparing students for academic and career success in the 21st century is a key goal of the IBLM at SA. According to Summerlee and Murray (2010):

Data presented in the present paper demonstrate that, working in an inquiry-based mode, students refine their approach to research: they seek more sophisticated resources, rely less on family and friends for information, rely less on Wikipedia, and more frequently consult scholarly papers and articles. (p. 88)

This quote illustrates the idea of higher-level thinking proponents of inquiry as an outcome of the IBLM (Coffman, 2017, p.3).

Research has shown that “true” open inquiry yields significant learning outcomes that are crucial in the development of 21<sup>st</sup> century students. Summerlee and Murray (2010) found that students that participate in an IBLM experience a higher level of engagement, build confidence, and change their approach to research as well as their use of resources. Developing 21<sup>st</sup> century scholars who possess the skills to think critically and problem solve is a top priority at SA, and this type of research supports this goal.

The COVID-19 pandemic has had a profound impact on our world, and education has not been isolated from the impact of the pandemic. Most schools in the United States have had to pivot to some type of online teaching and learning platform in lieu of in person instruction because of restrictions created by the pandemic, supported when West (2021) states:

The effects of widespread school closures on student achievement are already the subject of countless projections and will be a topic for much future research. Another interesting question is whether parent and student frustrations at school closures and the exposure of union political power during the debate over reopening will yield lasting change. When

historians look back, they may find that one of the most fertile periods for education reform was a time when many schools were not even physically open. (p. 2.)

The forced familiarity with online platforms has the potential to expand additional online learning opportunities at the high school level. Henderson (2021) quotes a recent poll by Education Next when he writes, “Among parents whose children primarily participated digitally in instruction during the closure, those who report more satisfaction with this instruction also express greater willingness to have their child go through high school taking some academic courses online” (p. 4). The IBLM is associated with student-to-student interaction as well as project-based learning which is more challenging in an online format. The educational reform spurred by the pandemic has created more online learning in United States schools. The current iteration of online learning along with a possible pivot to more future online learning could have significant implications for the IBLM.

### **Student Engagement.**

Enhancing student engagement as part of developing a student-centered culture was communicated as a priority by the administration of SA. With this being a desired outcome, it is important to glean from the literature the importance and impact a higher level of student engagement can have on learning as well.

Student-centered instruction models have been theorized to support a higher level of engagement from the students who participate in this type of learning. Summerlee and Murray (2010) cite that students in their study who participated in an IBLM model compared to a non-IBLM control group reported a higher level of engagement than their peers. Engagement is significant because a high level of engagement has also been tied to academic achievement. Carini et al. (2006) report that student engagement is positively correlated with desired learning outcomes of developing critical thinking skills and improved grades. A high level of satisfaction

has been associated with predicted student success as well. Smallhorn et al. (2015) reported a measurable positive impact on student outcomes and satisfaction when they shifted their biology labs to an IBLM curriculum for first year undergraduate students.

The ability to keep students interested has been associated with enhancing student engagement (Buchanan et al., 2016). A teacher's ability to attract and retain a student's attention is paramount to a successful learning environment. Buchanan et al. (2016) write, "The literature on student motivation demonstrates a strong connection between student interest, engagement, academic motivation, and achievement" (p. 38). Since the IBLM at SA was implemented with the expectation it would increase student engagement, contribution to add value of placing the students at the centerpiece of the learning experience was also desired. Specifically, the IBLM is asking students to help chart their course selections in regard to their individual educational experience and development. Engaged students are empowered to increase their own agency and take control of their own learning experience. Increased engagement, motivation, and learner agency were desired outcomes of the implementation of the IBLM at SA.

### **Effective Teaching and Learning Methods.**

To evaluate the IBLM at SA, it was important to review the literature regarding how people learn. There has been a tremendous amount of research regarding the human brain in the last 20 years. It was important to provide a brief discussion of how the brain processes and functions to provide context to the discussion of teaching and learning. Although the neuroscience of the brain is important to understand, Byrnes (2001) suggests that knowledge gained through neuroscience should be applied through an interdisciplinary lens and cautions against an approach that uses a single perspective. This brief overview of basic brain anatomy and its functions will provide context for later discussion on the teenage brain, learning

processes, and how external factors influence learning. Regarding the anatomy and functions of the brain, Jensen (2005) found:

Input to the brain arrives from the five senses or is generated internally through imagination or reflection. This input is initially processed in the thalamus, but it's also routed simultaneously to other specific areas for further processing. Visual information is routed to the occipital lobe, language to the temporal lobe, and so on. Quickly, the brain forms a rough sensory impression of the incoming data. If any of the data are threatening or suspicious, the amygdala (the "uncertainty activator") is activated. It will jump-start the rest of the sympathetic nervous system- the part of the nervous system that helps us deal with emergencies-- and enable a quick response.

Typically, however, the frontal lobes hold much of the new data in short-term memory for 5 to 20 seconds. Most of the new information is filtered, dismissed, and never gets stored. It may be irrelevant, trivial, or not compelling enough. If it's worth a second consideration, new explicit learning is routed to and held in the hippocampus. There the information is processed further to determine its value. If the new learning is deemed important, it will be organized and indexed by the hippocampus and later stored in the cortex. In fact, it will be stored in the same lobe that originally processed it-- visual information in the occipital lobe, language in the temporal lobe, and so on. The original processing takes place at lightning speed, but the subsequent stages and storage processes can take hours, days, or even weeks. (p. 16)

Jensen (2005) continues:

The units in the brain that are largely responsible for information processing and storage are the neurons and the glia. The brain has at least two dozen types of neurons. As mentioned on page 8, neurons have a cell-body, tail-like extension called an axon, and branchlike structures called dendrites. The junction between two connected neurons is called a synapse. Neurons use both chemical and electrical signals for processing. (p. 17)

It is important to note, the human brain is still undergoing significant change during the teenage years of development (Jensen, 2005). Students are immersed in their high school educational experience during one of the most critical times for brain development. Jensen (2005) describes this brain development period as follows:

The everyday experience of adults who either live or work with teens is often that of bewilderment and exasperation. Teens often make bad choices and then lie to cover them up. In some cases, the average 9-year-old can make a better decision than an adolescent can. The traditional explanation has been "it's hormones." But recent neuroscience is shedding new light on teen behaviors, and the bottom line is that hormones are only



partly to blame. The rapid and massive structural change occurring in the brain during the teen years is actually the biggest reason for often-bizarre teen behavior. (p. 30)

Jensen (2005) goes on to describe the anatomical changes to the brain in detail:

On a gross anatomical level, most areas of the brain are under major construction during adolescence. In fact, changes are similar to those happening in an infant's brain. The parietal lobes undergo major changes, with areas doubling or tripling in size. The frontal lobes, a big chunk of our "gray matter" and the area of the brain responsible for thoughtful, reflective reasoning capabilities, are the last areas of the brain to mature. (p. 30)

The changes that are prevalent in the teenage brain during the formative years of high school should be a consideration of educators when working with students of this age group. Through synaptic reorganization, the teenage brain becomes very receptive to new information (Jensen, 2005). While the anatomical changes of the teenage brain are significant, there are also chemical changes present during this time. Jensen (2005) reiterates this when stating:

On the chemical level, the teen brain is influenced by volatile levels of the feel-good neurotransmitter dopamine. Some researchers argue that dopamine levels are actually very high during this time frame--- even higher than the levels found in adults. In either case, the teenage brain is different. (pp. 30-31)

Teenage brains also typically have low melatonin levels that impact the sleep cycles of teenagers which can have a significant impact on learning (Jensen, 2008).

Due to the significant anatomical and chemical changes high school students are experiencing during their teenage years, schools must be mindful of how they choose to educate their children. Instructional methods, tone, patience, and understanding can be significant in helping a child reach his or her potential (Jensen, 2018). Brain function and adaptations provide the foundation to provide a brief overview of how we learn. Furthermore, Jensen (2005) cites engagement, repetition, input quality, coherence, timing, error correction, and emotional states as significant factors to learning that are a product of the actual design of the brain. SA's move to the IBLM cited engagement as a significant factor in that decision-making process. SA wanted to

ensure that its teachers are using best practices to facilitate an environment with a high level of engagement with its students. Practical techniques that are suggested to improve student engagement are brevity, relevant tasks, attentional devices, and amine activation (Jensen, 2018).

Environmental and cultural factors have also been cited as significant factors regarding student learning outcomes (National Academy of Sciences, 2018). Recent research from the National Academy of Sciences (NAS) supports a holistic view of how we learn. Their committee asserts, “Because our concern is with how people learn (not say, with how computers learn), we viewed our charge as including the social, emotional, motivational, cognitive, developmental, biological, and temporal contexts in which learning occurs” (National Academy of Sciences, 2018, p. 22). This approach to studying how we learn provides insight into what factors influence how humans learn. As such, culture has been identified as a significant factor in student learning (National Academy of Sciences, 2018). The NAS (2018) has gleaned two major insights in the study of how culture impacts learning:

Caregiver practices vary across cultures and that these variations influence learners, and the interplay between culture and learning arose out of efforts to establish developmental norms: Benchmarks against which children could be compared to assess whether they were developing normally. (p. 24)

Additionally, the environment a student grows up in can shape their cognitive processes (Medin & Bang, 2014). NAS (2018) writes, “Researchers have identified many examples of cultural differences in what are considered ‘basic’ cognitive processes once assumed to be universal” (p. 26). Embedded within cultural influences, there is also a social aspect to learning. The NAS (2018) states the following:

The underlying principle in this body of work is that cognitive growth happens because of social interactions in which children and their more advanced peers or adults work jointly to solve problems. Adults help children learn how to use their culture’s psychological and technical tools (e.g., number and writing systems, calculators,

computers). These types of tools have skills and ideas built into them, and learning how to use them is a critical aspect of cognitive development. (p. 26).

The cultural influences on learning, along with the social components that are embedded within them, fit into a much larger context. The NAS (2018) writes, “The biology of the brain provides the physiological platform for learning and is shaped by the social and cultural influences outside of the individual” (p. 28). The impact culture has on learning is significant in this study due to the unique nature of the independent school environment in which SA is situated. Students from various cultures, backgrounds, and socio-economic statuses attend the school. In addition, students at SA have spent various amounts of time immersed in the SA educational environment. Some students have been at SA their entire educational careers, while others have been at the school for a relatively short amount of time.

Other factors such as social interactions, emotional states, nutrition, and sleep are important to learning outcomes (National Academy of Sciences, 2018). High school students deal with a tremendous amount of stress from external factors during these formative years. A student’s social relationships provide significant formation of the brain, such as their emotions and knowledge (National Academy of Sciences, 2018). Many of the IBLM strategies that have been implemented at SA involve a cooperative learning component. Cooperative learning strategies, by their nature, will promote frequent social interactions between students.

Regarding emotion, the NAS (2018) reports, “Emotion plays a role in developing the substrate for learning by helping people attend to, evaluate, and react to stimuli, situations, and happenings” (p. 29). A student’s emotions are crucial to problem-solving (National Academy of Sciences, 2018). The NAS (2018) reports, “People are willing to work harder to learn the content and skills they are emotional about, and they are emotionally interested when the content and skills they are learning seem useful and connected to their motivations and future goals” (p. 30).

Furthermore, Physical components such as sleep, nutrition, and physical activity have been shown to be significant influences on learning, (National Academy of Sciences, 2018). It is important to note that these influences can have a significant impact on learning outcomes in students. These topics of are relevant to the IBLM at SA as the program was implemented with the intent of engaging students, and to utilize the program to help make learning relevant to the students who are experiencing this type of instruction.

This brief synopsis of brain function, the science of learning, and influences that impact learning provide context to evaluate the effectiveness of the IBLM at SA. Understanding how students learn is critical to the successful implementation of any instructional strategy. The focus of the next section will now shift to the IBLM exclusively.

### **Inquiry Based Learning Method.**

Inquiry based learning is an instructional method that is becoming popular in education, but it is not a new concept. Ramsey et al. (1990) state, “The value of asking questions to teach has been recognized for centuries. As early as 200 B.C., Socrates used questions to provoke his students and make them listen carefully, analyze their thoughts, and think critically” (p. 420). The IBLM is a method that is associated with 21st century skills such as problem-solving and critical thinking (Donini-Lenhoff, 2010). IBLM is an instructional style that has also been categorized as a student-centered approach to learning. Alberta Learning (2004) describes ILBM as:

A process where students are involved in their learning, create essential questions, investigate widely, and then build new understandings, meanings, and knowledge. That knowledge is new to the students and may be used to answer their essential question, to develop a solution, or to support a position or point of view. The knowledge is usually presented to others in some sort of public manner and may result in some sort of action. (p. 1)

A major goal in the implementation of the IBLM at SA was to shift from a teacher-centered culture to a student-centered culture. Coffman (2017) writes:

The use of inquiry changes the way we think about learning and teaching. In the classroom, inquiry oriented-learning takes many forms. It involves moving away from a traditional teacher-centered approach and toward a more student-centered style. One that encourages students to take responsibility for learning by thinking in more complex terms about the course content and how it fits in their world. (p. 3)

According to Kirschner et al. (2006), unguided instruction may “have negative results when students acquire misconceptions or incomplete or disorganized knowledge” (p. 84). Roblyer et al. (1997) suggested that instructional guidance in an IBLM curriculum must be very intentional and students must have a baseline of knowledge to draw from to solicit desired learning outcomes. Additionally, Laursen and Kogen (2013) found that students that participated in an IBLM performed moderately better than students who did not participate in an IBLM. They also reported there was no harm done to students that participated in an IBLM and these students performed as well as their non-IBLM peers in later coursework. This work suggests that an IBLM environment is, at the very least, non-detrimental to student learning when compared to a traditional DI model. The suggestion that IBLM is not detrimental to student learning helps support the case for IBLM at SA. Academic performance was already at a high level before the shift, and the school’s major concern with moving to a more student-centered educational philosophy was the possible disruption of academic performance. Research from Summerlee and Murray (2010) helps address this concern in its report that IBLM seminar groups “performed better, on average, in their subsequent courses, compared to their peers” in non-IBLM control groups (p. 89).

The success or failure of IBLM programs also seems to be correlated with attitudes, perceptions, and implementation by instructors at schools who implement this method.

Campbell et al. (2011) performed a study that did not show significant positive outcomes for IBLM. Instead, teachers in the study cite “an inability or discomfort to direct or control student inquiry, a perception that open inquiry is too time intensive, and a lack of evidence for improved student outcomes” (p. 267). The bias of the teachers in the study could have had an effect on the final results if these were indeed the attitudes prior to the study. Conversely, Ramnarain (2013) reports that teachers in rural South African school districts generally have positive attitudes toward an IBLM, but cite multiple challenges such as poor teacher preparation, a lack of resources, large classes, and limited exposure to an inquiry of learners that prevent them from implementing IBLM successfully. Ramnarain (2013) also reports teachers at urban and suburban schools in South Africa seem to favor an IBLM approach which seems to support this claim. According to the previously mentioned research, proper training for teachers regarding the IBLM is important to the successful implementation of the program. Teachers appear to play a significant role in the successful implementation of IBLM in schools. Teachers give us the ability to put educational theory into practice, and they have the capacity to influence outcomes at a high level (Kang and Keinonen, 2016). First and foremost, teachers must be confident and competent in what they are teaching to be effective. These are the basic expectations for any instructor, and these two factors are a predictor of successful implementation of an IBLM in a school. Teachers’ confidence in their ability to facilitate IBLM instruction seems to be a significant factor regarding perceptions and attitudes of the model. Kang and Keinonen (2016) report that, “IBLM implementation in lower secondary schools can be strongly predicted by teachers’ confidence in teaching science” (p. 41). This study supports the notion that confidence and competence play a significant role in the successful implementation of an IBLM in a school district. An area of interest that could also shed light regarding teacher confidence is preferences

by instructors regarding teacher-centered instruction and student-centered instruction. The formal training of an educator could be another potential factor regarding the phenomenon of instruction preferences.

To implement a successful IBLM, administrators must support their faculty in a variety of manners. Ramnarain (2013) cites multiple areas of support that include proper onboarding to implement IBLM, continued professional development, small class sizes, and an end-of-year assessment structure that is not the crux of the class. SA's professional development program for teachers regarding IBLM should reflect an emphasis in this area to solicit the desired outcomes of implementing the program.

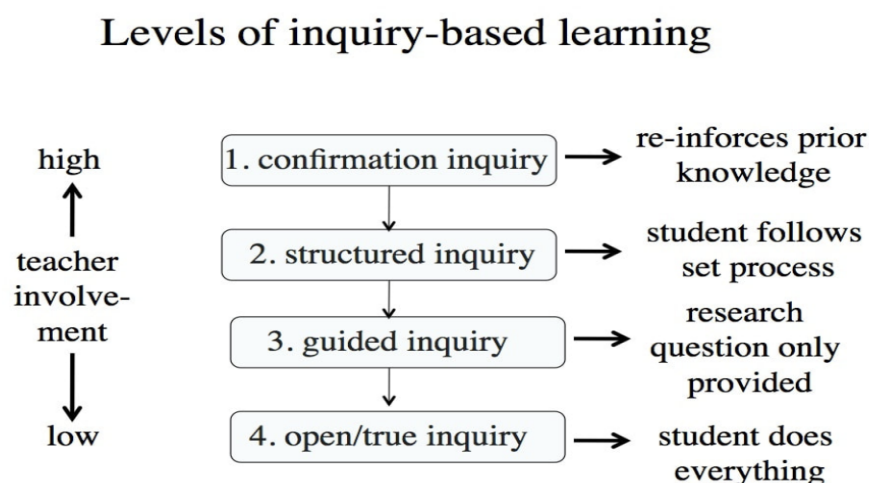
Although there is a substantial amount of literature to support the IBLM. There is also literature that could be considered contradictory to positive IBLM findings. There is research to suggest that there are more effective instructional methods than the IBLM for educating students towards desired levels of achievement (Hattie, 2009). This research would be a major concern if SA's primary goal of IBLM implementation was centered around student achievement. Although increased student achievement is not a primary goal for the IBLM at SA, further examination of the program is warranted to provide context to research that does not support this method of learning. If the IBLM is found to be significantly detrimental to student achievement at SA, this would cause a significant problem and counter to the ultimate goals of the school. This data helps support the notion that the IBLM at SA should be thoroughly evaluated to determine the effectiveness of the ILBM program.

### **Conceptual Framework**

The research from this problem of practice is a vital piece in evaluating the strategic plan of SA. The administration of the school rewrote its mission six years ago to support the

implementation of the IBLM. This plan was adopted in response to negative community perceptions, low student and parent satisfaction, and declining enrollment numbers. The school wanted to match an instructional method with a more student-centered culture. SA's administration implemented the IBLM to help achieve this goal.

Two theoretical perspectives informed this study: levels of inquiry-based learning and constructivist theory. Banchi and Bell (2008) describe four stages of inquiry-based learning and how each is correlated with a specific level of both teacher and student involvement. As the instructor's method of involvement changes the student involvement increases in this model. This is illustrated in Figure 1.



**Figure 1.** *Levels of Inquiry-Based Learning*

*Note:* from Banchi and Bell (2008)

The four levels of inquiry are significant in developing a framework for where SA currently position in its implementation of the IBLM program. Levels three and four of Figure 1 suggest a very student-centered approach to education. Banchi and Bell (2008) describe the first stage of inquiry as follows:

At the first level, confirmation inquiry, students are provided with the question and procedure (method), and the results are known in advance. Confirmation inquiry is useful



when a teacher's goal is to reinforce a previously introduced idea; to introduce students to the experience of conducting investigations; or to have students practice a specific inquiry skill, such as collecting and recording data. For example, you may want students to confirm that the less air resistance an object has the quicker it will fall. Students can create paper helicopters with wings of different lengths to confirm this idea. They follow the directions for doing the experiment, record their data, and analyze their results. (p. 26)

The next level of inquiry is referred to as structured inquiry and is described by Banchi and Bell (2008) as follows:

At the next level, structured inquiry, the question and procedure are still provided by the teacher; however, students generate an explanation supported by the evidence they have collected. Using the same paper airplane example, students would not be told the relationship they were investigating ahead of time. They would need to use the data collected showing that airplanes with longer wings took longer to fall to understand that the longer wings created greater air resistance and slowed down the airplanes. While confirmation and structured inquiry are considered lower-level inquiries, they are very common in elementary science curricula. These kinds of inquiries are important because they enable students to gradually develop their abilities to conduct more open-ended inquiry. (pp. 26-27)

The third level of inquiry becomes more student-centered in its function. Banchi and Bell (2008) describe this as follows:

At the third level, guided inquiry, the teacher provides students with only the research question, and students design the procedure (method) to test their question and the resulting explanations. Because this kind of inquiry is more involved than structured inquiry, it is most successful when students have had numerous opportunities to learn and practice different ways to plan experiments and record data. Just because students are designing their own procedures does not mean that the teacher's role is passive. To the contrary, students need guidance as to whether their investigation plans make sense. (p. 27)

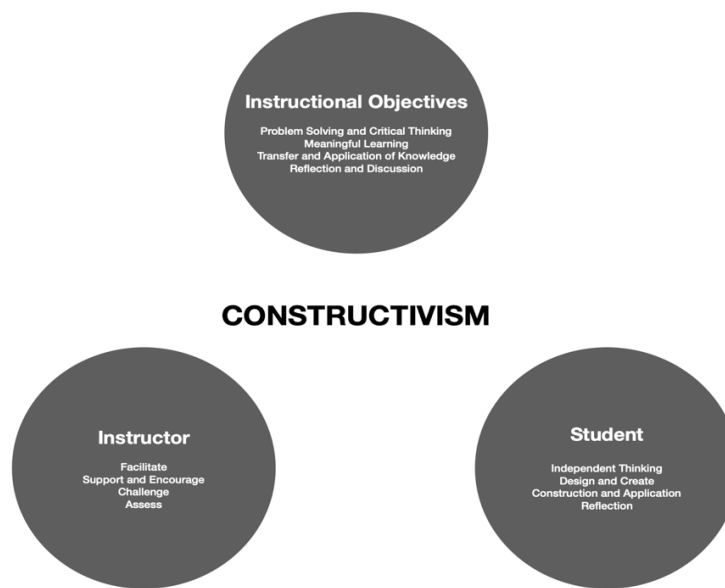
The fourth and last level of inquiry is the highest level and most student-centered level of inquiry. Banchi and Bell (2008) describe this as follows:

At the fourth and highest level of inquiry, open inquiry, students have the purest opportunities to act like scientists, deriving questions, designing and carrying out investigations, and communicating their results. This level requires the most scientific reasoning and greatest cognitive demand from students. With ample experience at the first three levels of inquiry, students at the fourth- and fifth-grade levels will be able to successfully conduct open inquiries. It is only appropriate to have students conducting open inquiries when they have demonstrated that they can successfully design and carry

out investigations when provided with the question. This includes being able to record and analyze data, as well as draw conclusions from the evidence they have collected. (p. 27)

This study will help determine where SA is situated within the four levels of inquiry as a school and how that correlates in a move to a more student-centered approach that attracts and retains students. Constructivism is the second theory that is centered around IBLM and informed this study. According to Correiro et al. (2008), students need a baseline knowledge of a subject matter to experience success with a constructivist style of learning that is associated with IBLM (p. 457). If students have the appropriate prior knowledge, then a constructivist style of learning has proven effective in enhancing knowledge through active engagement (Ormand, 1988). Constructivism directly lines up with the first levels of inquiry needed to progress to guided and open inquiry.

In an independent school setting, IBLM provides the opportunity for teachers to provide a learning environment that is hands-on and student-centered. IBLM also provides the opportunity for students to solve problems using 21st century skills such as collaboration, critical thinking, and creativity. Using these two theoretical approaches aligned with desired goals for SA regarding student-centered learning, engagement, and achievement. These theories place the student at the center of the learning experience. The evaluation of this program's implementation should provide data that will help determine at what level this is occurring. SA's administration feels that a positive, student-centered learning culture will solve perception and enrollment issues the school experienced with its former educational philosophy of DI. The school also feels that involved and engaged learners will continue to achieve similar levels of achievement scores. Figure 2 illustrates the constructivist approach associated with IBLM.



**Figure 2.** *Constructivist Approach to IBLM*

*Note:* Adapted from Correiro, E.E., Griffin, L.R., & Hart, P.E., (2008)

### **Chapter Summary**

The purpose of the literature review was to present literature that informs this problem of practice. In this study specifically, there is not an extensive amount of research that has been conducted on independent schools. There is very scant existing literature particularly as it refers to independent schools. The notion of student-centered learning is also a relatively new notion in education. This is a new evaluation of a program at an independent school that is positioned around student-centered learning. The literature review focused on the different components and aspects associated with inquiry-based learning. Chapter Two is helpful in demonstrating background information that was useful in understanding the rationale of SA's shift to the IBLM. Chapter Two was also helpful in understanding the benefits and challenges of SA's attempt to develop a more student-centered culture through the implementation of IBLM. Next, Chapter Three details the research design and methodology used to answer the research questions of this problem of practice. Quantitative methods were used to better understand the IBLM's possible

impact on student achievement scores and enrollment figures. Qualitative methods were used to attempt to gauge the program's impact on developing a more student-centered culture and ascertain constituent perceptions.

## Chapter Three: Methodology

### Introduction

The purpose of this study was to examine the effectiveness of an IBLM in an independent school environment. Specifically, this study examined the effectiveness of the IBLM implemented at SA. According to Uno (1990), IBLM is:

A method of instruction in which students are led to an understanding of concepts for themselves and the responsibility for learning rests with them. The teacher acts as a catalyst, directing student interactions, activities, and discussion rather than bearing all information. (p. 841)

A convergent mixed-methods design approach was used based on the complex nature of this problem of practice. A convergent mixed-methods approach allows the researcher to collect qualitative and quantitative data simultaneously with the primary intent of analyzing the data separately and then using the data from both these sources to interpret the results (Creswell & Plano-Clark, 2011). More specifically, Tashakkori and Creswell (2007) define the convergent mixed-methods design approach as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both quantitative and qualitative approaches” (p. 4). The complex nature of this problem of practice led to the use of this method to develop a potentially robust picture of the impact of the IBLM at SA. Ravitch and Carl (2016) wrote, “mixed methods research designs, which strategically combine aspects of qualitative and quantitative methods, can be an additional way to seek qualitative rigor and validity depending on the research questions, goals, and arguments you are trying to make” (p. 209). The research questions of this study attempted to examine the impact of the IBLM on SA.

Multiple sampling strategies were implemented due to the mixed-methods nature of this study. Quantitative data collection included four years data of seniors’ American College Testing (ACT) scores and four years of school enrollment data, both from the years 2014 to 2017. The

total number of ACT scores collected was for 309 students. SA's enrollment and attrition rates from 2014 to 2017 were obtained from SA's Blackbaud database. The quantitative data was used to identify trends or themes in ACT scores, enrollment figures, and attrition percentages and to measure the IBLM's impact on these particular measures. Mitchell (2017) defined attrition as "the number of students who leave your school other than by graduation" (p. 1). A high attrition rate in a school can be attributed to poor satisfaction with the experience of its constituents (Corbett & Torres, 2019).

Faculty, administrator, and parent perceptions were collected using a Likert-scale and open-ended surveys. This survey solicited information regarding general feelings, perceptions, experiences, and attitudes of those who have experienced the IBLM at SA. Surveys were distributed electronically to faculty, administrators, and parents. Stratified random sampling was used when selecting participants. Individuals from the upper school division for administrators and each academic discipline for faculty was selected. This study provided the opportunity to survey key constituents involved in the IBLM curriculum at SA. Surveys were administered using Qualtrics<sup>®</sup> and all survey information was stored and tracked in the Qualtrics<sup>®</sup> platform and on the researcher's computer which was encrypted with a passcode.

The qualitative data collected was used to identify perceptions, attitudes, and experiences of administrators, faculty, and parents at SA that have experienced the IBLM and shift in the school's educational philosophy. The open-ended narrative feedback portion of the surveys was evaluated, analyzed, and coded. Analyzing and coding this feedback information highlighted themes that were beneficial to the evaluation of this study. Qualitative data was also collected by utilizing focus group interviews. These focus group interviews were conducted with parents, faculty, and administrators. Purposeful, expert sampling was used for all focus group interviews

which identified individuals that had intimate knowledge of the implementation of the IBLM at SA. The focus group interviews were semi-structured. That is, data gathered from the focus group interviews was analyzed, evaluated, and coded to identify themes and patterns that were valuable in answering the research questions of this study. All interviews and data collection were conducted virtually via Zoom Video Communications<sup>®</sup> platform due to the COVID-19 pandemic in the United States preventing many in-person operations.

Additionally, this problem of practice was complex due to the unique nature of independent schools. There is not a lot of research on independent schools, specifically regarding successful practices of independent schools. SA is an independent school that exists as a non-profit in a tuition-driven model. The school operates based on net-tuition revenue and donations from its constituents. The school needs tuition-paying students and donations to operate, pay its employees, and educate its students. The independent school model is in stark contrast to public schools that are funded by our federal government. Creswell and Creswell (2018) provide a rationale for this type of method when they write, “the researcher converges or merges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem” (p. 15). The quantitative and qualitative data were collected in isolation of each other and were then merged to develop a healthy understanding of the data in relation to this problem of practice (Creswell & Creswell, 2018).

The IBLM program was implemented at SA in the 2015-2016 school year, and there has been no formal evaluation of the program since. This is the first attempt to evaluate the effectiveness of the shift from DI to IBLM. This study hoped to satisfy two major goals:

1. To determine if the IBLM has been an effective instructional method that promotes a student-centered culture that attracts and retains students to the SA community.

2. To provide information and data that may be useful to similar independent schools researching student-centered learning methods.

The examination of the effectiveness of this program will center around three research questions:

1. What is the relationship between IBLM and student achievement scores?
2. What impact has the IBLM had on enrollment and attrition at SA?
3. Has the shift from DI to IBLM resulted in a more student-centered culture?

Quantitative methods were used to provide data regarding student achievement and enrollment data. To obtain information regarding the IBLM's effect on student achievement, ACT scores from the senior classes of 2014 through 2017 were analyzed in this study. This archival data was retrieved from SA's Blackbaud database. Qualitative methods were used to identify perceptions and attitudes regarding the IBLM from SA's key constituent groups. This problem of practice sought to determine the effectiveness of the IBLM at SA through the evaluation of the enrollment data, student achievement scores, as well as constituent perceptions, attitudes, and experiences.

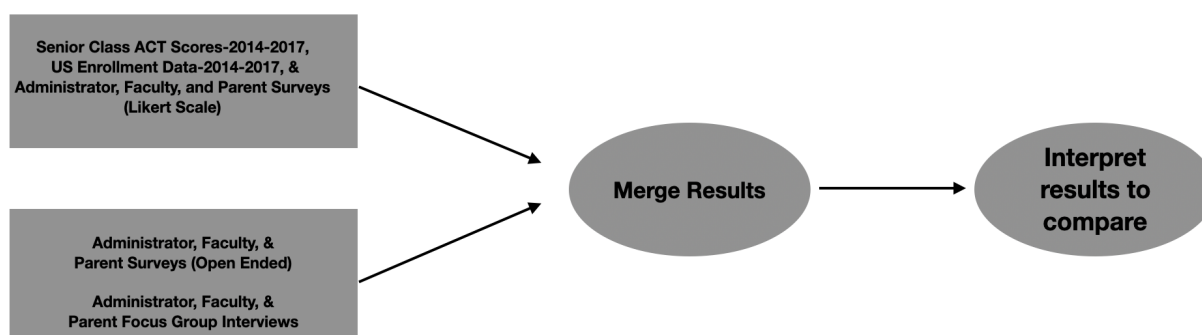
Chapter 3 includes the following: rationale for the study, the context/setting of the problem, research sample and data sources, data collection methods, data analysis methods, trustworthiness, limitations and delimitations, and a summary of the chapter.

### **Rationale**

A convergent mixed-methods approach was utilized in this study. Creswell and Creswell (2018) maintain that a mixed-methods approach can be beneficial "because of its strength of drawing on both qualitative and quantitative research and minimizing the limitations of both approaches" (p. 216). Both quantitative and qualitative data were necessary in this study to create



a complete picture of perceptions and performance during the first four years of the implementation of IBLM at SA. A convergent mixed-methods approach provided a greater understanding of the data to answer the research questions of the study (Creswell & Creswell, 2018). Quantitative and qualitative data analyses were completed separately and merged. Creswell and Creswell (2018) describe this process when they write, “In this single-phase approach, a researcher collects both quantitative and qualitative data, analyzes them separately, and then compares the results to see if the findings confirm or disconfirm each other (p. 217). This process is detailed in Figure 3.



**Figure 3.** *Study Design of Effectiveness of IBLM in an Independent School*

*Note:* Figure adapted from Creswell & Creswell, (2018)

The use of a mixed methods approaches also provided the researcher with an opportunity to triangulate the data collected. Ravitch and Carl (2016) define triangulation as “a set of processes that researchers use to enhance the validity of the study. It is commonly thought of as having different sources or methods to challenge and/or confirm a point or set of interpretations” (p. 195). Triangulation of the quantitative and qualitative data collected in this study also helped address issues of trustworthiness (Bloomberg & Volpe, 2019). The collection of quantitative and qualitative data yielded a deeper understanding of how the IBLM has affected the health of the school, administrator, faculty, and parent experiences, as well as student achievement.

Quantitative data collection included four years of ACT scores and four years of school enrollment data from the years 2014 to 2017. The quantitative data were used to identify trends or themes in ACT scores, enrollment figures, and attrition percentages to measure the IBLM's impact on these measures. SA's enrollment and attrition rates from 2014 to 2017 were obtained from SA's Blackbaud database. Mitchell (2017) defined attrition as "the number of students who leave your school other than by graduation (p. 1). A high attrition rate in a school can be attributed to poor satisfaction with the experience of its constituents (Corbett, & Torres, 2019).

Faculty, administrator, and parent perceptions were collected using a Likert-scale and open-ended surveys. These surveys solicited information regarding general feelings, perceptions, experiences, and attitudes of those who have experienced the IBLM at SA. Surveys were distributed electronically to faculty, administrators, and parents. Both random and purposeful sampling will be utilized. Parents and faculty were selected using stratified random sampling while administrators were selected using purposeful, expert sampling. Surveys were administered using Qualtrics and all survey information will be stored and tracked in the Qualtrics® platform and on the researcher's computer encrypted with a password.

The qualitative data collected was used to identify perceptions, attitudes, and experiences of administrators, faculty, and parents at SA that have experienced the IBLM and shift in the school's educational philosophy. The open-ended narrative feedback portion of the surveys was evaluated, analyzed, and coded. Analyzing and coding this feedback information highlighted themes that were beneficial to the evaluation of this study. Qualitative data also derived from focus group interviews. These focus group interviews were conducted with administrators, faculty, and parents. The focus group interviews were semi-structured. Data gathered from the interviews was analyzed, evaluated, and coded to identify themes and patterns that were valuable

in answering the research questions of the study. All interviews and data collection were conducted virtually via the Zoom Video Communications<sup>®</sup> platform due to the COVID-19 pandemic in the United States causing situational change limiting in-person communication. This problem of practice sought to determine the effectiveness of the IBLM at SA through the evaluation of the enrollment data, student achievement scores, and constituent perceptions, attitudes, and experiences.

### **Problem Context/Setting**

SA is situated in the southeast part of the United States, and it has been in operation since the late 19th century. SA is the oldest private school in its area. In Forbes magazine, SA's surrounding county was listed as one of the wealthiest counties in the nation with a median income of over 100,000 dollars a year (Hubbard, 2017). The county has experienced rapid growth in both population and construction.

SA has historically benefited from a stellar academic reputation in the area, and the school has been viewed as the premier private school in its area for most of its existence. SA's reputation began to wane immediately following the 2008 recession due to concerns regarding a teacher-centered educational environment. Several years ago, SA struggled with negative perceptions regarding a traditional college preparatory educational philosophy that was based around DI. Student experience and parent satisfaction were low, and this was corroborated through negative feedback from school constituencies. This information coincided with declining enrollment in the school when constituents of the school felt an approach focused on DI was very teacher-centered, thus the school began searching for an approach that was more student-centered. The goal was that a more student-centered approach would improve perceptions of the student experience and reverse negative enrollment trends at the school. SA implemented a new

educational philosophy that centers around an IBLM. The IBLM has been implemented with no measurement regarding the effectiveness of this approach. This study looks to address the lack of formal evaluation regarding the implementation of the IBLM at SA. The study looked to measure the effectiveness of the IBLM curriculum at SA through its research questions.

### ***Reevaluation of Private School Education***

SA's role in the area began to change significantly after the 2008 recession hit the area. After the 2008 recession, traditional private school families began to evaluate the benefits of private school education. More than ever, families were looking for a high rate of return for the educational dollars that were being invested in private schools. This mentality has remained constant after the recovery from the recession (Miezkowski, 2010). Despite a tremendous amount of wealth in the area, families are still hesitant to spend their money on private school education without feeling there will be a high rate of return on investment regarding preparation and experience.

### ***Internal Struggles***

During the economic crisis, SA struggled with leadership turnover, concerns regarding the direction of the school, and negative perceptions of the excessive rigor of the academic curriculum and student experience. Correspondingly, additional private school options became available to both current and potential SA families. Furthermore, the area's public school system became the highest-rated system in its state, convincing residents of the county to attend an expensive private school over free, highly rated public schools. This posed a significant challenge of this study being situation in a competitive market. As such, these collective factors contributed to a shift in perceptions, reputation, and enrollment for the school.

Because of the tuition-driven nature of independent schools, the number of families that elect for their children to attend independent schools is critical to the survival of these types of schools (Leaman, 2016). The attrition rate at SA was significantly higher than the rate of its surrounding peer private schools (NAIS DASL, 2020). Along with rising attrition, new inquiries, and admittance to attend the school were down from past admissions cycles, these factors resulted in shrinking enrollment, particularly in the upper school upper school.

### ***Paradigm Shift***

Coupled with the residual impact of the economic crisis, SA's student and community satisfaction took a downward turn at the end of its previous upper school head's tenure. The upper school head had been at the school for 42 years and had a reputation of being rigid regarding the traditional educational and discipline philosophy of the school. The last few years of his tenure were difficult for the school largely due to his refusal to adapt to a significantly changing environment. The school had steadily developed a reputation that was centered around the experience of the teachers as opposed to the experience of its students. Direct instruction was the primary means of content delivery in the classroom and this instructional method was a microcosm of the teacher-centered culture that prevailed. Near the end of 2014, families of 26 8<sup>th</sup>-grade students, soon to be entering 9<sup>th</sup>-grade, decided to leave SA due to the perceived unnecessary rigor of the institution. A change in SA's entire administration coincided with the end of the previous upper school head's tenure. The introduction of a new head of school, upper school head, lower school head, and several key board positions provided the school with an opportunity to move in a new direction. The new administration was charged with implementing a new strategic plan and reimagining the educational experience at SA. As part of this process, the school wanted to shift the paradigm of what education had previously looked like at SA.

Constituents of the school voiced concerns to the new administration through the strategic planning process about the teacher-centered nature of the school. The resulting strategic plan was put in place to address concerns from the community and to build a healthy and sustainable future for the school. The strategic plan placed the IBLM as its centerpiece to develop a more student-centered environment. IBLM has been associated with a high degree of learner agency and student engagement, which fit well with a more student-centered approach (Fan, 2015).

The implementation of the IBLM was the centerpiece of creating a new and engaging student-centered educational experience for current and future SA students. The IBLM has been in place since 2015-16 and the school continues to subscribe to this method of instruction. Four years provided ample time to evaluate the effectiveness of the IBLM model of instruction. This study contributed to the continued evaluation and evolution of education at SA. Furthermore, it provided the first formal evaluation of the program since its implementation.

### **Research Sample and Data Sources**

Multiple sampling strategies were implemented due to the mixed methods nature of this study. Quantitative data included ACT scores and enrollment data. This data was taken from four years' worth of senior classes at roughly 80 to 90 students per class. The total number of ACT scores was 309 senior students. Qualitative data included administrator, faculty, and parent surveys as well as focus group interviews with the same constituent groups. This study provided the opportunity to survey key constituents involved in the IBLM at SA.

#### ***Administrators***

Administrators at SA are the individuals in leadership at SA. This group included the head of school, associate head of school, and possible division heads. The rationale for interviewing this group is that they were able to provide insight into any possible underlying

reasons for the shift to the IBLM curriculum, as well as their perspective regarding the effectiveness of the IBLM at SA from a leadership position. Administrators oversee the implementation and success of the IBLM. This group also determines professional development, resource allocation, and structure that the faculty implements the IBLM in their classrooms, as well as with developing the culture of the school.

### ***Faculty***

Department chairs are the primary faculty that evaluate teaching faculty at SA. They also work with the heads of school and division heads in curriculum formation. This group is charged with the implementation of the IBLM curriculum in their respective academic departments. Department chairs also serve as classroom instructors in a reduced course load. This group is traditionally viewed as the voice of the faculty with the administration.

The teaching faculty at SA is the primary group that implements the IBLM curriculum in their classrooms. This group is composed of department chairs and teaching faculty. Department chairs are the bridge between the administration and the teaching faculty. Department chairs are involved with the administration in decision-making processes in the school, and they also participate and experience delivery of the IBLM in SA classrooms. They are viewed as the top instructors in their given disciplines and lead their respective departments in terms of curriculum implementation. Department chairs work closely with the administration to ensure that the primary teaching faculty is meeting expectations of classroom instruction. This group's perspective provided valuable insight and perspective because of their dual role as leaders in their department and classroom instructors. They understand why the administration supports the IBLM program, and they are skilled educators that are tasked with leading their respective departments in IBLM implementation.

The SA teaching faculty is the largest group of employees in the school and have a large role in developing the teaching and learning culture of the school. The administration at SA guides the culture, but ultimately the teachers are the agents for implementation. The SA faculty is also charged with guiding its students to a high level of success. This group will provide a unique perspective regarding the day-to-day implementation of the IBLM curriculum at SA. Their perspective is the furthest removed from the administration, and this is a group micro-focused on their given subject areas. They truly are experts in their given content areas and have little involvement in the larger strategic vision of the school.

### ***Parents***

Parents are the financial stakeholders and decision-makers regarding their students' attendance at SA. Their perspective is shaped by the information they receive from their children about their child's experience and quality of education at SA. The tuition revenue from their children's attendance drives the operation of the school, and they are the most important stakeholder in determining whether their children choose to attend and remain at SA. Their insight and perceptions provided tangible data regarding the success of the shift to a more student-centered culture with the shift to the IBLM curriculum.

### ***Use of Quantitative Data***

Quantitative data was collected using archival data. The data was pulled from SA's internal Blackbaud database. This school-wide database is used to provide all three school divisions electronic access to administrative computing services that provide school decision-makers accurate, timely, and comprehensive information (TDOE, 2019). Data included ACT scores and enrollment data from the senior classes from 2014 to 2017. The ACT scores of the entire senior class for each year from 2014 to 2017 were used in the descriptive statistics.



### *Use of Qualitative Data*

Purposeful, expert sampling was used for the focus group interviews with administration, faculty, and parents. All interviews and data collection were conducted virtually via the Zoom Video Communications® platform due to the COVID-19 pandemic in the United States. This type of sampling is used to identify individuals that have intimate knowledge of the implementation of the IBLM at SA. Etiken et al. (2016) comment that, “this sort of sampling is useful when the research is expected to take a long time before it provides conclusive results or where there is currently a lack of observational evidence” (p. 3). This quote illustrates that this type of sampling relates well to this study because there has been no formal evaluation of the IBLM at SA since the time of its implementation. The selection process included administrators involved in the decision to shift to an IBLM, department chairs involved in the implementation and evaluation of the faculty, and faculty who have been employed since 2014 to experience the previous educational philosophy and current implementation of the IBLM at SA. Parents who had students that attended the school before the implementation of the IBLM and after its implementation were also selected.

A stratified random sampling was used to select participants. Individuals from the upper school division for administrators and each academic discipline for faculty were selected. Purposeful, expert sampling was used to select parents of students that attended the school prior to the implementation of the IBLM program and after its implementation. IRB (Appendix C) and informed consent (Appendix D) approvals were given before the survey was administered and any data were collected.

## **Ethical Considerations**

Ethical concerns in this study were limited. The researcher did not directly supervise or evaluate anyone who participated in the study. Two of the senior administrators are my superiors and the other division heads are categorized as my peers. The department chairs do not report to the researcher directly, and this eased any anxiety with the process for the researcher and participants. All participation was voluntary and individuals in the study had the option to opt-out of the process completely at any time.

Although the researcher does not directly supervise anyone interviewed or surveyed, he did acknowledge that I had prior relationships with all parties that could possibly influence responses to questions in the data collection process. The intent of the study was transparent and clearly articulated to help alleviate any concerns of the parties involved. Participants remained anonymous and were assured that no identifiable information will be disclosed in the reported information.

## **Data Collection Methods**

Existing achievement scores, student enrollment data, surveys, and interviews were collected during this study. All participants in the study were volunteers, and they had the option to refuse to participate or withdraw from the study at any time.

### ***Student Achievement Scores and Enrollment Data***

Achievement scores and enrollment data were obtained from the school's Blackbaud database. Student information was kept confidential. Only mean scores were reported. All students were assigned a unique number as opposed to an identifiable name in the spreadsheet containing their ACT information. The ACT scores were gathered for each senior class from 2014 through 2017. The enrollment data were collected from 2014 through 2017. Enrollment

information included attrition rates and enrollment numbers for each year previously mentioned. All student achievement scores, and enrollment data were obtained from the Blackbaud databases at SA.

### ***Surveys***

Surveys were administered to administrators and faculty at SA. The survey was 20 questions long and took approximately 10 minutes to complete. The first five questions were demographic information that identified alum status, total years of experience, department, degree level, and years at SA. The next five questions pertained to teacher preparation and implementation of IBLM at SA, and the final 10 questions revolved around administrator and faculty perceptions regarding student engagement of IBLM in SA classrooms. A Likert-scale was implemented for the last 10 questions of the survey. The Likert scale was a five-point scale, with five scored as the maximum agreement and one scored with least agreement (i.e., 5-strongly agree; 4-agree; 3-neutral; 2-disagree; and 1- strongly disagree. Parent surveys were 10 questions in length and took approximately five minutes to complete. The first two questions were demographic information that identified alum status and the number of children at SA. The next three questions pertained to admissions data at SA, and the last five questions revolved around their family's experience at SA. An email was sent to possible survey participants to explain the goal of the survey and the timeframe (Appendix E). Qualtrics<sup>®</sup> was the online platform used to distribute the surveys and collect the data via an email on SA's server. The surveys were anonymous to protect the anonymity of the respondents. These surveys were kept on SA's server encrypted with a passcode.

### ***Focus Group Interviews***

All semi-structured voluntary focus group interviews with administrators, faculty, and parents took place virtually on the Zoom Video Communications<sup>®</sup> platform. All parties had the option to stop the interview at any time, and they were made aware of that option prior to the start of the interview. The interview was conducted in a private location to avoid being disturbed. The interview focused on 20 questions and was approximately 60 minutes in length. The interview attempted to ascertain perceptions regarding the shift from DI to IBLM at SA, perceptions regarding IBLM at SA, student-centered education, and potential recommendations of growth for IBLM at SA. A Sony ICD PX333 digital voice recorder device was used for all interviews, and a transcript was created for each interview. All interview recordings will be stored on the recording device and locked in a cabinet in the researcher's office. The transcripts of the interviews are stored on a hard drive and the hard drive is locked in a cabinet in the researcher's office. The audio recordings are stored on the researchers recording device and the device is locked in a cabinet in the researcher's office. These artifacts will be stored and secured for the amount of time required by the University of Arkansas after the completion of the study. There were no markers to identify the participants, aliases were used, and all information was encrypted on SA's servers. The transcripts of the interviews were coded to identify emerging themes.

### **Data Analysis Methods**

#### ***Use of Quantitative Data***

Quantitative data were collected using archival data. The data were pulled from SA's Blackbaud database. This school-wide database was used to provide all three school divisions electronic access to administrative computing services that provide school decision-makers

accurate, timely, and comprehensive information (TDOE, 2019). Data included ACT scores from the senior class from 2014 to 2017 and enrollment data from 2014 to 2017. The ACT scores of the entire senior class for each year from 2014 to 2017 were used in the descriptive statistics.

The quantitative data collected were from SA's archival testing and enrollment data on the school's Blackbaud server. The collected data were extracted and imported into Microsoft Excel<sup>®</sup>. The data were collected, evaluated, and merged with the qualitative data. A one-way ANOVA was conducted to determine if there was a difference in ACT scores from 2014 to 2017. These four years were during a time of transition from DI to IBLM. The independent variable, the year tested, included four years: 2014, 2015, 2016, and 2017. The dependent variable was the ACT scores. The study's data satisfies the three assumptions of independent observations, normal population distribution, and the same variances. Levene's Test (1960) was used to determine if the population variance for the four years were equal. Because the overall F-test was significant, follow-up tests were conducted to evaluate the differences among the means. A Tukey Honestly Significant Difference (HSD) test was run to see if there were statistically significant differences between the two means.

The qualitative data from the focus group interview transcripts were coded. The process followed in coding was a three-step process. The initial round of coding looked for patterns, the second round of coding took those patterns to determine categories, and the third round of coding helped develop theories and developed emerging themes regarding the data collected (Saldana, 2016). The focus group interviews were triangulated with the survey responses to provide narrative context to the data collection process. Open-ended responses from the surveys were triangulated as well. The goal of this method was to establish trustworthiness in the study and to

look for consistency and inconsistencies between survey responses and focus group interview responses.

### **Trustworthiness**

Permission and access were the first ethical concerns that needed to be addressed prior to the start of the study. I obtained permission to conduct the study from both SA and the Institutional Review Board (IRB) of The University of Arkansas. All participants in the study were voluntary without coercion. Individuals interviewed were individuals who supervise the researcher, who are considered at an equal level in terms of hierarchy or are not directly supervised by the researcher. Anyone who did not wish to participate was given the opportunity to decline. There was no fear of retribution because the researcher does not interact or supervise the interviewees. The head of school was extremely supportive of the study for evaluative purposes, and he communicated his comfort with all possible faculty subjects. Transparency was apparent through the candid disclosure of the purpose of the study to all participants. All data and information were stored appropriately and encrypted with a password on SA's server to protect the privacy of all participants involved. Participants were assigned aliases as an added layer of privacy and protection.

The validity of this study was challenged by two threats. The first was the researcher's own personal bias toward the quality of education at SA. The researcher believes SA provides an excellent education, and, in the same likeness, also believes the school to be one of the best in the area. As such, the researcher had to look at the school through a critical lens to collect impartial data in the research process. Triangulation of the quantitative and qualitative data were another way in which trustworthiness was established. With this, the researcher hoped to mitigate any biases by collecting both quantitative and qualitative data to develop a well-rounded

understanding of the educational experience at SA. Convergent mixed methods studies lend themselves to data triangulation. Creswell and Creswell (2018) write, “The key assumption of this approach that both qualitative and quantitative data provide different types of information-- often detailed views of participants qualitatively and scores on instruments quantitatively-- and together they yield results that should be the same” (p. 217). Gathering as much information available, both quantitative and qualitative, was key to developing validity in this study. The qualitative portion of the study helped provide insight and narrative to the quantitative measures taken. The second threat in the study was the possible differences in sample sizes from the quantitative to the qualitative data collected. Creswell and Creswell (2018) write, “Another data collection issue is the sample size for both the qualitative and quantitative data collection process. Unquestionably, the data for the qualitative data will be smaller than that for the quantitative data collection” (p. 219). The survey responses were larger than the focus group interviews conducted. The researcher did not attribute this as an impassable barrier to overcome. Instead, he believed the qualitative data collected provided a narrative to the quantitative data. Creswell and Creswell (2018) described this perspective as follows:

One other approach taken by some mixed methods researchers is not to consider the unequal sample sizes a problem. They would argue that the intent of qualitative and quantitative research differs (one to gain an in-depth perspective and the other, to generalize a population) and that each provides an adequate count. (p. 219)

Member checks were another method that was implemented to develop trust and rapport with those that participated in the interview process. Regular check-ins were used to give participants the opportunity to review any work and ensure that the researcher represented participants' views appropriately and accurately. Ravitch and Carl (2016) write, “Member checks are often discussed as an important validity measure to establish credibility” and this was crucial to developing trustworthiness in this study (p. 197).

## **Limitations and Delimitations**

During this study, the researcher operated as both an insider in some respects and as an outsider in other respects. The researcher operated, in part, as an insider, through his employment at the institution as well as being a member of the schools' senior administration team. Through this, the researcher participates in monthly meetings that discuss the IBLM program. Although the researcher has an insider position in regard to employment at the school, he is also in capacity as an outsider, specifically regarding the implementation and evaluation of the IBLM academic program due to differing role assignment(s). That is, the researcher was not directly involved in the implementation of the program, teaching classes using the IBLM method, or directly supervising or evaluating anyone involved in the IBLM at SA. Understanding his focal position in this study allowed for cognizant reflection of any potential biases or limitations experienced by the researcher. These served as safeguards to protect the integrity of the study and remove any personal biases or dire limitations.

Conversely, one limitation of the study was the size and nature of the school. It is a small independent school causing the sample size to, respectfully, be small as well. There are 358 students in SA's upper school US, and testing data was only taken from the senior classes of 2014 to 2017 for a total of 309 students.

The second limitation involved the COVID-19 pandemic. The COVID-19 pandemic presented a challenge in the qualitative data collection stage of the study. 83 of 300 SA families responded to the survey, but that was below the desired response rate of 100 families. The number of families who were eligible to receive the survey was purposely lowered to ensure only families who had experience before and after the IBLM were surveyed. 19 of 55 faculty members responded to the survey which was also lower than expected. The COVID-19



pandemic has presented unprecedented challenges to all, and the researcher believes survey responses became secondary to some other daily challenges presented to parents and faculty by the pandemic. Because of the small sample size, there was a chance the data was not completely representative of the perceptions of each constituency group.

A third limitation was the sample size for the quantitative and qualitative data collected. The focus groups were purposely limited to individuals who had knowledge of the school before and after the implementation of IBLM at SA. This sample size also runs the risk of not being representative of the perceptions of each constituency group. Creswell and Creswell (2018) write, “Another data collection issue is the sample size for both the qualitative and quantitative data collection process. Unquestionably, the data for the qualitative data will be smaller than that for the quantitative data collection” (p. 219). The survey responses were much larger than the focus group interviews conducted. The researcher believes the qualitative data provided a narrative to the quantitative data, therefore, did not pose an impassable barrier. Creswell and Creswell (2018) describe this perspective as follows,

One other approach taken by some mixed methods researchers is not to consider the unequal sample sizes a problem. They would argue that the intent of qualitative and quantitative research differs (one to gain an in-depth perspective and the other, to generalize a population) and that each provides an adequate count. (p. 219)

Finally, a fourth limitation of the study was the lack of research available on independent schools. The literature review was limited regarding specific research about independent schools. Efforts were made to find literature that supported the study while working around this limitation. One of the goals of this study was to provide more research information about independent schools.

The procedures implemented to provide trustworthiness to this study ensured the information collected from the survey and interview participants provided meaningful results. Triangulation of the quantitative and qualitative data is one way in which trustworthiness was established. Convergent mixed methods studies lend themselves to data triangulation. Creswell and Creswell (2018) wrote, “The key assumption of this approach that both qualitative and quantitative data provide different types of information—often detailed views of participants qualitatively and scores on instruments quantitatively—and together they yield results that should be the same” (p. 217). Gathering a plethora of available information, both quantitative and qualitative, was key to developing validity for this study. The qualitative portion of the study provided insight and narrative to the quantitative measures taken.

Member checks were another method that was implemented to develop trust and rapport with those that participated in the interview process. Regular check-ins were used to give participants the opportunity to review my work and ensure that I am representing their views appropriately was crucial to developing trustworthiness for this study. Ravitch and Carl (2016) write, “Member checks are often discussed as an important validity measure to establish credibility”, such as peer debriefings, prolonged engagement, audit trail, triangulation, and others (p. 197).

Delimitations of the study include the decision to only look at one independent school that is utilizing an IBLM methodology, intentionally limiting the survey participant numbers, and intentionally limiting the size of the focus group interview participants.

### **Chapter Summary**

The purpose of this study was to examine the effectiveness of an IBLM in an independent school environment. Specifically, this study examined the effectiveness of the IBLM

implemented at SA. The three research questions are reiterated below. The data that were used to illuminate each research question is listed after each of the research questions.

1. What is the relationship between IBLM and student achievement scores?
  - Quantitative ACT scores retrieved from archival data from the SA Blackbaud database will be used to investigate the relationship between the implementation of the IBLM and student achievement.
2. What effect has the IBLM had on enrollment and attrition at SA?
  - Quantitative archival data from the SA Blackbaud database will be used to investigate enrollment trends since the implementation of the IBLM. Qualitative parent focus group interviews were also used to provide narrative context.
3. Has the shift from DI to IBLM resulted in a more student-centered culture?
  - Survey data will provide valuable information, but the qualitative interview data will provide greater context and should illuminate the general feelings toward the learning culture at SA to answer this research question.

Chapter three proposed the methodology used to investigate the effectiveness of an IBLM in an independent school. The content of this chapter included the rationale for the study, the context/setting of the problem, research sample and data sources, data collection methods, data analysis methods, trustworthiness, and limitations and delimitations of the study.

## Chapter Four: Results

### Introduction

Chapter Four reviews the purpose of the study, the research questions, and the overall design of the study, and presents the quantitative and qualitative data results of the study. The first part of this chapter will reintroduce the primary purpose of the problem of practice for this study. The second part of the chapter will share the results of the study, including school demographic information, a detailed description of the participants in the study, quantitative and qualitative results, and a summary of the findings in this mixed-methods study involving a total of eighty-three families.

### Review of Study

The purpose of this mixed methods study was to examine the effectiveness of an IBLM in an independent school environment. Uno (1990) describes the IBLM as:

A method of instruction in which students are led to an understanding of concepts for themselves and the responsibility for learning rests with them. The teacher acts as a catalyst, directing student interactions, activities, and discussion rather than bearing all information. (p. 841)

Specifically, this study examined the effectiveness of the IBLM implemented at SA. The roots of the IBLM program began in the 2014-2015 school year with a reorganized focus toward a more student-centered culture. The IBLM is the educational vehicle SA used to implement a more student-centered environment at the school. The IBLM program was formally implemented at SA in the 2015-2016 school year, and there has been no formal evaluation of the program since its inception. This study is the first attempt to evaluate the effectiveness of the school's shift from primarily DI to IBLM. This study hoped to satisfy two major goals:

1. To determine if the IBLM has been an effective instructional method that promotes a student-centered culture that attracts and retains students to the SA community.

2. To provide information and data that may be useful to similar independent schools researching student-centered learning methods.

The examination of the effectiveness of this program centered around three research questions:

1. What is the relationship between IBLM and student achievement scores?
2. What impact has the IBLM had on enrollment and attrition at SA
3. Has the shift from DI to IBLM resulted in a more student-centered culture?

The research questions of this study attempted to examine the relationship of the IBLM and its impact on the development of an attractive, student-centered culture at SA.

### **Summary of Research Design**

A convergent mixed-methods design was used due to the complex nature of this problem of practice. A convergent mixed methods approach allowed the researcher to collect qualitative and quantitative data simultaneously with the primary intent of analyzing the data separately and then using the data from both these sources to interpret the results (Creswell & Plano-Clark, 2011). More specifically, Tashakkori and Creswell (2007) define the convergent mixed methods design approach as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both quantitative and qualitative approaches” (p. 4).

Quantitative data used to inform this study were archival ACT scores from the 2013-2014 school year to the 2016-2017 school year. Archival school enrollment data from 2014-2017 were also used to evaluate student achievement scores and school enrollment data before and after the shift to the IBLM program. The design of this study allowed for the surveying of SA parents, faculty, and administrators. Parents were surveyed regarding the IBLM, student-centered culture, differentiating factors of the academic program, and satisfaction with the school. Faculty and

administrators were surveyed regarding their perceptions of the IBLM, professional development program(s), teacher experience, and student experience. Follow-up interviews were conducted with parents, faculty, and administrators based on predetermined demographic criteria. Four parents, five faculty members, and four administrators were interviewed in focus group format via the Zoom Video Communications<sup>®</sup> platform. The qualitative data gained from the focus groups was used to solidify the findings found simultaneously from the results of the quantitative data collection method.

The purpose of this chapter is to provide the analyses of student achievement scores, school enrollment information, and the results of the surveys and interviews. Demographic information about the school is shared first to provide context. Quantitative data are shared next and are followed by qualitative data. In accordance with a convergent mixed methods design, the final findings were merged with the quantitative and qualitative data together to inform the study.

## **Findings**

### ***Background Information***

SA is a private, independent school in the southeastern part of the United States. SA is an above-average sized K-12 independent school in comparison to the National Association of Independent Schools (NAIS) member school statistics (NAIS, 2019). Student enrollment numbers and attrition rates are important indicators of the overall fiscal health of a school. Fiscal indicators are especially important for independent schools, which generally operate as non-profit organizations, to find paths to sustainability (Leaman, 2016). SA's perception and enrollment issues revolved primarily around the upper school (US) division. The US division consists of grades nine through 12. This problem of practice centered specifically on the US for

this reason. The US is the division that was the main source of student attrition for the school. A comparison of SA's 2013-2014 US enrollment and NAIS Member School median statistics are detailed in the Table 2.

**Table 2**  
*2013-2014 SA vs 2013-2014 NAIS Demographic Information*

Demographic Information	Seisan Academy	NAIS Member Schools Median
School Enrollment	806	406
Student Attrition Rate	8.6%	7.9%

The US at SA was the division at SA that was experiencing the highest rate of attrition in the three divisions of the school. The US experienced an abnormally high attrition rate of 11% during the 2013-2014 school year. Total school enrollment and US enrollment will be detailed in this chapter. With the US's high attrition rate, it was important to investigate these enrollment figures separately to accurately evaluate trends and changes in that specific division and in the school. SA's shift from a teacher-centered DI environment to a student-centered IBLM environment is part of the school's response to enrollment challenges brought about by negative perception of the US experience. Student retention is a centerpiece to financial sustainability in independent schools. Table 3 details the enrollment and attrition rate at SA during the 2013-2014 school year.

**Table 3**  
*2013-2014 SA US Enrollment & Attrition Data*

Demographic Information	SA
US Enrollment	323
Attrition Rate	11%

In regard to SA's US faculty, the US faculty experienced a large turnover rate the first year the philosophy of the IBLM program began to take root in the school. The US faculty turnover for the period of this study is detailed in Table 4.

**Table 4**  
*US Faculty Turnover 2013-2014 to 2016-2017*

School Year	N	Retention Rate
2013-14	47	100%
2014-15	28	59%
2015-16	28	59%
2016-17	28	59%

There was significant staff turnover the year the long-tenured US head retired and a philosophical change in instructional delivery occurred. The school shifted toward a more student-centered environment with IBLM as the centerpiece of the teaching and learning philosophy. Additionally, the faculty that remained after the 2013-2014 school year continued to work at SA for the remainder of this study.

This background information is crucial to understand independent school demographics, SA's position within those demographics, and the state of the faculty turnover at the school. SA's high US attrition rate relative to other NAIS independent schools would be of concern to similar independent school leadership regarding sustainability (Leaman, 2016). The US faculty turnover after the 2013-2014 school year may also suggest a school in transition as it was working to resolve negative perceptions and enrollment issues. The following section includes the quantitative results of student achievement scores, enrollment, student retention, student attrition trends, and the analysis of Likert score data from faculty and administrator surveys.



## Quantitative Data Results

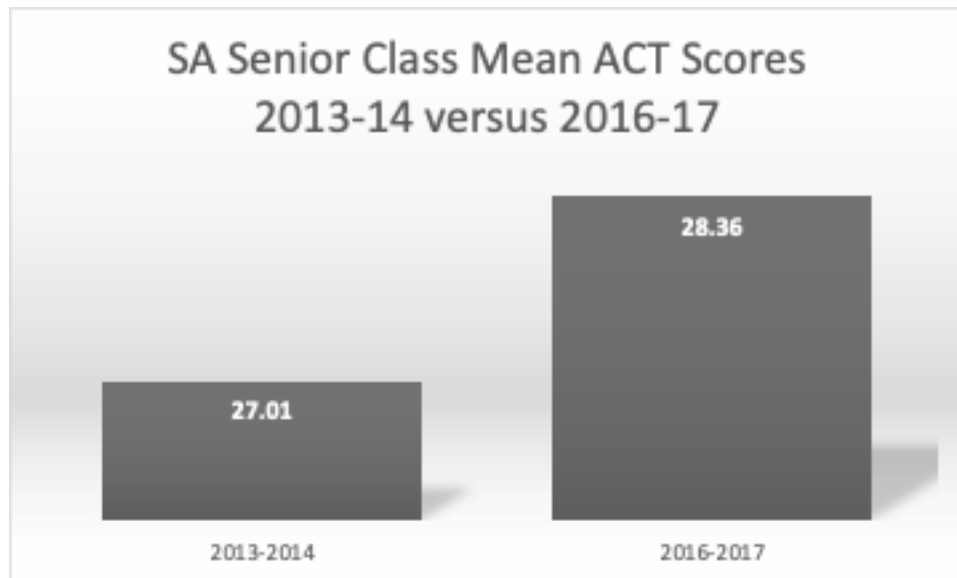
### *Student Achievement Score Results*

Research question one is centered around the relationship between IBLM and student achievement scores. To answer this research question, quantitative data was gathered by evaluating the ACT scores from four different SA senior classes. The ACT as a student achievement score is a benchmark of student academic success, in public and independent schools. Tennessee public schools had an average ACT score of 20 in 2019 and expect to have an average ACT score of 21 in the near future (TDOE, 2020). The county school system that is in direct competition with SA posted a 25.3 as an average ACT score for 2019 (Tennessean, 2019). Independent schools market high ACT scores as an advantage of private, independent school education. SA's mean ACT score consistently outperforms the state average, as well as the local competing school system. With SA's shift to a more student-centered culture IBLM sought to improve the experience of its students while maintaining a high academic standard. ACT scores are one of the measurable components used to evaluate independent schools, so it was important to understand how the shift to IBLM has impacted ACT test scores at SA.

**Table 5**  
*SA Mean ACT Scores and Standard Deviation*

School Year	<i>M</i>	<i>SD</i>
2013-2014	27.01	4.28
2014-2015	26.68	4.08
2015-2016	27.97	4.09
2016-2017	28.36	4.14

From the years 2014 through 2017, the mean ACT growth is 1.35 points from 27.01 to 28.36.



**Figure 4.**

*Note:* Data are from the SA School Database

A four-year longitudinal study was conducted with a total of 309 participants in the four senior classes at SA. Six participants did not indicate an ACT score during this time and were not included in the study. Post hoc two-sample *t*-tests were conducted to compare the years of 2014 and 2015, 2014 and 2016, and 2014 and 2017, 2015 and 2017, and 2016 and 2017 to determine which years had significant differences between participants of the senior classes as indicated by these selected years. The ACT scores of 152 participants were used to determine whether significant differences existed between participants from the senior class of 2014 and 2015 via the *t*-test. The ACT scores of 154 participants were used to determine whether significant differences exist between participants from the senior class of 2014 and 2016 via the *t*-test. The ACT scores of 163 participants were used to determine whether significant differences exist between participants from the senior class of 2014 and 2017 via the *t*-test.

## Results

### *Research Question 1*

#### **What is the relationship between IBLM and student achievement scores?**

This study examined the effectiveness of an IBLM in an independent school environment. Research Question 1 asked about the relationship between IBLM and student achievement scores? The descriptive statistics of the ACT scores for the senior classes from 2014 to 2017 can be seen in table 6.

**Table 6**  
*Summary of ACT*

Groups	<i>N</i>	<i>M</i>	<i>SD</i>
2014 ACT	79	27.01	4.31
2015 ACT	75	26.68	4.10
2016 ACT	72	27.97	4.12
2017 ACT	83	28.36	4.08

*Note.*  $N = 309$

Additionally, a one-way Analysis of Variance (ANOVA) was conducted to determine if there was a significant difference among student ACT scores from the period of 2014 to 2017. These four years were during a time of transition from DI to IBLM. The independent variable, the year tested, included four years: 2014, 2015, 2016, and 2017. The dependent variable were the ACT scores. The study's data satisfied the three assumptions of independent observations, normal population distribution, and the same variances. Levene's Test (1960) was used to determine if the population variance for the four years were equal. In this case,  $p > .05$  and the population variances were assumed equal. The ANOVA was significant,  $F(3, 305) = 2.84, p = .04$ . The strength of the relationship between the year the ACT score was earned and the ACT

score, as assessed by  $\eta^2$ , was small, with the year the ACT score was earned accounting for 2.72% of the variance of the dependent variable.

Because the overall F-test was significant, follow-up tests were conducted to evaluate the differences among the means. A Tukey Honestly Significant Difference (HSD) test was run to see if there were statistically significant differences between the two means. The HSD is a post hoc analysis test that is used after a researcher comes to the conclusion the overall ANOVA test is significant (Abbott, 2011).

Abbott (2011) writes,

In essence, the HSD is a critical value of exclusion because it is based on a set of probabilities that define extreme values on a distribution that takes into account the degrees of freedom in the overall study and the number of groups in the analysis. Thus, we use a formula to determine the value beyond which the paired group differences in the study would be considered extreme. (p. 273)

Post hoc comparisons using the Tukey HSD test indicated that the mean score for the 2017 ACT scores ( $M=28.36$ ,  $SD = 4.08$ ) was significantly different to 2015 ( $M = 26.68$ ,  $SD = 4.10$ ). However, there were no additional years that indicated significant differences. Specifically, the results suggest that while the mean ACT scores were different for 2014, 2015, 2016, and 2017 the only group that showed a significant difference was the comparison of student's ACT scores between 2015 and 2017.

The results of this study were mixed regarding significance. The ANOVA test indicated a significant difference between the ACT scores of the senior classes from 2014 to 2017. Post hoc tests were administered to determine where the significance existed between those years. The Tukey HSD test applied to this study indicated there was not a significant difference between the ACT performance of the senior classes of 2014 and 2015, 2014 and 2016, 2014 and 2017, 2015

and 2016, and 2016 and 2017. The Tukey HSD found there was a significant difference between the years 2015 and 2017.

### ***Research Question 2***

#### **What impact has the IBLM had on enrollment and attrition at SA?**

Research Question 2 asked what impact has the IBLM had on enrollment and attrition at SA? Table 7 illustrates SA Enrollment Trend Results from 2014 to 2017.

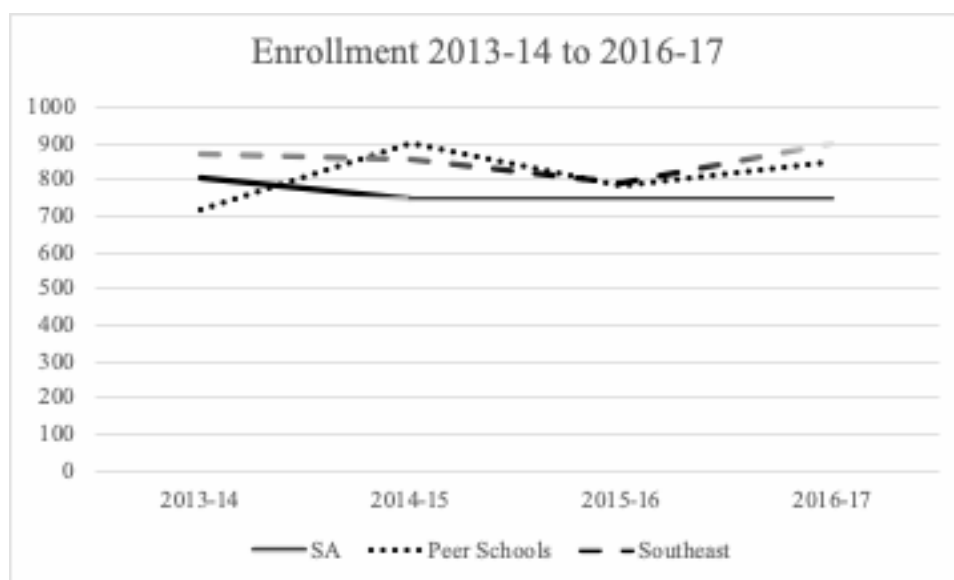
**Table 7**

*Total Opening Day School Enrollment for 2013-14 to 2016-17*

Grade	13-14	14-15	15-16	16-17
K	30	24	18	35
1	35	38	26	21
2	37	37	32	26
3	40	37	38	36
4	35	43	39	42
5	64	39	42	42
6	69	67	56	50
7	83	66	73	58
8	90	81	76	76
9	86	89	92	89
10	77	83	94	96
11	80	76	83	94
12	80	77	77	85
Total	806	747	746	750

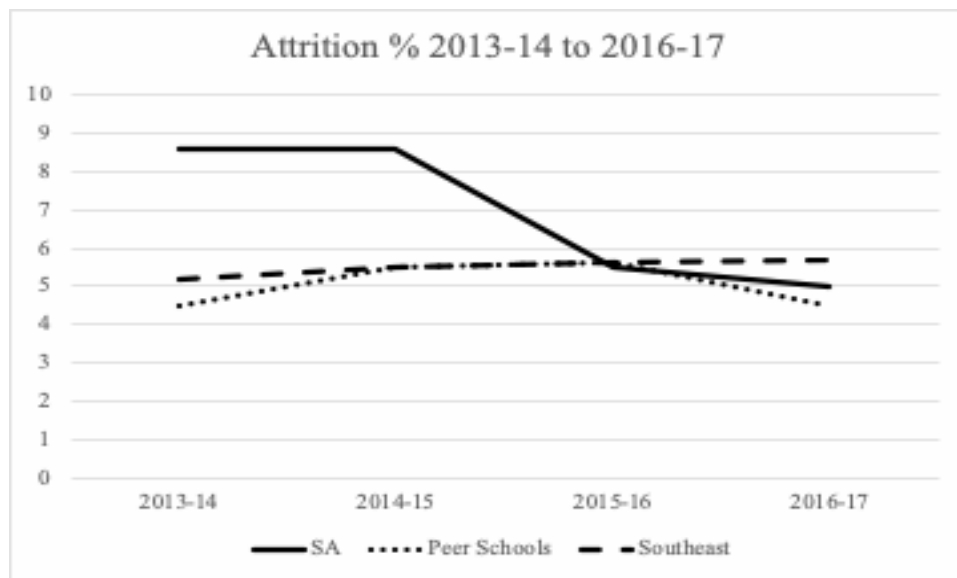
SA's total school enrollment experienced a decline after the 2013-2014 school year. Total school enrollment for 2013-14 through 2016-17 school years are detailed in Table 8. There is a

significant drop from the 2013-2014 school year with a decline in student enrollment of 59 students in the US in the 2013-14 school year. Since this initial drop, enrollment has stayed consistent. To illustrate the stabilization pattern, the school only lost one student from the 2014-15 to 2015-16 school year, and it added four students from 2015-16 to 2016-17.



**Figure 5.** SA Enrollment Trends Compared to Peer Schools in the Area and the Southeast  
*Note:* The data in the chart is from the NAIS DASL database.

Figure 5 shows how SA compared to other NAIS schools in the southeast, and peer schools in the area during this same time period. The most significant drop for southeast independent schools occurred during the 2015-16 school year. The 2016-17 school year saw a large increase for southeast schools with an increase from a mean of 794 students to a mean of 901 students. Peer schools in the area experienced their most significant mean jump in the 2014-15 school year with an increased mean of 798 to 899. In comparison, SA experienced a significant drop after the 2013-2014 school year, and enrollment remained relatively stable through the 2016-17 school year.



**Figure 6.** *Attrition Percentages 2013-14 to 2016-17*

*Note:* The data in the chart is from the NAIS DASL database.

Figure 6 details student attrition for NAIS schools in the southeast, peer schools in the area, and SA for the 2013-14 school year through the 2016-17 school year. Mitchell (2017) defined attrition as “the number of students who leave your school other than by graduation” (p. 1). The target attrition set by the board of trust for SA is 5%. This is the attrition marker the board of trust and head of school feel positions the school to continue to grow from an enrollment standpoint.

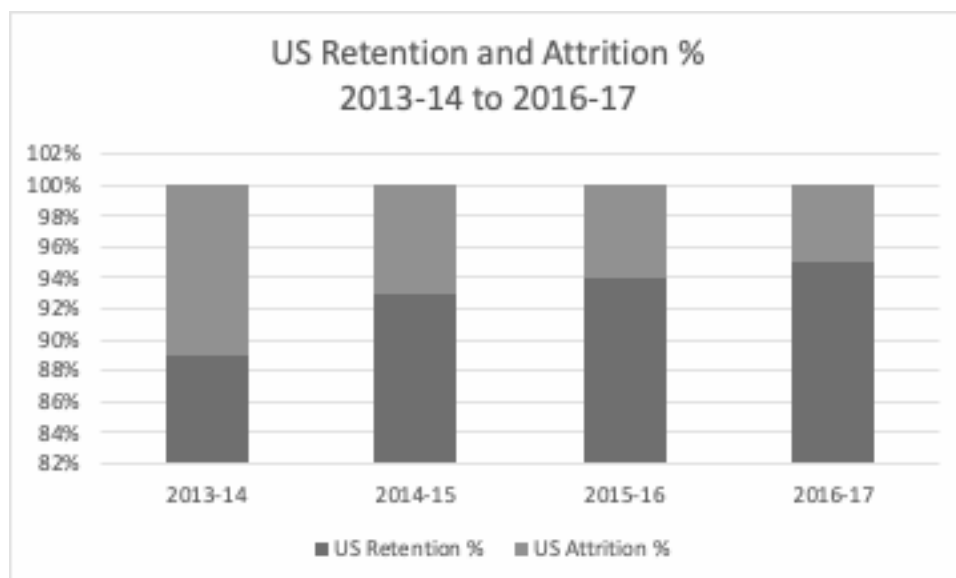
**Table 8**  
*SA US Class by Class Enrollment, Retention, and Attrition Data*

Class	13-14		R%		14-15		R%		15-16		R%		16-17		R%	
9 <sup>th</sup>	80	67	84	92	75	82	82	75	91	76	70	92				
10 <sup>th</sup>	84	73	87	82	77	94	89	83	93	92	87	95				
11 <sup>th</sup>	91	78	86	76	74	97	84	79	94	96	91	95				
12 <sup>th</sup>	76	75	99	77	76	99	76	75	99	86	85	99				
Total	331	293	89	327	302	93	331	312	94	350	330	95				
Attrition%			11				7				6				5	

*Note:* Data are from the SA School Database.

In 2013-14, SA's US was the division with the highest percentage of attrition compared to the middle and lower school. This high rate led the researcher to investigate the attrition trends of the US more specifically for this study. Table 8 presents enrollment, retention, and attrition data for the time of 2013-14 to 2016-17. During the 2013-14 school year, the total school attrition rate was 8.6% compared to an 11% attrition rate specifically for the US. In 2014-15, the total school attrition rate was 8.6% compared to 7% for the US. In 2015-16, the total school attrition rate was 5.5% compared to 6% for the US. In 2016-17, the total school attrition rate was 5% while the US attrition rate was also at 5%. The highest grades for attrition are the 9th and 10th-grade years. In 2013-14, 9th-grade attrition was 17% and 10th-grade attrition was 13%. In 2013-14, the 11th-grade class had an attrition rate of 14%, the only year the 11th-grade class had an attrition rate in double digits. In the 2014-15 school year, the 9th-grade attrition rate was 18%. The 10th-grade attrition rate was reduced to 6% for this year. The 9th-grade attrition rate for 2015-16 was 9%, and the 10th-grade attrition rate climbed to 7%. For the 2016-17 school year, the 9th grade had an attrition rate of 8%, while the 10th-grade attrition rate was 5%.





**Figure 7.**

*Note:* Data are from the SA School Database.

Figure 7 details SA's US retention and attrition rates for the 2013-14 school year to the 2016-2017 school year. The US's retention rate increased from 88% to 95% during these four-years. Additionally, the school's attrition rate decreased from 11% to 5%

**Table 9**

*SA US Enrollment 2013-2014 to 2016-2017*

School Year	2013-2014	2014-2015	2015-2016	2016-2017	Total Student Increase Since 2013-2014
US Enrollment	323	325	346	364	
Additional Students		2	21	18	41

*Note:* Data are from the SA School Database.

Table 9 shows the individual student growth for the US division for the school years 2013-14 through 2016-17. The US grew its enrollment by 41 during this time.

#### Faculty Likert Scale Survey Results

A faculty survey was sent to all certified staff. There were 19 respondents out of the 55-faculty surveyed. The response rate for the faculty survey was 34.5%. Faculty and administrator

demographic data was collected from the first five questions on the survey. Question one asked the respondents to identify whether they were an alum of the school. Eighteen respondents were not alums of the school while one respondent identified as an alum of the school. Next, survey question two asked respondents how many years of experience they had in education and question five asked how many years of experience they had at SA. The mean years of experience in education for respondents were 19, while the mean years of experience for respondents at SA was nine. Question three asked the faculty what department they worked in at SA. Nine different areas of the school were represented by the 19 different survey respondents. Table 10 details the different departments represented and the percentage of respondents of each category.

**Table 10**  
*School Department*

Department	<i>n</i>	Faculty Respondent %
Administration	4	21
College Counseling	1	5
English	3	15.5
Entrepreneurial Leadership	2	11
Fine Arts	1	5
Math	2	11
Science	3	15.5
Social Studies	1	5
Wellness	2	11

*Note:* N=19

The distribution was relatively evenly distributed with administrators comprising the largest single group of respondents. College counseling, fine arts, and social studies were each represented by one respondent to account for five percent of the responses individually. These

three areas accounted for 15% of the total respondents represented. All departments of the school with knowledge of the IBLM program were represented in the responses.

**Table 11**  
*Faculty and Administrator Education Level*

Highest Degree Level	<i>n</i>	<i>%</i>
Bachelors	3	15.8
Masters	14	73.7
Doctorate	2	10.5

*Note:* N=19

Question four asked the respondents to list their highest degree level. Table 11 details the breakdown of the respondents, the number of responses for each area, and the percentage of the corresponding responses associated with each degree level.

Questions six through 16 were Likert scale questions. Respondents were asked to rate their responses on a scale of maximum agreement to least agreement (i.e., 1-strongly disagree, 2-disagree, 3- neutral, 4- agree, and 5- strongly agree). Table 12 details the breakdown of the responses in each Likert scale category by percentages.

**Table 12**  
*Faculty Survey Respondent %*

Question	Strongly Agree %	Agree %	Neutral %	Disagree %	Strongly Disagree %
6	47.8	39.1	13	0	0
7	52.2	43.5	4.3	0	0
8	26.1	60.9	8.7	4.1	0
9	8.7	56.5	21.7	8.7	4.3
10	8.7	56.5	21.7	8.7	4.3
11	39.1	52.2	8.7	0	0
12	26.1	47.8	26.1	0	0
13	47.8	47.8	4.3	0	0
14	60.9	26.1	13	0	0
15	17.4	21.7	56.5	4.3	0
16	8.7	34.8	52.2	4.3	0

Question six centered on whether faculty members felt support in their professional development endeavors. The mean score of the question was 4.3 which lies between agree and strongly agree. 86.9% of the respondents answered they strongly agree or agree that they feel supported in their professional development endeavors. 39.1% of respondents answered agree with no one disagreeing or strongly disagreeing.

Question seven asked respondents whether they felt the IBLM facilitates a student-centered learning culture. The mean response for this question was 4.5 which leans toward a strong agreement. To varying degrees, 95.7% of respondents agreed regarding the IBLM facilitating a student-centered learning culture. 4.3% of respondents were neutral in their responses.

Question eight asked respondents their feelings toward whether students enjoy IBLM activities. The mean response for this question was 4.1 which leans toward agreement. In total, 87% of survey respondents expressed some form of agreement in students' enjoyment of IBLM activities. 8.7% of the responses expressed neutrality. 4.3% of respondents did not agree that students enjoyed IBLM activities.

Question nine asked respondents their feelings regarding students' enjoyment of lecture-based activities. The mean score for this question was 2.7 which leans toward neutrality. Of the faculty responses 78.2 expressed agreement with students' enjoyment of lecture-based activities. 21.7% of respondents were neutral in their responses. Of the respondents 13% of respondents disagreed or strongly disagree that students enjoy lecture-based activities.

Question 10 asked the faculty their feelings toward fidelity with the IBLM at the school. The question asked if respondents felt the IBLM is being implemented at a high level in the school's classrooms. The mean response to this question was 3.6. This places the mean response somewhere between neutral and agree with a slight lean toward agreement. 56.5% of respondents agreed that IBLM is being implemented at a high level in SA classrooms. 21.7% of respondents were neutral in their responses. 8.7% of respondents strongly agreed the IBLM is being implemented with fidelity. 8.7% of respondents disagreed with the question, and 4.3% of respondents strongly disagreed the IBLM is being implemented at a high level.

Question 11 asked respondents if they feel the IBLM places the student at the center of their own learning experience. The mean response to this question was 4.3. This positions the mean score in agreement with students being at the center of their own learning experience. 91.3% of respondents are either in the agree or strongly agree category of responses. 8.7% of the respondents were neutral in this question.

Question 12 asked if IBLM is implemented regularly in the faculty classroom specifically. The mean response was 4 on this question. The mean response falls into the agree category on the Likert scale. 73.9% of respondents fell into the agree or strongly agree categories. 26.1% of respondents answered they were neutral to the question.

Question 13 from the survey asks if the respondent feels if the IBLM is a productive teaching and learning style. The mean response for this question was 4.43 which falls almost halfway between agree and strongly agree. 95.6% of respondents fell into the agree or strongly agree categories. 4.3% of respondents answer neutrally to the question.

Question 14 asks respondents if they feel IBLM contributes to the development of 21st-century learners. The mean of this question was 4.47 which falls almost midway between the agree and strongly agree categories. Of the respondents, 87% fell into the agree or strongly agree category of answers. 13% of respondents answered they were neutral to the question.

Question 15 asked faculty if they feel their students understand the concept of IBLM. The mean of the responses to the question was 3.5. The mean falls directly between the neutral and agree categories of responses. 56.5% of respondents answered they were neutral on the question. 21.7% agreed students understand the concept of IBLM. 17.4% of respondents replied they strongly agreed that the students understand the concept of IBLM. Of respondents 39.1% either agreed or strongly agreed students understand the concept of IBLM. 4.3% of respondents disagreed regarding the notion that students understand the concept of IBLM.

Question 16 asked if students take initiative to direct their own learning in this school's classrooms. The mean response to the questions was 3.47 which falls between the neutral and agree categories. 43.5% of respondents either agreed or strongly agreed students take initiative to

direct their own learning. 4.3% of respondents disagreed with the notion that students take initiative to direct their own learning.

### **Qualitative Data Results**

The qualitative data collection in this study consisted of parent open-ended survey questions, faculty/administrator open-ended survey questions, parent focus group interviews, faculty focus group interviews, and administrator focus group interviews. Qualitative data was used to better answer the research questions: (2) “What impact has the IBLM had on enrollment and attrition at SA?” and (3) “Has the shift from DI to IBLM resulted in a more student-centered culture?” The qualitative data for this study was collected to help provide narrative context for research questions two and three.

#### ***Parent Open-Ended Surveys Results***

Parents who had experience with the school before and after the implementation of the IBLM program were surveyed. There were 83 out of 300 families who met specific criteria who responded to the survey for a response rate of 28%. The goal of the study was to receive 100 responses from 300 families who met the criteria for the survey, however the response rate fell short in this regard, and the COVID-19 pandemic was a potential reason for this shortage. The stress associated with the pandemic may have distracted individuals from participating in a project that did not directly impact their daily lives during this stressful time (APA, 2020). Questions one through three on the survey were demographic questions to ensure families met the criteria for the survey. The remaining seven questions were: (4) “What did you choose this school for your student(s)?”; (5) “Was the academic program a major factor in choosing to attend the school?”; (6) “Do you feel this school has been student-centered in regard to your student/students? Why or why not?”; (7) “What has been your student’s/students’ experience

with the IBLM at this school?"; (8) "What do you think differentiates this school's academic program from other area public schools?"; (9) "What do you think differentiates this school's academic program from other area independent schools?"; and (10) "If you could change anything about your student's academic experience at this school, what would you change?"

### ***Parent Surveys- Research Question 2***

#### **What impact has the IBLM had on enrollment and attrition at SA?**

The parent survey questions elicited information regarding the parents' decision to send their student to SA. Eighty-three parents responded to the survey. Parents who responded to this survey were reported as parent survey participants (PSP) and attached to a corresponding number throughout Chapter Four. This system was used to protect the identity of parents in their responses. The decision to attend SA is directly related to enrollment at the school. Question four asked parents why they chose this school for their students. Information regarding why parents choose to invest in independent schools is very important to understand what aspects of the school are attractive to prospective parents. With SA's recent enrollment struggles, it was important to solicit feedback from parents on why SA became their school of choice. Two themes emerged from open coding for question four in regard to parents choosing SA for their student: (1) quality of education, and (2) small class sizes. Regarding the quality of education, parents cited the reputation of the school and challenging academics as specific reasons for choosing the school. Multiple SA parents gave similar remarks regarding the reputation of the school for providing quality education. One SA parent commented, "The school has an excellent reputation" (PSP22). PSP1 commented, "I wanted my sons to get a great education." Another SA parent remarked, "We chose SA, to give our children the best academic program we could" (PSP19). In regard to the quality of education at SA, one parent remarked they chose the school,



“to allow her to grow as a student. To find herself as a student, to find things she was interested in. To begin opening up, speaking out, and being comfortable to speak out. Of course, the education aspect of the school” (PSP33). This comment speaks specifically to this parent’s thoughts regarding the type of education her daughter would receive at SA. Several SA parents commented they chose the school for its “strong academic program.” Additionally, regarding challenging academics, multiple SA parents cited the academic rigor of the school. A parent noted SA provides, “rigorous academics in a supportive environment” (PSP39). Another SA parent commented, “We needed a school that would challenge my child academically, not waste half the year reviewing and preparing for state-mandated standardized testing” (PSP78).

Small class size was the next major theme that became apparent through the coding process. Parents continue to choose SA for small class sizes and some benefits of a smaller educational environment. Multiple SA parents cited, “low student-teacher ratios” as a primary reason for choosing SA as their school. PSP5 commented, “Smaller class sizes, more personal engagement between teachers and students. A focus of resources on all students to better assist in growth and development.” PSP21 stated, “A smaller, structured environment was more appropriate for my older child.” The individual attention a small school environment provides was pivotal for many parents in the survey. PSP78 noted, “We were looking for a school that my children could be involved in many activities, wanted small class sizes, and a place where teachers would actually know and care about my children.” In relation to small class sizes and individual attention, PSP 31 noted, “A belief that smaller class sizes allow for improved academic achievement, and an opportunity for school personnel to individually know each student.” PSP71 concurred with a similar thought, “Smaller class sizes, more opportunities for individual growth, seeking more project-based activities.”

Question five asked parents to respond to whether the academic program was a major factor in their selection of the school. 88% of parent respondents to the survey answered yes to this question. Extracurricular activities were primarily cited by those who did not choose the academic program as their primary reason for school selection. To add narrative to these responses, PSP9 responded, “The academic atmosphere was the major factor in enrolling my sons at SA.” PSP22 commented, “yes, the academic program was very important.” In speaking to the reputation of the school, PSP24 responded, “Yes, the program has a great reputation.” PSP30 commented, “Yes, the academic program and associated study habits and techniques that are a part of the curriculum.”

The reason parents choose a school or choose to remain at a school is vital to understanding the market needs of an independent school. The questions regarding the choice of the school and the academic program were intended to ascertain why parents chose the school, and if the academic program of the school was a vital part of this decision-making process.

### *Parent Surveys-Research Question 3*

#### **Has the shift from DI to IBLM resulted in a more student-centered culture?**

Question six asked respondents if they felt the school has been student-centered to their student's/students' experience. Research question three revolves around the attempt of the IBLM program to develop an environment that constituents of the school feel is student-centered, and this survey question speaks directly to this research question. 93% of those who completed the survey responded they felt the school is student-centered. Two themes emerged regarding this question: (1) Faculty support, and (2) personal care and interest. Support in the form of faculty relationships with students was mentioned in several participant responses. PSP14 responded, “Yes, demonstrated commitment by the faculty to the success of my child.” PSP3 responded,

“Very much so, I believe the teachers knew my students and understood their strengths and weaknesses.” In line with the previous comments, PSP22 answered, “Yes, I feel that the teachers make a concerted effort to get to know students and to help them learn to get the most out of their educational experience. Instructors employ a variety of methods of teaching in order to reach all students.” PSP31 responded, “Yes, the school is set up to support students. Teachers and staff are available and responsive.” In speaking to the commitment of the faculty in regard to support, PSP48 answered, “Yes. SA goes over and beyond to help each student be successful. Teachers require student participation in learning class material, they get the students involved in conversations prior to teaching facts which help the student gain interest in the subject.”

There were several comments regarding care for their student such as a response from PSP25, “Yes, I feel all the faculty and staff really care about my child and are passionate about helping him grow.” PSP34 answered, “We have teachers and administrators who take an interest in our children when they’ve needed it- struggling, falling behind, or exploring new opportunities.” A specific parent’s story regarding the personal touch of a faculty member was provided by PSP49, “Yes, yes, and yes again! In a way no other school has! We were very impressed that, in our meeting to choose our son’s classes for his first year at SA, Mr. Schumacher’s attention and focus was on our son. He listened to him. I mean....really listened. At one point, there was a little discussion over which language our son should take, and Mr. Schumacher listened to both of us as parents, and our son, and advised to let him take the class he preferred.” Continuing the theme of personal attention, PSP47 responded, “The school’s student-centered learning has a variety of support strategies that focus on students’ learning needs, interests, activities, aspirations, or cultural background as an individual and a group of students.”

### *IBLM Experience*

Question seven asks survey respondents what their students' experience has been with the IBLM at the school. This question was asked to solicit responses that can provide answers to research questions: (2) "What impact has the IBLM had on enrollment and attrition at SA?" and (3) "Has the shift from DI to IBLM resulted in a more student-centered culture?" The two major themes that emerged from these responses were a positive parent perception of the IBLM as well as active participation and engagement of the SA student in their own learning experiences.

PSP16 responded, "I feel like the IBLM better prepared my kids for college and beyond." PSP14 answered, "Positive experiences, but it is different from the this is what you need to know approach of our previous school." PSP21 responded, "It has been excellent, especially for my older child who is extremely inquisitive. This seems to help him retain knowledge better than teaching memorization only." In regard to the lasting impact of the IBLM at SA, PSP1 responded, "I do know that IBLM at our school has made our students better critical thinkers who want to be lifelong learners." One of the goals of the IBLM at SA was to develop 21st-century learners who leave the school prepared to think critically in preparation for their future endeavors. PSP1 continues, "It gives them the opportunity to critique, analyze, create, develop, and implement their ideas across different curriculums instead of just regurgitating information that was pushed out to them." PSP39 answered, "It gives great opportunities for students to learn how to engage in dialogue or debate." Continuing the theme of 21st-century skills, PSP53 responded, "Both girls have also had large projects that were presented to a large audience that included students from other grades, and faculty, staff, and parents. These have all proven to get my children excited about what they are learning, as well as to provide real ownership of the process and pride in the result." PSP62 answered, "We believe she is learning more from IBLM

and retaining that info instead of memorizing info for tests then forgetting about it. She shows an interest in a variety of subjects because she is learning more about the subject.”

Student-directed learning was the second theme that emerged from the responses to question seven. PSP5 responded, “The benefit of independent school is the flexibility of the curriculum to cover unexpected topics of interest based on the student’s inquiring minds.” PSP19 answered, “They were able to pursue their own interests in a learning environment.” Speaking to the transformative nature of IBLM and student responsibility, PSP36 responded, “Excellent, I think it has helped her come out of introverted self and express her ideas and concepts more articulately.” PSP48 responded, “My son has enjoyed this format. He has been able to learn by asking questions, participating in group discussions, and working in groups.” PSP65 responded, “My students both enjoy the opportunity to make connections between what they learn in school with things they are currently experiencing.” Continuing to speak to active participation and engagement, PSP38, “My daughter’s history teacher continually asked students to personally research and relate historical events to current events. My son’s science curriculum was entirely project-based and very impressive.” Some parents also spoke to the enhancement of participation of their students in their learning process. PSP31 responded, “Largely positive, certainly has expanded assertiveness and participation from one child that needed that development.” PSP61 answered, “I believe he has been more engaged and focused. He enjoys discussion and class participation.” PSP79 responded, “For the most part really good, our children are engaged, so they really thrive compared to the ones that need to be prodded to advocate for themselves and speak up.” PSP74 gives a detailed response to the transformation of a shy student who may be less likely to advocate for himself:

Our son’s experience has been very good. He is somewhat shy, so this approach helps bring out some of the best in him. In addition, it allows him to hear what other students

are thinking. The faculty does a great job of working with the students using this approach. We were able to experience some of it during the last quarter of school due to COVID-19 when we listened in on parts of his classes.

Although comments regarding the IBLM were overwhelmingly positive, there were a small number of parents who did not have knowledge of the IBLM or had negative feelings toward the approach. PSP9 responded, “I must confess to not knowing much about it, so I apologize I may not be of much help in this regard.” PSP3 answered, “I do not know what IBLM is.” PSP25 responded similarly with, “I know very little about it.” Negative comments toward the IBLM included PSP37, “For the most part, my child has had to teach herself all of her school lessons every night only to come into class the next day to check the answers.” Another parent answered, “While my child enjoys the occasional project, he has complained about some of the classes assigning too many” (PSP72). PSP78 responded, “Depending on who is in the group IBLM, can be a nightmare, one person does all the work, or two people put in 80 hours of work on a project, and the third person puts in two hours.” Another parent responded with a mixed review. PSP82 answered, “Overall, he has had a positive experience except for one rather unfortunate exception with one teacher. The teacher didn’t seem to understand IBLM or teaching high school students at all.”

### ***Parent Surveys- Research Question 2***

#### **What impact has the IBLM had on enrollment and attrition at SA?**

Questions eight and nine ask parents what they believe differentiates SA’s academic program from area public schools and other area independent schools. In regard to area public schools, three themes emerged in the answers revolving around what differentiates SA from area public schools: (1) faculty, (2) small class sizes, and (3) individual attention. Regarding the faculty at SA, PSP45 answered, “The teacher’s attentiveness to the students.” Another parent

responded, “What convinced us to send our sons to an independent school versus a public school was the guarantee that our kids would not be lost during middle and high school. Lost in the sense of no one (teacher, coach, administrator) taking an interest in them” (PSP34). PSP51 responded, “The faculty really get to know the students. They make the student feel that they have their best interests at heart.” Another parent responded, “The fact that they know every single child and care about the success of every single child” (PSP58). To further illustrate the notion of a caring faculty as a differentiator, PSP29 responded, “The way the faculty care for the students and want them to do their best, and they also take a very personal interest in the student.”

Small class size was the next theme presented by the respondents as a reason for choosing SA over area public schools. Respondents did not provide much narrative context to this theme other than the smaller student-to-teacher ratios that differentiate SA from area public schools. PSP48 illustrated this with some narrative context, “SA's smaller student-teacher ratio, focus on group work and discussions, encouraging students to use problem-solving and critical thinking skills.” PSP58 responded, “The small group learning experience is clearly a differentiating factor.” Another parent responded, “SA is different from public schools due to the smaller student population, smaller classes, and lower student to teacher ratio” (PSP72).

Individual attention was the third theme of question eight in regard to what differentiates SA from public schools in the area. PSP41 responded, “The personal touch and how the school caters to each individual student’s academic needs.” Another parent responded, “Teachers and coaches appear to know my children individually... specifically their strengths and opportunities” (PSP31). PSP39 responded, “More attention can be paid to each child. There are more opportunities for a child to participate and students can explore topics in more depth.”

Another parent responded, “Individual attention, the freedom to tailor the curriculum to the needs of individual students, the ability to make exceptions when they are called for” (PSP65). PSP69 echoed the theme of individual attention, “Personalized approach, the individual student is supported for who they are and who they are becoming. It is not a herd approach to teaching.”

Negative public-school perceptions were also repeatedly cited in response to this question. It was not listed as a differentiator, but there was rich data provided in narrative context by parents who provided this type of response to the question. PSP51 responded:

I have another child that has gone through the public school system where we live. His experience was suboptimal at best. The teachers did not get to know the students and assistance was not readily available. If it was available, it was not necessarily provided by the student’s teacher. The student was more like a number than a person.

This quote speaks directly to the three areas cited as themes for this question as well. Faculty, small student-to-teacher ratio, and individual attention are all embedded in this quote regarding the differences between SA and public schools. PSP67 responded, “Independent school learning is superior- the students are accountable and responsible for their own development, and that isn’t evident in the public system.” Also expressing belief in a superior product relative to public schools in the area, PSP74 answers, “I believe that SA students are gaining some experience that students in the public school system will not experience until college.” The lack of flexibility and state standards were cited by several parents. PSP22 responded, “I think the area public schools focus on lecturing to students and then testing them on the material. There is more of a focus on standardized tests and scores in the public schools.” Another parent believes the difference between SA and public schools is, “The academic rigor and focus on independent thought and work rather than focus on standardized tests” (PSP82). PSP14 responded, “Public schools teach to the test. SA is teaching to the student.” PSP24 illustrates the stark contrast between his or her perception of SA versus area public schools by saying, “In my opinion, there is no comparison.



From what I understand, the independent school curriculum is almost two years ahead of the public school curriculum. SA's faculty's presentation of the information is nurturing, engaging, and expansive." In a direct comparison to college admissions, a PSP2 responded, "SA students are getting admitted into better schools with more scholarships than the local public schools. That is a fact."

Question nine centers around what differentiates the school's academic program from other area independent schools. Three themes emerged in the answer to this question: (1) respondents do not have knowledge regarding other area independent schools, (2) Academics, and (3) non-religious based. Regarding the lack of knowledge of other area independent schools, PSP21 responded, "I am not familiar with other area independent schools." PSP30 answered, "I have no basis for comparison. I do not know anything about other private school programs." PSP34 responded, "I do not know any details about our independent schools vs other independent schools." PSP55 responded, "I'm not familiar with other area independent schools. I imagine it would be the same answer as above compared to public schools."

Academics emerged as the second theme presented by respondents to question nine as a differentiator for SA compared to other area independent schools. PSP24 responded, "I think SA better prepares students for college than other private schools in the county, especially in writing research papers and public speaking." Another SA parent responded that SA has a "clear focus on college prep" (PSP8). In comparison to other private schools in the area, PSP11 cited "higher standards at SA compared to other area independent schools." A more rigorous academic program was also repeatedly cited as a differentiator by those who responded to this question. PSP62 describes SA as "more rigorous" than other independent schools in the area. PSP9 answers, "From my perspective, I believe in SA's academic prowess." Balanced academics and

extracurriculars were also cited as differentiators by parent respondents. PSP62 responds that in comparison to other area independent schools, SA “Focuses more on academics than athletics.” PSP67 responds, “It seems that SA puts academics at the forefront where other independent schools emphasize athletics as being equal to academics.” PSP26 also responded SA is “more academic-based versus sports.” PSP31 responded, “Balanced academic offerings with available complimentary extracurricular opportunities and experiences.” Another parent responded, “Not having their focus be only on sports” (PSP28).

The third theme for question nine of what differentiates SA from other area independent schools centered on the non-religious aspect of the school. PSP14 responded, “The area has a number of faith-based schools. Not having the faith-based piece allows for more freedom by teachers and the school. PSP53 responded, “I like that we are non-denominational and focus on character instead of a specific religion.” Another parent responded, “Many independent schools are based in a particular version of Christianity. While SA has a number of Christian values at its core, it is not a religious school, and I appreciate that” (PSP82). PSP39 responded, “There is no religious component.”

Questions eight and nine were asked to help provide a narrative regarding reasons why parents may choose as well as stay at SA over other area public and independent schools. SA’s head of school cites differentiators as a reason that families in our area may choose SA as their school of choice. The responses to questions eight and nine are indirectly related to research question two.

Question 10 asks parents what they would change about their student’s/students’ experience in the academic program at SA if they had the ability to make these changes. The themes that emerged in response to this question were: (1) no recommended changes, (2) faculty,

and (3) and inclusivity PSP9 responds, “I would not change anything academically, because they were challenged and performed well.” PSP53 responded, “I cannot think of a single thing.” PSP33 answered, “No change at this time. I have been pleased.” PSP80 also responded, “Academically, there is nothing I would change.”

Faculty skill disparity emerged as an area of suggested change. PSP31 responded, “Not much, but I do believe there is always an opportunity for ensuring that selected teachers are individually passionate about the subjects they teach. I believe that teachers, especially in private school settings, are both teachers and ambassadors for their subject areas. Individual passion for the subject is required to transfer interest to students.” PSP6 responded, “Like a lot of places, the best teachers teach the better students. They need the entire staff to be like the honors teachers.” PSP14 responded, “There appear to be gaps among the faculty in terms of abilities and efforts to adopt new methods.”

Inclusivity is the next area that emerged as a theme for question 10. PSP9 responded, “If I could change anything it would be the perception of some staff, parents, and families that the minority students are just as capable and deserve to have a quality education regardless of their race.” Another parent responded, “There should be more inclusion for students of color. Discipline, rules, and consequences should be the same for all students” (PSP9). Another parent spoke to the need for diversity in the classroom by responding, “We need more black teachers” (PSP4). PSP13 responded, “The lack of social understanding and their ability to relate to my child and his different background.”

### *Parent Focus Group Interview- Research Question 2*

#### **What impact has the IBLM had on enrollment and attrition at SA?**

Four SA parents who met set criteria were interviewed as part of a focus group for this study. Pseudonyms have been used to protect the identities of those parents interviewed. The focus group interviews were semi-structured and focused on three distinct areas: (1) the decision to choose the school, (2) perceptions of student-centered/IBLM classroom, and (3) overall academic program perceptions. The semi-structured interviews began with background questions to increase the comfort of the participants and ended with concluding questions to allow participants to share any final thoughts. Parents that were selected for focus group interviews had to have met the criteria of experiencing the US academic program both before and after the implementation of the IBLM. The demographics for the group were one Caucasian male, one African American female, and two Caucasian females. Pseudonyms have been used to protect the identities of the focus group participants. For reporting purposes, Nathan, Kara, Stephanie, and Chelsea are the names that will be used to identify focus group participants. All focus group participants had a student attending SA. Table 13 details the demographics of the parent focus group.

**Table 13**

*Parent Focus Group Participant Demographics*

Parent Focus Group Participant Name	Gender	Years at SA (n)	Children at SA (n)
Nathan	Male	11	2
Kara	Female	11	1
Stephanie	Female	10	1
Chelsea	Female	13	3

The first group of questions revolved around why they chose SA as their school of choice. The first question asked the group how they were first introduced to the school. Three of the four members were introduced to the school by someone who was already familiar with SA. Stephanie was introduced through a tour with the admissions office. Stephanie answered:

We originally moved here from the North Shore of Chicago, and we did public education there because it is a nationally-ranked public school system. When we moved here, I just expected that in the school system, and that is not what you get in the county schools. After a horrendous second grade with my daughter, I went looking for opportunities. She interviewed at two independent schools in the area. When she toured SA, she said it was like she was home. So, I just said, ok, well, let's try this, and we have been extremely happy ever since.

The next question asked the focus group how long they have been associated with the school, why they chose SA, and what differentiates SA from other area public and independent schools. All focus group participants have been associated with the school for more than a decade at this point. Academics seemed to be the most prevalent factor in school choice for the parents in this focus group. Kara responded, "We were looking for academics, testing, college entrance scores, and SA met everything." She continued, "I'm a happy parent, I love the academics." Nathan answered in a similar fashion, "Academics was the biggest part for us. We looked at other things, obviously the smaller school, the opportunity to play sports, opportunities to be in clubs, opportunities for leadership roles that you may or may not get in larger schools."

In discussing what differentiates SA from area public schools a theme of transformative education as opposed to transactional education in area public schools emerged in the responses to this question. Stephanie answered:

My daughter had a mean and nasty teacher in the public school that she was terrified to go to ask for help. As soon as she got to SA, the teacher wanted to keep my daughter after one day a week just to get to know her better, so she would know what to focus on in working with her.

Nathan responded, “I went to public school. I had 12 years of public schooling, and I now understand that as you are checking a box as you move to class.” Nathan continued:

It’s a very transactional approach toward education versus my kids knowing how to take care of going to class, having two study halls during the day, and still being able to take advantage of that time. A micromanaged education versus a collaborative education, which I feel like you get in a school like SA.

Kara responded:

Well, I’m going to discuss COVID-19 and distance learning. I feel this is very important now. SA was able to continue the kids’ education throughout the COVID-19 pandemic in the spring. I’ve looked at some other public schools, and they are in chaos including the surrounding county schools. I have a nephew in a neighboring county school, and the kids have not been able to continue their lessons or class to keep up with their education in a timely fashion.

The next question in this section revolved around what differentiates SA from other area independent schools. There were varying responses to this question. The SA community emerged as a theme in the answers provided by the focus group. Other answers revolving around the non-sectarian nature of the school, community service, and balance were mentioned.

Stephanie answered, “Well, it is non-denominational, which is what we were looking for and there are not many non-denominational schools in the area.” She continued, “I do think it is a bit warmer than when you go into some of the other schools which are a bit more sterile.” Chelsea concurred:

I’m from the area, and I come from a huge family. We have probably had someone in every private school in the area at some point, so I have a little bit of intel for those. Some of those schools are a bit snotty. In my opinion, just by being around and growing up in the area, SA seems to be the most down-home community that has parents who care about their kids’ education.

### *Parent Focus Group Interview-Research Question 3*

#### **Has the shift from DI to IBLM resulted in a more student-centered culture?**

The next section of questions centered on parent perceptions of student-centered IBLM classrooms. The first two questions asked the group how familiar the group is with the academic program at the school and the perception of the IBLM at the school. The focus group participants unanimously responded they were not very familiar with the academic program or the IBLM of the school. They referenced a lack of communication on the part of their individual students as part of the reason for this. Chelsea joked, "I know what they had for lunch." Chelsea continued, "I know only because I looked it up online. I have to research, that is who I am. So yeah, I know they use aspects of it, but I don't know how it is ingrained into the curriculum." In a follow-up question that coincided with a future question, parents were asked what they do get from their students regarding the academic program. Stephanie answered:

I get a lot of information from my daughter when she has had a class where they have had a lot of discussions whether it is about a book or something that happened in history or something in science. If it is one of those conversations where the kids voice their opinions and are very passionate, she will come home, and she will just go on and on about what happened in class."

Nathan concurred, "Yeah, I would agree. I think you don't get a lot from teenagers, especially teenage boys. I think what I do get back from them is a lot of conversational learning in class." As the interview progressed, the focus group participants began to speak to varying components of the IBLM. Nathan expressed concern with group-based projects, "One of the potential negatives is with group projects. A lot of the time, not everyone puts in the same amount of effort." Chelsea lauded the hands-on approach of the IBLM. She said, "They go through a program and that teacher progresses them through a hypothesis and its hand on, and it is wonderful." Chelsea continued, "It is not a great way to do a group project where you get a

grade, but for science when you are looking at experiments, I think it is wonderful.”

The interview naturally transitioned to the next question of what they feel is the most important aspect of their student’s education at the school. The theme in responses was lifelong learning and curiosity. Chelsea responded, “Learning how to learn. Please teach my child how to learn.” Stephanie responded with a more traditional answer regarding standardized testing. She said, “Writing, standardized testing, writing, being able to write. Being an effective writer in standardized testing.” Nathan concurred with Chelsea, “My answer was going to be to learn permanently. When I remember what I have learned a year down the road. It is future learning for me.” Stephanie answered, “Yeah, I agree with all of that. I also think it is important for kids to learn how to ask questions. This is one of the reasons we are at SA. I do think that is a part of learning how to learn.”

### ***Parent Focus Group Interview- Research Question 2***

#### **What impact has the IBLM had on enrollment and attrition at SA?**

The next question asked the focus group if there was a particular element of the school’s academic program that led them to choose SA as their school. Character and excellence were mentioned and agreed upon by the group. Chelsea answered, “I think character and excellence, the way they carry themselves. Character and excellence are what is keeping us here.” Kara answers, “I agree with what everyone said, perfectly.” College preparation was also mentioned as a reason for choosing SA. Nathan responded, “We spoke to parents who had students graduate from SA, and they said the same thing. The first two years of college were easy for my child because of the way SA taught and what they learned at SA.”

The next question asked the focus group what they feel represents a student-centered education and does the school meet this expectation. Care for the student and input into learning



were mentioned in this part of the interview. Chelsea responded, “Teachers came back to work not from a job security position during COVID-19, but from a care from the student position.” In speaking to learning input, Nathan answered:

Input into learning and input into what is being taught. I have seen grades changed, because the intent was the learning, not necessarily getting it right exactly as the teacher felt it should have been answered. If you can justify the answer, then the teacher would accept it. I think that goes along with what I am trying to say.

In regard to meeting expectations on a student-centered expectation, all four parents agreed the school definitely meets expectations.

### ***Parent Focus Group Interview- Research Question 3***

#### **Has the shift from DI to IBLM resulted in a more student-centered culture?**

The next question asked the focus group how their child feels about the academic program at the school. Once again, the focus group had a hard time pinpointing what their students like about the academic program. Nathan answered, “I think they enjoy it. They don’t complain the way other kids do about school. So, I think they do enjoy the way they are learning, but it is a guess because I get little from them.” Focus group members did not have a tangible answer for their least favorite aspects of the academic program. Chelsea quipped, “There is no cheese on the tacos. I don’t know why, but that happened. They want cheese on the tacos. She said you had to go to the salad bar to get the cheese. That is what I got.”

The next question asked parents their feelings toward the direction of the academic program. Kara responded, “I see distance learning growing more, improving with technology. I believe you will get more at home learning to deal with pandemics, inclement weather, and such. I like that the school has added more business courses.” Chelsea quipped:

Earlier in the SA years, you didn’t have snow days. They saw zero snow days. If you didn’t do something in class you got a zero. When the interim head of school came, SA

became a kinder, gentler SA. I do want to make sure we don't get away from the rigorous curriculum.

Nathan agreed, "I agree, I remember homework days of four, five, and six hours of homework a night. I like the change." Stephanie agreed in regard to homework, she quipped, "I cried."

The next question asked focus group participants what adjustments they would make to the current format of the program. Two answers emerged from this question—more AP courses at a younger age, and increased business class offerings with experiential learning. Stephanie responded, "I know the county schools allow freshmen and sophomores to take AP courses. I don't know that they are necessarily ready for AP courses, but I feel there are not many of them to take their junior year, and the senior year is heavily loaded in other areas." Regarding business classes, Kara commented, "The business curriculum they have, I believe it is called the entrepreneurial leadership program. Maybe they can add an internship or real-life experience element."

The concluding question section began with asking focus group participants if they are satisfied with the product they receive from the school and components that stand out, and what they would like to see change. All participants quickly answered they were very satisfied with the product they received from the school with no further comments.

### ***Faculty/Administrator Open-Ended Survey Results- Research Question 3***

#### **Has the shift from DI to IBLM resulted in a more student-centered culture?**

The faculty/administrator open-ended survey responses solicited feedback regarding the professional development program for IBLM at SA. Faculty survey participants (FSP) were identified with the pseudonym FSP and a corresponding number for all respondents' answers.

The appropriate training of teachers and teacher efficacy is a critical component in the success of an academic program. Ramnarain (2013) cited professional development as a critical component

to develop confident and competent teachers. For the IBLM program to be successful, SA's teachers need proper training and support to develop the desired learning environment for their students.

Of the respondents to the survey, 15 of 19 answered the open-ended questions portion of the survey. Four chose not to answer this portion but completed the Likert-scale portion of the survey. Question 17 of the survey asked respondents if SA provided professional development for IBLM and student-centered learning. 14 of 15 or 93% of respondents felt the school provided professional development opportunities for IBLM and student-centered learning. FSP6 responded, "Yes, they promote conferences, articles, books, seminars, etc. that are centered around the IBLM model of learning. This is promoted actively throughout the school." FSP4 answered, "Yes. The school supports each teacher's decision to choose their seminars. The school also provides a list of options for the teachers to pursue." FSP14 responded, "Yes, most summers we have workshops focused on furthering IBLM in the classroom." FSP8 responded "we have peer teaching periodically where the classes are developed specifically with IBLM in mind. We have spent time understanding what IBLM is and how it can be implemented in the classroom."

Some of those that agreed the school provided professional development also offered comments regarding an increased opportunity in this area. FSP1 responded:

Yes, the school regularly hosts opportunities on in-service days for school-wide IBLM professional development. However, I think having professional development opportunities related to department-specific IBLM and grade-specific IBLM would be helpful as well as IBLM looks different in a 12th grade English class versus a 6th-grade math class.

Another teacher responded, "Yes, although it could be more consistent across departments and divisions" (FSP7). FSP3 responded, "Yes, but they should do more." Only one

respondent did not feel the school provided professional development for its faculty. FSP9 responded, "I do not believe the school has provided adequate training on inquiry-based learning and how to implement it effectively."

Question 18 asked respondents how accessible they felt professional development was at SA. The responses to this question were mixed among the 15 respondents. Six respondents (47%) felt professional development is very accessible. FSP2 responded, "Very accessible. Division heads initiate similar conversations about implementation and practice in the classroom." Another faculty member responded, "Extremely accessible" (FSP8). FSP11 responded, "I would say very accessible - we have a rather substantial budget for academic professional development each year and encourage all faculty to do at least one PD event per year."

Four respondents (27%) answered with mixed perceptions regarding accessibility. FSP6 responded:

It depends. We get weekly emails updating the faculty on the week ahead which usually includes an article centered around IBLM, so that is obviously very accessible. The conferences and workshops are accessible, but the need for travel takes time away from the classroom in order to attend these events.

Another faculty member responded, "I think it is an area for potential growth (FSP14). FSP1 responded, "While the school has been very supportive of opportunities on campus and those teachers have researched on their own and requested to attend, I think having suggested opportunities in the summer would be an additional benefit."

Three respondents (20%) did not feel professional development is accessible at SA. FSP3 responded, "It should be accessible to all teachers equally, not the administrator's pets." Another faculty member responded, "Not very available" (FSP12). One (6%) responded they were unsure of the accessibility of professional development at SA.

Question 19 asked respondents to provide a positive aspect of the professional development program at SA. Three themes emerged in response to this question. 27% of respondents cited accessibility as a positive aspect of the professional development program at SA. FSP4 responded, “I have never been told I couldn’t attend a conference or workshop that I felt would improve my teaching.” FSP15 responded, “I am afforded the opportunity to attend a summer workshop each year that is discipline-specific and addresses ways to involve and motivate students.” 20% of respondents cited collaboration as a positive aspect of the professional development program at SA. FSP1 responded, “I think collaboration between teachers is one of the most positive aspects. Sharing successes and failures with other teachers has been very beneficial when implementing IBLM.” FSP8 also responded, “Teacher support and cross-curricular collaboration.” Flexibility was also cited by 20% of respondents as a positive aspect of the professional development program at SA. FSP7 responded, “Teachers have the flexibility to pursue a wide array of professional development opportunities.” FSP13 responded, “There is a good deal of freedom for teachers to seek out professional development that is appropriate to them on an individual level.”

Question 20 asked respondents to list one aspect of the professional development program that they would change. No particular theme emerged in the responses to the question. There were multiple suggestions from varying areas presented in the responses. FSP1 responded:

Having someone on campus whose job is to research the best programs, whether online or in the summer, and give teachers suggestions for professional development. While everyone doing a similar program on an in-service day is a great opportunity, having a variety of options that different teachers could attend and share would enhance the professional development experience not only of each teacher but also, the broader teacher community at the school. Teachers should be given the opportunity to share the highlights from their professional development experience.

Speaking to formal sharing opportunities within the school, FSP10 responded, "I'd like to see more formal sharing out of the PD opportunities in which the faculty participate - departmental, divisional, or grade-level meetings should be utilized for more peer-to-peer sharing." Budget concerns were presented as well. FSP 13 responded, "Increase the budget for professional development... though I know this is tough given the strange times we are experiencing." Regarding more structured feedback from the administration regarding professional development, FSP8 responded, "More frequent check-in and analysis or feedback of the IBLM application in the classroom." Regarding in-house professional development, there were mixed comments. FSP4 answered, "The PD we do at school during in-service has been effective maybe once in the last 14 years. It's a waste of time and money to bring in an outside person to do a two-hour workshop on something we'll never discuss again." In contrast to this comment, FSP6 responded, "I would like to see us bring in a speaker at the beginning of the year. This would be a great opportunity to "attend a conference" but reach the entire faculty population at once with a speaker that could help stimulate ideas for our IBLM." The responses were varied for this question, but there was still rich information to be gathered in viewing ways to improve the professional development program through the eyes of the faculty at SA.

### **Faculty Focus Group Interview**

A faculty member focus group interview was conducted with five members of the SA teaching faculty. Pseudonyms were used to protect the identities of the SA faculty members interviewed. The first several questions asked were demographic in nature to allow participants to become comfortable in an interview setting. This group was represented by three males and two females from a demographic standpoint. Multiple cultures are represented by this group as well. This group was represented by Caucasian, Hispanic, and African American participants.

Multiple degree levels were represented by the participants. Everyone in the group had obtained at least a master's degree with one participant having a doctorate degree. All participants had at least 10 years of teaching experience with four of five having over two decades of experience. The mean experience level of this group was 23.6 years. Multiple departments were represented including English, science, math, and wellness. The mean tenure of the focus group participants at SA was 10.4 years. Table 14 details the demographics of this group.

**Table 14**  
*Faculty Focus Group Member Demographics*

Participant Name	Gender	Degree Level	Years of Experience
Mr. Tudor	Male	Masters	28
Mr. Hapsburg	Male	Masters	12
Mrs. Plantagenet	Female	Masters	21
Mrs. Valois	Female	Doctorate	25
Mr. Bourbon	Male	Masters	32

### ***Faculty Focus Group Interview- Research Question 3***

#### **Has the shift from DI to IBLM resulted in a more student-centered culture?**

The last background question asked focus group participants what they feel differentiates this school from other schools where they have been employed. Three answers were given in this portion of the focus group interview: (1) collaboration, and (2) teacher autonomy, and (3) institutional change. Mr. Hapsburg answered,

I think the main thing that I've noticed that's different from here as opposed to other schools where I've taught is that I feel like there's a much more familial, collaborative sense with the faculty where you're supported by everyone around you.

Speaking to teacher autonomy, Mr. Tudor responded:

In my case, I feel like at SA I have more latitude to do what I feel like, is the best for the student to do. You can tell me what to do administratively, but I don't like when someone tells me what to do in my subject area.

Another teacher, Mrs. Plantagenet, agreed:

I think it's the autonomy that we all have, to teach what we want to teach, and do it the way we want to do it under the inquiry-based learning umbrella, which has been a really easy shift for my subject area, but I have also seen a lot of growth.

Mrs. Valois agreed, "I think sets us apart from some other schools that aren't really ready to let go, or to give their teachers the autonomy to make decisions in the things that we do."

Institutional change was mentioned by multiple faculty members as a backdrop for this question. Mrs. Valois alluded to change in one of her responses:

When I went from teaching at another area private school to SA, it did feel like a little bit of a step backward in terms of how progressive we were there. Remember I was hired the year that the interim head of school came, and he was a positive disruptor.

She continued:

When I got here it felt very old school in my subject area. It was a very drill-and-kill kind of approach, but then it slowly changed and progressed. I think that willingness to adapt and understanding we have to hold on to the traditions that are important, but the ability, and flexibility, and the willingness to adapt to what kids actually need is what we did.

Mrs. Plantagenet agreed, "I have been here over 15 years and things have radically changed. I think we can also say SA changes slowly, but it does change. If you look at the span, things are really, really different from how they were when I first came."

The next section of questions revolved around perceptions of student-centered IBLM classrooms. The focus group was asked how they would define student-centered. Mrs. Valois replied:

I think any decision we make in education should always be filtered through the sieve of what is actually best for kids. Not what's best for the teacher, not what's best for the parent, not what's best for anything other than the student. And so that's been my philosophy from the get-go, which is why I've had to hop around to find the right place



for me where the idea of, let's make decisions based on what's best for kids, is first and foremost, always.

She continued:

And so student-centered to me means, let's dial in on where the kids are when they arrive, and how can we move them forward? To be student-centered means we need to differentiate, we need to really get to know the kid and build a relationship so that we can move them forward. So, it really has to do with that individual piece. Just getting to, what does the individual actually need? And let them make some decisions and helping them hopefully to have... Just fostering that student agency peace, advocating for themselves.

The theme from the focus group was that teachers must meet the students where they are and put the needs of the students first to be student-centered. The conversation quickly moved to the next question which asks what a typical class may look like in their specific subject areas. Mrs.

Plantagenet replied:

I think the pandemic has really put into relief how much our inquiry-based learning was doing for our students, and I think it's much harder right now. At least in my class... My classes are always in a circle.

Mrs. Plantagenet added:

I am simply a facilitator. I'm in the circle, I sit in the circle with them. The idea, I tell them this from the beginning is I am not leading the discussion. I'll put out the initial question, and then it's up to you guys to let it go wherever it's going to go.

Mr. Hapsburg added:

I think that what everyone is saying is inquiry-based learning puts the responsibility for learning more on the student than it has before.

We've always been the facilitators throughout, but now that role is reduced a little bit more so that we are more shepherds instead of facilitators. We're teaching them how to find the information instead of just giving them leading questions to answer the information.

Mr. Hapsburg described a current class as follows:

For me, let's say it's organized chaos, sometimes just unorganized chaos. Because, for example, right now we're working on a project where the kids have to build battery-powered cars that have to accomplish certain specific tasks. So, I've got kids in my classroom, I've got kids in the hallway, I've got kids kind of spread all over the place that are all working toward accomplishing the same tasks but using different ideas to do it.

Mr. Tudor commented:

In a typical classroom, in my case, you have to have everyone to be engaged. Therefore, I either ask a question or ask them to answer the question. So, I try to do my best in that regard for the student to participate very well.

Mrs. Valois answered:

What I encourage my students to do is to wonder why it works the way it does. It's frustrating to me for kids to want to just know what is the answer. So, we have loads of talks about that. Like, why when you have a proportion, why do you think you just cross multiply? Why are you guys doing a dance over Keep, Change, Flip?

She continued,

So, we have these pretty intense conversations about why does math actually work the way it does? And why is it that I can do it this way, but I can do it this way also? And it all works. So, I want them to ask questions, that's what I'm trying to get them to do. The next question asked the focus group if they subscribed to a different style of instruction before the implementation of the IBLM at SA, and if so, to what type of instruction did they subscribe? Mrs. Valois jumped in:

When I first came here as I've already mentioned, it felt like a step back, and it felt old school, and it felt like drill and kill. I was trying to fit into the mold, and it felt very teacher-centered.

Mr. Hapsburg concurred:

I had the same shift that Mrs. Valois did. Mine was when I did my masters. One of the focuses we had was on the flipped classroom. I did that while I was working at a different private school prior to coming here.

But prior to that, I was very much the preach and teach type of instructor. The standing in front of the classroom, just direct instruction. And in all honesty, it wore me out. And I think it just wore the students out because they just sat there and were just zoned out.

Mrs. Plantagenet offered a different response:

I honestly don't know that there has been much change in the way I teach. And like I said before, my subject lends itself really well to inquiry-based learning. Ever since I came to SA, I don't think I've ever been the sage on the stage.

So the shift was very easy for me. It was just a matter of refining what I was doing and doing it with more intentionality.

The next question asked the focus group what type of activities they used to facilitate a student-centered environment, what their favorite IBLM activity is, and the frequency in which this type of activity is used. Mrs. Valois answered:

For me, it's a lot of the students talking to each other rather than talking to me. So, kind of the Socratic Seminar model where it's not just everybody firing at whoever's facilitating, but going between each other rather than having to go through me to make a statement. And so, I tried to do that. It's a little bit trickier currently, this setup. But that's one way. And then additionally, I try to connect with other subject areas such as science as much as I can.

I always know what's going on in science class. It is easy for me to make connections with the kids on that level, and it gets them asking, what do you think about this thing that I'm doing on my current science? Do you think this would work? I think that just helps move things along with the kids to get them asking questions for themselves, asking questions to each other, all that.

Mr. Hapsburg responded:

Yeah. I agree. I do a lot of group work in my class whenever I can, because not only do they ask questions back and forth, but they also answer the questions back and forth. Sometimes I've found that one kid will explain a concept to another one, not only do you have to have a firm understanding of that concept to be able to explain it, but also sometimes the kids will phrase it a certain way to each other that makes more sense to them than an explanation that I would give. I think that's very helpful.

Mr. Bourbon responded, "In my subject area, outside of concentrating on the physical aspect, there's also social, mental aspects of our curriculum. So, diet, exercise, sleep, good decisions, bad decisions, high consequences, things of that nature."

In regard to frequency there were varying answers, Mrs. Valois responded:

I think it depends on how you define inquiry-based learning. We were a couple of years into inquiry-based learning before finally our US head spoke to me about us fostering an inquiry-based culture, which is different in my opinion. That made me feel a lot better about what I was doing because, as we've mentioned, a little bit trickier in math when you know that if they don't come out of algebra one with these very specific skills, then it's just going to be a disaster for them in the future.

She continued, “So that inquiry-based culture phrasing helped me a lot. Because you can have that in a moment, it basically happens every day, every class period, but it's not the full class period long.”

Mrs. Plantagenet responded:

Not to get too literary on you, but Ralph Waldo Emerson, in his 1836 piece on education which I teach, talks about the ideal classroom. I think our independent education is based on Emersonian ideals, but he talks about genius and drill, and how those have to work together. And genius is what we would consider inquiry-based learning and drill is what Mrs. Valois just said.

It's the stuff that you actually have to know in order to understand why something works, or in order to be able to apply it. And so, if I were going to... I don't know, I would say my class is probably, I don't know if I can quantify it, but I would say maybe 80% inquiry-based learning, and 20% is the nitty-gritty stuff that we got to do for the AP exam, or me teaching vocabulary and then writing their sentences.

The next question asked the focus group how students have responded to the IBLM in their classrooms. Mrs. Valois responded:

Well, I teach a college prep version of my subject and an honors version of my subject. What I see daily is that the majority of my honor students are not comfortable with the inquiry-based learning idea, because these kids tend to be kids who are very driven by grades, and they want to know, am I doing it right? And is this the answer?

They don't really want to engage in that mental task of truly understanding what's going on. I would say out of my 35 honors kids, I probably have 10 to 15 that really can handle and appreciate grappling with difficult concepts and try to understand them on their own. They would much prefer for me to stand at the board and just lecture, they're going to write it down, and they're going to get an A+. That is what they think anyway.

In speaking to her college prep students, Mrs. Valois continued:

Whereas my college preps kids, they love it. They love engaging and wondering why, and how is his answer right, but mine is also right, but they look different? And how do we approach them differently? They seem to enjoy that more and thrive on it more.

Mr. Tudor chimed in, “But now I'm discovering another thing in my college prep class. This class is mostly sophomores. They are awesome. I introduced the inquiry modeling method at this level, and they are getting it very well.”

Mr. Hapsburg responded:

One thing for me that I've been pleased to see over the years is when I do the inquiry-based, and this goes with what Mrs. Valois was saying, I've seen some of my lower performing students that would normally do poorly on a quiz or a test, they really excel at thinking outside the box and working with their hands or building something.

Then some of the kids that are usually the ones that get the hundreds on the test, they can take in information and just give it back, but when we have them think for themselves, it creates some discomfort for them. It also gives them an opportunity to learn more about themselves as well. I think they wouldn't have had the opportunity if it was a more traditional classroom.

The next interview question centered on how the IBLM has been received by faculty.

Mrs. Plantagenet responded:

I think initially people didn't like it. I think some people have been resistant to it. I mean, the kids will say in the US that there is a department that doesn't seem to be in line with all the other departments. That department is still very much the teacher talks for 45 minutes. I don't know to what extent that's true, but they all say it. There must be a grain of truth in that. That just could be the discipline because some disciplines are more lecture-based, but I don't know. I think it is true for students and faculty. Now that we've been doing it for a while, this is just what we do.

Mr. Hapsburg added, "I guess it's cool we're embracing it, but I think there's always going to be a few outliers here and there that are resistant to change."

The next question asked the focus on what expectations have been set regarding the IBLM and the development of student-centered learning. Mrs. Plantagenet stated:

I don't know. I mean, supportive, yes. I don't know how much. Initially, we were told this is what you have to do. We were not necessarily told how you have to do it, and you could seek professional development for it. I don't remember, but they probably brought somebody in to talk to us for an hour and actually expected it to be done. I think it was a slow process. They would say that it's not been a slow process, but I think it's been a slow process.

The rest of the group expressed agreement with Ms. Plantagenet's synopsis.

Focus group participants were then asked what adjustments they would make to the current format of the program if they had that ability. In asking this question, there were multiple

comments regarding the professional development program which is embedded in the next group of questions. Mr. Tudor began, “In my case, I would ask the administration to let us participate more in or do workshops for us to get more updates on this knowledge and skills.” Mrs. Valois concurred when she stated:

I think we just need a little bit more time. If you can magically create time that'd be great. Then we could all meet and come up with cool projects together and look at each other's works like that critical friends kind of concept, where you look at somebody else's project plan, and you could ask questions and poke holes in it and help people, but we need time. Given our current scenario, there is a lack of time for sure.

Continuing the theme of the professional development program, Mrs. Plantagenet said:

Well, I do want to say that I have never asked to do professional development and been told no. I do think SA is really good about letting us do professional development. I think they're not so good at making people do professional development who need it. It's like when you give an option, extra credit and your best students are the ones who go for it, right? Everybody else who needs it doesn't. I think it's that... so I don't know. That's what I would say, but I do think SA has a professional development budget that is accommodating to what we want to do.

Mrs. Valois offered commentary regarding the school's late start meeting time by stating:

I do think that time provided during late start is actually not helpful. You can't get anything done in 40 minutes or whatever it is. It's cool we can sit down, and we can brainstorm, but then you go back to your usual grind at nine o'clock or whatever time it starts. It needs to be an uninterrupted time that is a good chunk of time.

Maybe three hours every day for four days in the summer, but the only way you're going to get teachers to do that, I think, widespread, is if you pay them to do it. It's hard. I don't mind coming in, and it's like Mrs. Plantagenet said, the kids that want the extra credit are going to go do it because they like doing the work.

Mr. Tudor responded:

Let me add that the turning point in my teaching career was after I attended a workshop about two years ago in Chicago. It was fabulous. With the teachers modeling. Anyway, it was awesome. That is why now I'm using the skill and knowledge to improve my teaching in my classroom with the inquiry modeling method.

Mr. Hapsburg added:

I'd like to see professional development that is not only for more horizontal collaboration, but also vertical collaboration. We don't see anything that links the grades vertically. I think that this would be something that would really add to our program here. For instance, a project in science that they're working on one aspect of it in sixth grade, but then in seventh grade, they build on to it or something like that. I think a vertical collaboration would be really cool.

The next question asked focus group participants if they have received feedback regarding the IBLM at the school. Mr. Hapsburg responded, "I think parents are more attached to grades than the kids are in some ways, and that is very difficult to overcome sometimes." Mr. Tudor responded, "But it could be the fact, as well, the parent doesn't know what it is."

Mrs. Valois agreed and stated:

Oh, no. I think the parents have no idea for the most part, but I do think that they appreciate what we are doing. They like the feedback that the students are getting is sometimes more than just the grade, there's some sort of rubric attached. I wish we could maybe move away from the way we do grades.

If there are certain characteristics and students that we value, as indicated by this inquiry-based learning approach that we are implementing, then there are certain skills and characteristics and student habits that we want the kids to exhibit, yet their grade is just a grade and it doesn't reflect all of the things that they have improved on in terms of their willingness to grapple with difficult problems, or their ability to assess a situation, come up with some questions, investigate, reassess, move forward.

Mr. Tudor mused:

I don't think the parents focus only on grades. As long as you can apply a teaching method that makes your kid happy, they are happy with that. The good grade went home, so everyone is happy, but they can also see the development in their kids. They can express themselves by saying what they like or don't like, because they can make choices as well. Therefore, I feel we are doing very well in that regard.

Mrs. Plantagenet responded, "Obviously, the older the kids get the less...I never hear from the parents. I mean, just in passing, but I can't remember the last time I got an email from a parent asking about anything."

The last section of questions centered around engagement in SA classrooms. The beginning question asked the focus group how they would define engagement for students. Themes that from the responses indicated students that are willing to be active participants in the class through questions and discussions and constant activity. Mr. Tudor responded, “When you have the kids asking and answering questions in the classroom when you have the kids participating in activities like lab and so on, and especially when they do their homework, and they ask questions.” Mrs. Valois answered:

I mean, for me, I mentioned it before, but I want students engaged with my subject the entire time that they are in my presence. So, if you think you have finished your work early, and now you're going to kick back and do nothing, that's not okay. I've got a whole lineup of other challenges and things we are exploring. That's your next task, to finish the problem that's out in the hallway, or finish the problem of the day. Let's go back and see what you did wrong on that thing three days ago and see if we can fix it and see if you understand it better now. That's my expectation when they walk through the door. Is that you are engaged in my subject for the entire 50 minutes.

The next question asked the focus group what engagement looks like for faculty in the IBLM.

Mrs. Plantagenet responded:

Well, pre-pandemic, I would say, faculty engagement is very...I mean, it's always exciting when your kids are engaged, right? It is like having them explore things. I mean, those are often highlights for me. Like, we have this amazing discussion in this class that energizes me, so I think that I'm much more engaged because of inquiry-based learning.

The effects of the COVID-19 pandemic were evident in the faculty responses to what is the most challenging portion of IBLM for the faculty. The responses centered on the difficulty of conducting productive IBLM classes due to pandemic constraints such as masks and socially distanced seating. Mrs. Plantagenet continued:

It's amazing how much the mask really interferes with... I keep telling my kids I can't see dead eyes. If I see dead eyes, then I know you're not engaged and participating. Give me some lively eyes because I can't see the rest of your face.



The last section of questions asked the focus group to present challenges and opportunities they envision moving forward with the IBLM as well as how they can be supported to implement the program. Themes including time and professional development. Mrs. Valois responded, “I think we have a great opportunity to come up with all cross-curricular things. The trouble again is time. Time is the obstacle. Time and the pandemic world we are currently living in, I would say.” Mrs. Plantagenet responded, “I just think time. They could just give us time to plan freedom and to take away the peripheral stuff. To be fair, it's not like we are in public school. We don't have a whole lot of bureaucratic red tape to go through, but if they could simplify things for us that would help.” Mr. Tudor wrapped the interview up by saying, “Talking about simplifying stuff, they can bring more people to provide us with workshops on campus, and that can give us more opportunity to go outside to other workshops.”

### **Administrator Focus Group Interview**

The administrator focus group consisted of four administrators with intimate knowledge of the IBLM program at SA. Pseudonyms were used to protect the identities of the SA administrators. Mr. More, Mr. Cromwell, Mr. Cranmer, and Mr. Wolsey were the names used. The first group of questions was background demographic questions that were asked to increase the comfort level of the group. The mean years of experience for the administrator group was 22.3 years. The mean for years of service at SA for the group was 8.5 years. All four participants were Caucasian males. Three of the four administrators had at least a master's degree with one administrator possessing a doctorate degree. One of the three with master's degrees was currently enrolled in a doctoral program. Table 15 details the demographic information of the administrator group.

**Table 15**  
*Administrator Focus Group Participants Demographics*

Participant Name	Gender	Years of Experience (n)	Degree Level
Mr. More	Male	24	Masters
Mr. Cromwell	Male	15	Masters
Mr. Cranmer	Male	30	Doctorate
Mr. Wolsey	Male	20	Masters

The last question in the opening section asked the group of administrators what they feel differentiates the school from other schools where they have been employed. Mr. More answered:

The history of the school. The fact that it's over 130 years old, the fact that relative to other similar schools across the country, it is a larger budget and relatively high endowment, when you take the full breadth of similar schools in the country.” He continued, “A comprehensive K-12 non-sectarian day program with a real clear focus on both intellectual and whole child development. I think it does a nice job of not falling off the cliff or falling into one ditch or the other of being either too academically focused or too athletically focused. I think it just has a real nice balance and blend to its educational approach.

Mr. Cromwell answered:

For me, one of the things that's interesting about school, that sets it apart is where at least my intersection with it, if this makes sense, is where the school currently is. I feel like I came to it when it was really at the beginning of a transition. I think we're still very much in that transition, whether that's culturally or as a part of this research on teaching strategies. I feel like it was very much a school that was in transition, that may be ahead of where other schools might be in some areas and certainly behind some others and lacking full maturity in some of its goals. It's an interesting transition time that I find to be unique.

Mr. Cranmer answered:

I think one thing that is different about SA than some of the schools I've been in is the age of the school. I think one of the things that attracted me to the school was not only that it was such a high academic school, but also that it had been around so long. The tradition of the school is one thing I think that sets it apart.

Mr. More responded to Mr. Cromwell's earlier comment by saying:

And I'll just piggyback on that from Mr. Cromwell. I think the city is growing so rapidly, and I have not worked in an independent school that has such an influx of new people to the area. So, part of that transition is not just school, it's cultural. I think that's a big differentiator because we've got to be able to translate the school program for those that are fifth-generation SA families and people who showed up last summer from the west coast. That's just a weird mix. I haven't seen that at any other school where I've worked before.

Mr. Wolsey chimed in,

I mean, you all have said, and I will duplicate some of that, but most schools across the board, the K-12 model is probably a small fraction of all schools, public or private. I think the idea is that if you're here long enough, you can see a kid enter kindergarten and then graduate. Just to see that whole progression is a pretty special and unique thing.

### *Administrator Focus Group-Research Question 3*

#### **Has the shift from DI to IBLM resulted in a more student-centered culture?**

The next group of questions centered on the student-centered IBLM classroom. The questions asked administrators what a student-centered class should embody, the type of instruction they are the most familiar with, and what activities they advise teachers to use to facilitate a student-centered environment. Mr. Cranmer responded:

I think it's very much a classroom where students are in charge of their own learning, and they are focused and really caught up in the subject being taught. I think it's very different in a lot of schools these days. I think one of the things Mr. Cromwell talked about was the transition we were in. When I first came here, our school was very lecture-based. I think the change to a more inquiry-based approach has made the school not only more kid-friendly, if you will, but also, I think the teachers have really grown in that time.

So, I think there are a lot of benefits that we've seen from it. I think it all comes full circle. I think also the cultural shift we have had has brought some of the students that we've seen coming in from other places. They have come in, and I think they found that we might be an old institution in a lot of ways, but we are using a lot of new strategies in our classrooms. I really believe this has drawn a lot of students to our campus.

Mr. More responded:

For me, the biggest difference I would say between student-centered and non-student-centered goes really to the heart of planning. As a teacher, am I planning what I'm going

to do and say, or am I planning what my students are going to do and say? Am I trying to construct my class to create opportunities for them to do and say, and participate in things that I believe will impact their learning? This approach as opposed to organizing, planning, and structuring my lessons so that I get to give them the information and the skills that they need? It is the pulling out as opposed to the putting in model. If I can use the old, Herb Brooks hockey analogy here, that we want to pull it out of them as opposed to put it into them. I think that's a simplified way of saying it, but to me, it really starts at the heart of it. It is how the teacher thinks about his or her class on a day-to-day basis.

Mr. Cromwell added:

I liken it to what you see when you go into a visual art studio or a science lab, right? You see industrious students. I think another thing is you see more dialogue, conversation, and collaboration. You see less one-on-one dialogue between the teacher and the larger group. I think when you are seeing those things they are some of the more visible signs of an industrious classroom.

The next question asked the administrators what a typical student-centered classroom should look like. Student participation was the theme to the responses here. Mr. Cranmer responded:

I think it can look a lot of different ways. I think we have some teachers who are doing a lot of project-based learning and a lot of problem-based learning. There is a lot of group work collaboration, and there is, of course, active engagement in labs.

Mr. More added, “The student to student conversation piece. You want to see more students talking to other students and really see that teacher as the facilitator.” Mr. Cromwell added:

Variety is the key. I think a variety of learning activities. There are seven steps to direct instruction, right? If somebody is just talking that is just one step of it. Direct instruction can also be done in a way that can be more student-centered and engaging as an instructional strategy. Is the direct instruction. I'm going to use setting up a period of inquiry where the kids are working together in groups. That is the question. To me, it's really just the variety of the experience. And I think that's one way is one of the great things about the school's vision of it as a culture, as opposed to strategy, I think has been really helpful in that vein.

The next question asked administrators what type of instructional strategy they were the most familiar with. There was a mix of answers here that revolved around direct instruction and the Socratic method. Mr. Cromwell answered:

For me direct instruction. I remember when I first started teaching, I went through six months at the basic school and I would say my lessons were very much like that. The instructor would get up and he would pull up his slide, This is what you're going to learn by the end of this period, you will be able to do X, Y, and Z. Let's go.

Mr. More offered a different strategy, "I was exposed to a lot of Socratic seminar-style discussion-based. So, a heavy dose of lecture for sure, but also a lot of project-based learning."

The next question asked the group what activities they advise teachers to use to facilitate a student-centered environment or if they have a favorite IBLM activity. Mr. Cromwell responded, "I think teachers have found that it is helpful to start with something that most of them have either seen or been trained in or understand." He continued:

If I'm having a conversation with a teacher where they have expressed discomfort, or I've observed it, it is usually because there is an imbalance between content and skill development. I think pointing that out to the teacher is productive in the sense that I can say this is where you want to get content-wise, and this is where you want to get skills-wise. When you put that in front of teachers, they can see that and the light bulb tends to go off.

Mr. Wolsey added, "I think that you have to be willing to experiment a little bit and be okay with not being perfect at it, at some of these strategies the first time." Mr. More commented:

I know these are simple, but if you really don't know what to do, I think pair sharing is a really easy one. You just ask an open-ended question, ask the student to think through it. Then, to create a low-risk environment for the student, have them pair up, share their answers, talk to a classmate, then share out a little bit. It's an easy way to create dialogue within the classroom.

The next group of questions asked the focus group how they feel students have responded to a more student-centered culture, the impact it has had on the school, and what some of the challenges have been. Mr. More responded:

I think the funniest response we have had from the students was like, 'Everybody's asking so many questions all the time. It's like question fatigue.' I thought, okay, we're getting somewhere. I mean, I think the students who lived through it as first-year students probably feel differently than students who have had it for four years. There is probably some discomfort there, but I think they also recognize why it's important. I do think some of the higher-end students struggle with it. I think some of the higher-end students

actually get more frustrated by this than some of the more average kids who are probably inspired by it a bit more.

Mr. Cromwell commented, “I think more of a difference for the normative culture for kids. I think at first there was this hesitancy, not real sure. It was pretty rigid. Students were very comfortable with the game of school.” Mr. Cranmer answered regarding the impact the program has had on the school:

I think because of the change in strategy, we have seen growth in our enrollment. The word has gotten around that we're doing something different, and it is fun to come to school here. It is fun to be in class. Even though these questions are sometimes challenging, it is fun to have that process going on during the day. I believe we have more students who want to be a part of it.

Mr. More jumped in to speak regarding the impact of changes at the school:

It is hard for me to divorce the cultural changes from the curricular changes because they all went together. The freeing up the schedule was intentional, so they didn't have seven class periods every day. They were getting ground up by homework. I think some of the softening of... I mean, just simple things like not having to wear your school uniform to a sporting event and just being a more kid-friendly institute created a lot of changes. I will say, and this is one of those things that I think we just have to be open with, some of our objective markers are down. National merit semi-finalist is one that jumps out at you. I think some of that is because we are not grinding kids up with that style of testing so that they show up to the PSAT, their junior year really dialed in. By the same token, our ACT scores have stayed pretty strong.

Mr. More continued:

I don't know that our program translates as well to that, but by the same token, the ACT has done well. Our college admissions have continued to be strong relative to the student population. I would say we have got a lot of students who are punching above their weight class a little bit in terms of acceptances, and that is because of the overall program. We have probably lost a little bit of that measurable, but I think what we have gained in its stead is so much more valuable.

In speaking to the challenges of the program, Mr. Cromwell commented:

I think at times maybe some clarity for kids. I think because classrooms differ, and there hasn't been a universal plan for everyone to follow there has been a lack of clarity for students at times. I think what it has done, and what I have seen is the empowerment of students to take ownership of their learning experience.

Mr. More commented on the old structures of the school in relation to the new educational philosophy:

We changed the educational and instructional philosophy without addressing many of the structures that support that, so our schedule preceded our educational philosophy. Our transcript looks essentially the same as it did before we changed our educational philosophy. I think in this next educational strategic plan, the way we've written it is the inquiry-based approach, and we have to run everything through that filter. Everything has to run through that filter including the daily schedule, how we spend time, how we have clubs, student leadership, what our transcript looks like, and what our school profile looks like.

Mr. More continued:

I think when you say what are some of the challenges? I think some of the challenges are putting new wine into old wine skins. We have to continue to get the instructional pieces working well, and we now have to get the structures to match so that we are not working against the grain of GPA, quarter grades, mid-quarter reports, comments, all the stuff that is really in an old school structure with a new school approach to it.

The next question asked the administrative focus group how they feel the IBLM program has been received by the faculty. Mr. Cromwell responded quickly:

I can speak to upper school faculty. I think in many ways it has unleashed their talent a little bit, is really what I observed.

I think it really unleashed a little bit of their creativity and took a little bit of the pressure off. I found that it really helped them, and I think it brought the entire upper school faculty together. Everyone was at some level of discomfort, and that helps to some extent.

Mr. Cromwell also stated:

I think it made it okay and encouraged a lot of conversation amongst teachers about teaching. I think the more teachers are comfortable and having those conversations, where they are not formal, but they're just naturally occurring over the course of the day. I think this really helped to shape the culture in a way that was beneficial to what we were trying to do.

In continuing to speak to old structures in place, Mr. Cranmer added:

I think one of the things we had to reevaluate was how we evaluated our teachers. When we first started this, we were still following the old ways of evaluation rather than rethinking that. We have started the process of rethinking that. I think that has really helped as well because it's freed people up to be a little bit more creative.

Mr. More concluded:

I think our teachers are getting more and more attuned to what does the teachable moment in an inquiry-based system look like, versus what does the teachable moment look like in a more direct instructional piece. Because they're different, and you have to be listening for them. And that's part of that getting better at it, year over year.

In speaking to the challenges of faculty reception, Mr. Cranmer responded:

There were a lot of things, everything from the professional development program, to how we prepare them for working in the classroom. We have done a lot of work with the inquiry approach, and we are trying to give our teachers things that they can use in those areas.

Even things as small as how our classrooms are set up, the furniture we have, and things like that. We are trying to plan a little better in some of those areas.

The next question asked the administrative focus group about the expectations set by the administration regarding IBLM and the development of a student-centered environment. Mr.

More circled back to the teacher evaluation system:

I think it goes back to the teacher evaluation system; it is pretty robust. We changed the classroom observation form, and it is pretty well laid out. There are some very clear domains that we expect that the teachers hit.

Mr. Cromwell added:

In the first year of implementation, I remember being much more deliberate about scheduling formal observations, more frequently, so that they knew when I was coming, that I would be wanting to see them working with specific goals, but also with the freedom to play with it. I think the first year we worked to see what feels comfortable, what doesn't, and then there was a good, hard push that summer with professional development.

Mr. Cromwell continued:

I think starting that next year, there was an expectation that a certain number of their lessons should be in an inquiry format. I think by the second semester of that second year, it had really taken off. That was a year when I felt like we were not necessarily talking about what it is. We were talking about how we were all doing it, whether that was through lesson fairs or faculty meetings. That is the sequence over that two-and-a-half-year period that I remember.

Mr. Cranmer added:



I remember sitting in on several of Mr. Cromwell's faculty meetings during those times. He really started simply asking the faculty to do just one thing, and then maybe expand that to two. It was very much a walk before you can run approach. I think the teachers were really on board with that type of approach, and I think he made them comfortable by starting with baby steps and letting them work towards proficiency.

The next question asked the focus group what changes they would make to the current format of the program. Mr. Cromwell responded regarding changing the structures previously mentioned by Mr. More. Mr. More responded that resources would be the addition he would make. He said, "If I could wave my magic wand, it is the resources to be able to say yes to really good ideas."

The next set of questions asked the focus group about the professional development training for IBLM. Mr. More responded:

I would say whatever they want. I think we have a really good program where people go out, identify, pick and choose, and we point them in the right direction. We have done some in-house stuff, and we have done some conference stuff. I don't think we're turning down a lot of people for good professional development requests.

Mr. Cranmer added:

We send teachers to workshops on inquiry strategies. We have done some things here on campus, and we have tried to think of the most cost-effective ways we could do that. Sometimes that is bringing someone to campus rather than sending someone to a conference. We have had some good professional development work in those areas. I think that's why we have had such rapid growth in these programs.

In speaking directly to his perspective regarding the teachers, Mr. Cromwell added:

Teachers may have a different perspective on it than I do, but I feel like the really hard press internally on our end spurred the curiosity on their end. The number of division meetings we spent dedicated to talking about inquiry, or at least a good portion of it was much higher. The lesson fairs, where we started to highlight people that were doing it. I believe that got people's competitive juices flowing a little bit, because then they want to share and present. That then turned into, what does this mean in my area, and where can I go find that.

I think the school has been unbelievably supportive of teachers when they found something that seemed worthwhile that connected to what they were doing. I believe if

you would go back and look at the PD tracker you would see a lot of more inquiry-based workshops than workshops in other areas of instruction.

Parent feedback regarding IBLM was the next topic of questioning. Mr. More spoke to enrollment trends as a measure of parent feedback:

I would say specific parent feedback is really hard to untangle from the cultural pieces. I would say, looking at our attrition, I mean, looking at our attrition from eighth to ninth grade, looking at our attrition over the last six years. We have been under 5% attrition for the last six, seven years, and so I would think that is the feedback.

I would just say the customer satisfaction, our Net Promoter Score in the SAIS value narrative survey, increased significantly in just a two-year window as we went through the IBLM implementation process. We have a lot of data that points to customer satisfaction.

The next group of questions revolved around student and faculty engagement. Mr.

Cromwell:

It is the engagement of meaningful work, and what does that mean? It goes back to that understanding of is it hands-on, but not minds on, and vice-versa. To me, student engagement is, I am really wrapped up in the doing, but it is in something meaningful.

Mr. More added:

I think in terms of attention, where is my attention? It has to do with meaningful work, the necessary amount of challenge, the necessary amount of variability as well as routine predictability, in the things we get wrapped up in. The whole point of that is that we can only give our attention to one thing at a time, so it is how you assess what your kids are giving their attention to when they are in your classroom.

Mr. More continued, “What engagement looks like is when students' attention is drawn towards the things that the teacher identified as the highest-level learning goal for that particular period or that particular unit.” In speaking to faculty engagement, Mr. More responded, “I think the engagement piece for faculty is, are they attuned and attentive to what their students are learning or not learning and how they need to adjust?” The administrative group agreed with this assessment of faculty engagement.”

The next question asked what the most challenging aspect of engagement is. Finding the right depth in the classroom was the common response. Mr. Cromwell responded, “Designing a lesson that isn't too shallow, or that isn't too deep. Finding that sweet spot, particularly in classes where you have a pretty wide range of students. I think that's the biggest challenge.”

The next round of questioning asked the administrative focus group what opportunities and challenges they see moving forward. Complacency, online learning, and changing educational fads were mentioned. Mr. More commented:

To mention some of the opportunities, I think just basically using inquiry as our filter and running the program through that filter. I think it's going to be really exciting. I don't see a whole lot of challenges other than not having it become stale, not having it become passé.

Mr. Cromwell commented, “I think the challenge might be when something else pops up that is either a hybrid of inquiry-based or when mounting test score data gets used as evidence to create a narrative that this is not in the best interest of kids.” Mr. Cranmer added, “If teaching and learning shifts to more of an online platform, I'm not sure how inquiry translates to online learning. I think that would require some rethinking and re-strategizing.”

The last question asked the group what they can best be supported to supervise those that implement IBLM in the school. Mr. More summed the need of the group succinctly, “I'm interested actually in seeing the results of this study. I am sure you are going to turn up some areas that we have not thought about. I want to look at data and see which areas were really affected and which areas might not be affected. We want to listen to our teachers and hear how we can improve as administrators and how we can support them and their work.”

## **Chapter Summary**

This study used a mixed methods approach to determine the effectiveness of inquiry-based learning in an independent school environment. Parent and faculty surveys were

distributed, and subsequent focus group interview participants were purposefully sampled by meeting the criteria of experiencing the school before and after the implementation of the IBLM. There were 83 families that responded to the parent survey to which four parents that met the set criteria were selected for the follow-up focus-group interview. There were 19 faculty members who responded to the survey and five teaching faculty were selected for a focus group interview. Four administrators were also selected for a follow-up focus group interview. Once again, these participants had to have experienced the school before and after the implementation of the IBLM to meet the set criteria. Archival enrollment and achievement score data comprised the quantitative portion of the study. This information was merged with the qualitative portion of surveys and focus group interviews to answer the following research questions:

1. What is the relationship between IBLM and student achievement scores?
2. What impact has the IBLM had on enrollment and attrition at SA?
3. Has the shift from DI to IBLM resulted in a more student-centered culture?

The archival data were collected to provide insight into research questions one and two. Survey instruments and interview protocols were developed to continue to answer research question two and to provide answers to research question three. The quantitative data relating to student achievement as well as enrollment and attrition scores will be explored more deeply in the next chapter. The qualitative data for this study was collected concurrently with the quantitative data in line with a convergent mixed-methods study (Creswell & Creswell, 2018). The next chapter will detail the merging of the quantitative and qualitative data to develop implications for practice. This is a synopsis of themes that emerged in the collection of the qualitative portion of data:

**Table 16**  
*Major Qualitative Themes*

<b>Themes</b>				
<b>School Choice</b>	Small class sizes	Quality academic program, Individual attention, excellent and caring faculty, college preparation	Non-Sectarian, negative public school perceptions	
<b>IBLM</b>	Implemented with fidelity, implemented progressively, constituents believe students enjoy the IBLM	Positive parent perceptions, but little understanding of the program	Parents reference characteristics of IBLM when referencing 21st century learning skills	Constituents believe the IBLM is developing 21st century skills, but higher level students struggle with IBLM
<b>School Structures to Support IBLM</b>	Grading system needs to change	Class schedule needs to change	Changes to the faculty evaluation system have supported IBLM	
<b>Customer Satisfaction</b>	Parents pleased with school's direction	Parents believe school is student-centered	Parents believe the school is flexible and listens to feedback	
<b>Academic Program</b>	High quality	Parents recognize characteristics of IBLM when referencing	All constituents seek engagement from students	Constituents believe the program is engaging
<b>Faculty Perceptions</b>	Value the collaborative and autonomous environment of SA	Faculty has embraced the IBLM, and feel professional development is accessible	Faculty feels supported in its implementation of the IBLM	SA is growth-minded and is supportive of professional development

- Quality of the academic program, caring faculty, small class sizes, individual attention, non-sectarian affiliation, and college preparation are why parents choose SA over area schools.
- A large number of SA parents communicated negative perceptions toward area public schools. Reasons cited were the quality of faculty at SA compared to public schools, large class sizes, and lack of flexibility in programming.
- Faculty and administrators believe structural changes to the school's grading system and class schedule are necessary to support the IBLM educational philosophy. The faculty does value the culture of collaboration and autonomy they have in working at SA.
- Professional development is important to both faculty and administrators. It is also considered accessible and both constituents believe the professional development program has room to grow.
- Parents are pleased with the direction of the school, the product they receive from the school, and the school's willingness to listen and accept feedback for positive institutional change.
- Parents have mainly positive perceptions of the IBLM program at SA, but they also articulate a lack of understanding of the IBLM, and the 21st-century skills associated with the program. They do, however, reference the characteristics of the IBLM and 21st-century skills when speaking about the academic program at SA.
- Parents, faculty, and administrators believe the IBLM is developing 21st-century skills in its students in a student-centered and engaging environment that parents, faculty, and administrators believe students enjoy.

The qualitative data collected in this study was integrated and merged with the quantitative data to identify emerging themes. The emerging themes from the merging of this data will be explored in more depth in Chapter Five.

## Chapter Five: Conclusions and Implications

### Study Overview

This problem of practice examined the implementation of an IBLM curriculum and shift toward a more student-centered environment at an independent school. Specifically, this study examined the effectiveness of the IBLM implemented at SA. The study covered a four-year time span at SA. The first year was pre-implementation, the second year was a transitional year, and years three and four were full implementation of the program. The IBLM is the educational vehicle SA has used to implement a more student-centered environment at the school. This study used a mixed methods approach to examine the effectiveness of the IBLM in an independent school environment. This study provided insight into the perceptions of the IBLM and student-centered nature of the school from parents, faculty, and administrators. The study also provided insight into enrollment trends, student achievement score trends, and general perceptions regarding the school and its programming. These insights provide valuable information regarding the current state of the program and school as well as recommendations for future growth and enhancement of both entities. 83 families, as well as 19 faculty and administration members, were surveyed using stratified random sampling. Purposeful expert sampling was used for follow-up focus group interviews for parents, faculty, and administrators. Three focus groups were created for subsequent interviews and were represented by four parents, five faculty members, and four administrators from the larger group that was surveyed for all the constituents. The research questions for this study were:

1. What is the relationship between IBLM and student achievement scores?
2. What impact has the IBLM had on enrollment and attrition at SA?
3. Has the shift from DI to IBLM resulted in a more student-centered culture?



The research questions of this study attempted to examine the relationship of the IBLM and its impact on the development of an attractive, student-centered culture at SA.

### **Limitations and Delimitations**

During this study, the researcher operated as both an insider in some respects and as an outsider in other respects. The researcher is employed at the institution of the posed problem and is a member of the senior administration team. As such, the researcher participates in meetings that discuss the program monthly. Although the researcher has an insider position with respect to employment at the school, he is also in an outsider position, specifically regarding the implementation and evaluation of the IBLM academic program. That is, he is not directly involved in the implementation of the program, teaching classes using the IBLM method, or directly supervising or evaluating anyone involved in the IBLM at SA. Understanding this position within the study has allowed the researcher to be cognizant of any potential biases or limitations he personally or professionally experienced. This understanding allowed certain safeguards to minimize personal biases or limitations to protect the integrity of this study.

The first limitation associated with the study was the relative size and the nature of the school. It is a small, independent school, and the sample size is inherently small. There are 358 students in SA's US, and testing data was only taken from the senior classes from 2014 to 2017 for a total of 309 students. Creswell and Creswell (2018) wrote, "...another data collection issue is the sample size for both the qualitative and quantitative data collection process.

Unquestionably, the data for the qualitative data will be smaller than that for the quantitative data collection" (p. 219). The survey responses were much larger than the focus group interviews conducted. The researcher did not see this as an impassable barrier to overcome. Instead, he

believes the qualitative data provided a narrative to the quantitative data. Creswell and Creswell (2018) describe this perspective as follows:

One other approach taken by some mixed-methods researchers is not to consider the unequal sample sizes a problem. They would argue that the intent of qualitative and quantitative research differs (one to gain an in-depth perspective and the other, to generalize a population) and that each provides an adequate count (p. 219).

The second limitation involved the COVID-19 pandemic. The COVID-19 pandemic presented a challenge in the qualitative data collection stage of the study. 83 of 300 SA families responded to the survey, but that was below the desired response rate of 100 families. The number of families who were eligible to receive the survey was purposely lowered to ensure only families who had experience before and after the IBLM were surveyed. 19 of 55 faculty members responded to the survey which was also lower than expected. The COVID-19 pandemic has presented unprecedented challenges to all, and the researcher believes survey responses became secondary to some of the other daily challenges presented to parents and faculty by the pandemic. Because of the small sample size, there is a chance the data are not completely representative of the perceptions of each constituency group.

A third limitation of the study is the lack of research available on independent schools. The literature review was limited regarding specific research about independent schools. Efforts were made to find literature that supported the study while working around this limitation. One of the goals of this study is to provide more research information about independent schools.

The procedures implemented to provide trustworthiness to this study ensured the information collected from the survey and interview participants provided meaningful results. Triangulation of the quantitative and qualitative data is one way in which trustworthiness was established. Convergent mixed methods studies lend themselves to data triangulation. Creswell and Creswell (2018) wrote, “The key assumption of this approach that both qualitative and

quantitative data provide different types of information-- often detailed views of participants qualitatively and scores on instruments quantitatively-- and together they yield results that should be the same” (p. 217). Gathering a robust amount of available information, both quantitative and qualitative, was key to developing validity for this study. The qualitative portion of the study provided insight and narrative to the quantitative measures taken.

Member checks were another method that was implemented to develop trust and rapport with those that participated in the interview process. Regular check-ins were used to give participants the opportunity to review the researcher’s work and ensure their responses are representative of their views appropriately and accurately. This was crucial to developing trustworthiness for this study. Ravitch and Carl (2016) wrote, “Member checks are often discussed as an important validity measure to establish credibility” such as, peer debriefings, prolonged engagement, audit trail, triangulation (p. 197).

Delimitations of the study include the decision to only look at one independent school that is utilizing an IBLM methodology, intentionally limiting the survey participant numbers, and intentionally limiting the size of the focus group interview participants.

## Summary of Results and Findings

Chapter Four presents an analysis of the data collected to answer three research questions proposed for this problem of professional practice. A convergent mixed methods approach was selected to examine the effectiveness of the IBLM in an independent school environment. A convergent mixed-methods design was used due to the complex nature of this problem of practice. A convergent mixed methods approach allows the researcher to collect qualitative and quantitative data simultaneously with the primary intent of analyzing the data separately and then using the data from both these sources to interpret the results (Creswell & Plano-Clark, 2011). More specifically, Tashakkori and Creswell (2007) define the convergent mixed methods design approach as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both quantitative and qualitative approaches” (p. 4). Quantitative data used to inform this study were archival ACT scores from the 2013-2014 school year to the 2016-2017 school year. Archival school enrollment data from 2013-2014 to 2016-2017 was also used to evaluate student achievement scores and school enrollment data before and after the shift to the IBLM program. Triangulation was present in this study through the interview process. Parents, faculty, and administration were all interviewed in a focus group format. The design of this study allowed for the surveying of SA parents, faculty, and administrators as well. Parents were surveyed regarding the IBLM, student-centered culture, differentiating factors of the academic program, and satisfaction with the school. Faculty and administrators were surveyed regarding their perceptions of the IBLM, professional development program, teacher experience, and student experience. Follow-up interviews were conducted with parents, faculty, and administrators based on predetermined demographic criteria. Four parents, five faculty members, and four administrators were interviewed in focus group format via the

Zoom Video Communications<sup>®</sup> platform. The qualitative data went through three cycles of coding to identify emerging themes for the study. The qualitative data gained from the focus groups was used to elucidate upon the findings collected simultaneously with the results of the quantitative portion of the study.

### ***Research Question One***

The measure used for student achievement scores in this study was four years of ACT scores from SA. The descriptive statistics of the ACT scores for the senior classes from 2014 to 2017 can be seen in table 17.

**Table 17**  
*Summary of ACT*

Groups	<i>n</i>	<i>M</i>	<i>SD</i>
2014 ACT	79	27.01	4.31
2015 ACT	75	26.68	4.10
2016 ACT	72	27.97	4.12
2017 ACT	83	28.36	4.08

Note. *N* = 309

The four years can be categorized in the following manner: 2013-2014 was pre-IBLM, 2014-2015 was a transitional year, 2015-16 was the first year of full IBLM implementation and 2016-17 was full IBLM implementation. As detailed in Chapter Four, the results of this study were mixed regarding significance. The ANOVA test indicated a significant difference between the ACT scores of the senior classes from 2014 to 2017. Post hoc t-tests were administered to determine where the significance existed between those years. The Tukey HSD test applied to this study indicated there was not a significant difference between the ACT performance of the senior classes of 2014 and 2015, 2014 and 2016, 2014 and 2017, 2015 and 2016, and 2016 and

2017. The t-test found there was a significant difference between 2015 and 2017. Interestingly, the only dip in ACT scores happened during the transitional year when the school was laying the foundation for the implementation of the IBLM program. There could be several reasons for this dip. One reason could be ambiguity regarding educational objectives for that particular year. The data yielded responses from both faculty and administration that the transitional phase of IBLM implementation was difficult and there was some confusion regarding expectations in the beginning. Growing pains can be expected in the implementation of a new educational philosophy that is in stark contrast to the previous educational philosophy. Another reason could be the significant faculty turnover after the 2013-14 school year. Only 59% of the US faculty returned for the 2014-15 school year. A disruption of long-tenured faculty may have resulted in a less experienced faculty or disrupted educational experience for students. The new faculty also may have needed a year to understand the school, the stated direction of the school, the culture of the school, and the students themselves. A third potential reason could be the overall academic strength of the 2014-15 class. All classes of students are unique and have their own identities. This class could have simply been a class that did not perform as well on standardized testing.

Overall, SA's most measurable student achievement score, the ACT, actually increased throughout the four years. There was an overall increase of the mean score by 1.35 points from 2013-14 to 2016-17. The most statistically significant change happened between the 2014-15 school year and the 2016-17 school year. The change in mean was 1.68 points from 26.68 to 28.36. Although the comparison between the 2014-15 and the 2016-17 years was the only one to show a statistical significance in post hoc tests, the small increase in the mean ACT score and lack of a significant dip bodes well for the IBLM at SA. For the purposes of this study, the school needed to yield ACT score results that were not significantly different from the previous

year's mean ACT scores. This much has been accomplished with the implementation through the small mean increase. The ACT will continue to be an important student-achievement measure for SA moving forward.

The small increase in the mean of SA's ACT scores from this study was a positive result to support the initial evaluation of the effectiveness of the program. It will be important for SA to continue to monitor the trajectory of its ACT scores moving forward. ACT scores are the primary student achievement instrument used for measuring academic performance by SA in relation to its peer independent schools and neighboring public schools. High ACT scores are used by SA and other independent schools in marketing strategies versus competitor schools. The scores from this study spanned a four-year period with only two years of post-implementation scores. The long-term trajectory of the mean ACT scores will provide administrators of the school with data to make informed decisions regarding the program and its long-term impact on student-achievement scores at SA. SA's mean ACT scores are currently highly competitive with its peer independent schools and significantly better than public schools in the area (Tennessean, 2019). Due to the emphasis placed on high ACT scores in independent school marketing, it is important for SA to continue to garner high marks in this area. Any significant negative change would force the school to reevaluate the IBLM program at the school or change messaging regarding learning outcomes from the school.

### ***Research Question Two***

Research question two sought to measure the impact of the IBLM program on enrollment and attrition at SA. This research question is answered by quantitative and qualitative measures. The quantitative portion is centered on enrollment numbers, retention rates, and attrition rates. SA's US was the division with the highest percentage of attrition compared to the middle and

lower school. This high rate led the researcher to investigate the attrition trends of the US more specifically for this study. Enrollment stabilized and grew for the school during the four years measured in this study. The US was the particular focus of this study, and the US experienced solid growth during the four-year time period. The enrollment of the US grew from 323 students in 2013-14 to 365 students in 2016-17. The growth of 41 students during this time is significant for the US specifically. To provide context, an addition of 41 students is close to half of a number of students added to the enrollment of US in that particular grade. The upper school is now growing at a higher rate than the rest of the school. The total attrition rate for the school went from 8.6% in 2013-14 to 5% in 2016-17. The attrition rate decrease of 3.6% allowed the school to meet its goal of a 5% attrition rate. The target goal of 5% attrition is the number set by the board of trust and head of school as the number that the school can grow. The US's attrition rate went from 11% to 5% for a 6% decrease during the four years.

After the implementation of the IBLM program, the school's enrollment increased, and its attrition rate decreased to the target goal. The US, specifically, experienced more pronounced growth and met its target attrition rate goal. There are numerous possible reasons for the enrollment and attrition rate shift at SA that can be gleaned from the data collected in this study. Interestingly, through parent surveys and the parent focus group interview, parents communicated that they chose SA as their school of choice for many of the traditional reasons people choose independent schools. Among the traditional reasons for choosing independent school given by SA parents were:

- Academic reputation
- Small class sizes
- More individual attention



- Negative public school perceptions
- Flexible programming

Another reason SA wanted to implement the IBLM was to develop a distinctive program to attract students to the school. It is interesting that parents still list many of the traditional reasons' parents have chosen independent schools in the past as reasons for choosing SA. The attitudes of parents regarding why they chose SA over other educational options are not as different as the researcher would have assumed going into the study. It is also of note that the academic reputation of the school is still overwhelmingly the number one priority for parents when selecting an independent school over other options. The IBLM could be a piece of why parents are choosing SA, but they are not specifically mentioning the educational philosophy. Parents responded in more general terms such as "strong academics" or "academic reputation." There is a general recognition by parents of a strong academic reputation as opposed to mentioning a specific instructional method in regard to school choice. When asked specifically about the IBLM, parents are not confident they completely understand the specifics of the program, but they do express familiarity with some of the skills the program develops in their students. Parents also express generally positive attitudes toward the IBLM at SA. There is the possibility that parents associate the skills developed in the IBLM program at SA with a generally strong academic reputation in choosing the school.

Three major themes emerged as to why parents chose SA for their children were:

1. The quality of the academic program was listed as a priority for parents that choose SA as their school of choice.
2. The caring faculty, small class sizes, individual attention, and college preparation are why parents choose SA over area public schools.

3. A large number of SA parents communicated negative perceptions toward area public schools. Reasons cited were: the quality of faculty at SA compared to public schools, large class sizes, and lack of flexibility in programming.

SA's enrollment data suggests its parents harbor a belief the academic program is worthwhile to invest in the school by sending their children to SA. The idea that parents find the academic program as a worthwhile investment is an interesting area to explore further. The data from this study suggests that parents believe the academic program will elicit positive student achievement score outcomes. It is important the school continue to elicit positive student-achievement scores such as the ACT, while also exploring individual interests in flexible curriculums. A SA parent commented, "The benefit of independent school is the flexibility of the curriculum to cover unexpected topics of interest based on the student's inquiring minds" (PSP5). Another SA parent added, "We needed a school that would challenge my child academically, not waste half the year reviewing and preparing for state-mandated standardized testing" (PSP78). Regarding the academic rigor of the program, a SA parent commented, "We chose SA, to give our children the best academic program we could" (PSP19). This quote illustrates the expectations of parents that choose to send their children to SA. It is important to have learning outcomes commonly associated with good academic programs such as high student-achievement scores. As illustrated through these quotes, parents at SA are going to expect a student-centered, flexible program that yields high academic achievement. There is an inherent tension in this scenario. Student-centered and flexible programming can move away from standardized testing preparation and make success in those areas more difficult to attain. Mr. More from SA's administration spoke to this tension when he said:

I will say, and this is one of those things that I think we just have to be open with, some of our objective markers are down. National merit semi-finalist is one that jumps out at

you. I think some of that is because we are not grinding kids up with that style of testing so that they show up to the PSAT, their junior year really dialed in. By the same token, our ACT scores have stayed pretty strong.

Mr. More continued:

I don't know that our program translates as well to that, but by the same token, the ACT has done well. Our college admissions have continued to be strong relative to the student population. I would say we have got a lot of students who are punching above their weight class a little bit in terms of acceptances, and that is because of the overall program.

Although some objective markers are down, the ACT marker has remained strong at SA, and constituents of the school feel good about the academic product. The school will have to manage the narrative they wish to have regarding learning outcomes if they find standardized testing starts to slip. At this point, the ACT marker has not been an issue and has truly increased. The ability to manage the narrative of SA's desired learning outcomes and reconcile that with the demands of its educational market. Mr. More provides an example of managing this narrative when he says, "We have probably lost a little bit of that measurable, but I think what we have gained in its stead is so much more valuable." Mr. More is describing some of the less measurable positive outcomes of the IBLM such as student engagement and student well-being in that statement. It will be important for SA to reconcile its learning outcomes, the narrative associated with its learning outcomes, and the demands of its educational market moving forward to continue to ensure success.

SA has been clear in its articulation of the IBLM program and the development of a student-centered culture to its constituents. A parent that enrolls their child at SA will have knowledge that the IBLM is the educational philosophy of the school. There is also the possibility that parents are not as concerned with the methodology of the program so long as it has a good reputation and elicits the desired results of testing and college preparation.

This study also discovered the IBLM has been implemented with fidelity with the SA faculty. The academic program was listed as the primary reason parents chose SA for the education of their children. Although not explicit, parents must implicitly be in line with the stated educational philosophy and direction of the school to make the significant financial investment needed to send a student to SA.

The idea that SA's faculty is centered on the individual success of their child is also in alignment with the IBLM implemented at the school. This also speaks to the student-centered nature of the IBLM and fits with the school's stated intent of developing a more student-centered culture. The IBLM is the primary vehicle for achieving the goal of developing a student-centered culture at SA. Parents also cited a lack of flexibility in programming as a reason for choosing SA. The IBLM at SA is an example of the flexible programming SA offers to prospective families. The entrepreneurial leadership program was mentioned several times as an example of flexibility and innovation for the school. The entrepreneurial leadership program is one of the key programs associated with the adoption of the IBLM educational philosophy. While evaluating the data collected in the study, it became apparent that research questions two and three were intertwined with each other. The data solicited from questions regarding the student-centered nature of the school yielded rich data regarding parent perceptions specific to the IBLM and their feelings toward the program.

### ***Research Question Three***

Research question three asks if the shift from DI to IBLM has resulted in a more student-centered culture. Entering the dissertation process, the researcher was unsure that the IBLM would facilitate a student-centered culture at SA. The researcher believes that most problems are multifactorial in their causes and solutions. Developing a student-centered culture at SA seemed

to fall in this paradigm as well. Furthermore, the researcher believed that developing a student-centered culture would be multifactorial as well, but he was unsure what those pieces would look like. The qualitative data from this study support the notion that the IBLM is viewed by constituents as a piece of developing a student-centered culture. The data also suggests there are other elements that contributed to developing a more student-centered culture at SA. A comment from Mr. More in the administrator focus group interview supports this assertion when he stated:

It is hard for me to divorce the cultural changes from the curricular changes because they all went together. The freeing up the schedule was intentional, so they didn't have seven class periods every day. They were getting ground up by homework. I think some of the softening of... I mean, just simple things like not having to wear your school uniform to a sporting event and just being a more kid-friendly institute created a lot of changes.

Prior to the study, the researcher also believed the school had become more student-centered, but he felt this was related more to the structural changes Mr. More alluded to in the focus group interview. Therefore, it was a surprising finding that SA parents, faculty, and administrators were all in agreement regarding the IBLM's role and impact in the development of a more-student centered culture at the school. The data also suggests the faculty is also an important piece of developing a more student-centered culture which coincides with the idea that the development of student-centered cultures is multifactorial. This research question was answered primarily through the qualitative data of parent and faculty/administrator surveys, as well as parent, faculty, and administrator focus group interviews. The major's themes that emerged from these sources were:

1. Parents believe SA's faculty is excellent, caring, and centered around the individual success of their children.
2. Parents believe that SA is providing a student-centered environment for their children, and they speak positively regarding the student-centered aspects of the IBLM in classes.

3. Parents, faculty, and administrators express the belief that the current methods being used at the school are creating a student-centered and engaging environment.
4. Parents, faculty, and administrators agree the IBLM is a piece of developing a student-centered environment.
5. Parents, faculty, and administrators believe students enjoy the IBLM style of learning.

The parent and faculty/administrator survey data, as well as the parent, faculty, and administrator group interviews, yielded results that suggest an educational environment that is student-centered. The academic program is the primary factor listed by parents as the reason they chose SA as their school of choice. Parents, the primary decision-maker in the school selection process, have communicated positive views of the student-centered nature of the academic program and the school. Specific to parental feedback, one SA administrator pointed to enrollment data as a direct form of parent feedback with the program and school. Mr. More spoke directly to enrollment trends as a measure of parent feedback by saying:

I would say specific parent feedback is really hard to untangle from the cultural pieces. I would say, looking at our attrition, I mean, looking at our attrition from eighth to ninth grade, looking at our attrition over the last six years. We have been under 5% attrition for the last six, seven years, and so I would think that is the feedback.

Throughout the research process, it became apparent that other changes beyond the change in educational philosophy and academic program may have played a part in positive perceptions from constituents regarding a more student-centered culture at SA. To illustrate an example of this, Mr. More commented:

It is hard for me to divorce the cultural changes from the curricular changes because they all went together. The freeing up the schedule was intentional so they didn't have seven class periods every day. They were getting ground up by homework. I think some of the softening of... I mean, just simple things like not having to wear your school uniform to a sporting event and just being a more kid-friendly institute created a lot of changes.

The school made a concerted effort to make the school a more welcoming environment for students there. The data collected from parents, faculty, and administrators feel the IBLM is a significant piece of the change to a more student-centered culture, but there also seem to be other factors in play beyond the academic program that has been intentionally taken to enhance the experience of the students at SA. Items that were mentioned such as lowering the homework load, allowing students to casually dress to come to athletic events, and building in more freedom in the daily schedule can have a significant impact on how students, families, and faculty feel regarding the student-centered nature of the institution. The IBLM has been communicated as a significant piece of the transformation of SA to a more student-centered culture, but there is also data to suggest other factors are significantly contributing to these positive perceptions held by parents, faculty, and administrators.

The IBLM was implemented as the centerpiece of developing a more student-centered culture at SA. Parents, faculty, and administration believe the school is operating in a more student-centered manner. Positive perceptions toward the IBLM and student-centered nature of the school have been communicated and corroborated through enrollment data, survey information, and focus group interviews.

### **Recommendations for Professional Practice**

The purpose of this study was to determine the effectiveness of the IBLM in an independent school environment. Through parent and faculty, and administrator surveys as well as three focus group interviews with purposefully selected parents, faculty, and administrators—major themes emerged from the research results as recommendations for future professional practice. Information regarding teacher efficacy in regard to proper training influenced questions that were asked in the survey and focus group interviews for faculty and administrators. The idea

that teachers need to be competent and confident in the material they teach resonated with the implementation of the IBLM at SA. This program was very different from the traditional DI model, and through the literature review, it became apparent that the training and professional development piece of the implementation of the IBLM was critical to the current and future success of the program. Teachers give us the ability to put educational theory into practice, and they have the ability to influence outcomes at a high level (Kang and Keinonen, 2016). Teachers must be confident and competent in what they are teaching in order to be effective. Teachers' confidence in their ability to facilitate IBLM instruction seems to be a significant factor regarding perceptions and attitudes of the model as well. Kang and Keinonen (2016) report that "IBLM implementation in lower secondary schools can be strongly predicted by teachers' confidence in teaching science" (p. 41). This study supports the notion that confidence and competence play a significant role in the successful implementation of an IBLM in a school district. Due to the significant role teachers play in the successful implementation of any program and information gleaned from the review of literature, questions regarding teacher support and the professional development program specific to the IBLM were asked to ascertain the current state of the professional development program, as well as help, elicit recommendations for future practice for the school. These are the themes that emerged regarding structural changes and the professional development program through the data collection process:

1. Faculty and administrators believe structural changes to the school's grading system and class schedule are necessary to support the IBLM educational philosophy. The faculty does value the culture of collaboration and autonomy they have in working at SA.



2. Professional development is important to both faculty and administrators. It is also considered accessible and both constituents believe the professional development program has room to grow.
3. Parents, faculty, and administrators have been pleased with everyone's ability and willingness to listen and accept feedback for positive institutional change.
4. Changes to the faculty evaluation system have helped support the shift to IBLM and increased the comfort level of the faculty.
5. Faculty would like more time to collaborate with colleagues built into the school day structure, more direction regarding specific professional learning opportunities, and more subject-area specific professional development.

From the data collected in this study, the current professional development program at SA is accessible and encouraged at the school. Three recommendations for future practice for the school emerged from the study:

1. Consider hiring someone or appointing a current employee to lead the research and development of the professional development program at SA. This person would be in charge of researching best practices school-wide including individual divisions and individual subject areas. This person would recommend and track the professional development endeavors of the SA faculty.

Areas for improvement may be a more targeted approach with professional development, specifically for the IBLM. One recommendation for future growth is to have someone research and oversee best practices and available development resources for individual subject areas to provide more direction for faculty that would like to develop in their knowledge and implementation of the IBLM at SA. The current feeling toward professional development at SA

is that it is available if wanted, but teachers seem to be unsure of where they should go to best prepare themselves through training.

2. Continue to evaluate the school schedule and work to develop a schedule that supports the IBLM.

Faculty and administrator survey and focus group responses indicated there is a need and desire to marry the school schedule with the IBLM program. Both constituencies expressed the idea that the educational philosophy was changed without little structural support. The recognition of this was mentioned specifically in the administrator focus group interview. This recommendation is that the school move forward with addressing this issue through a schedule change that supports the ILBM at SA.

3. Consider developing programming to educate current and prospective SA families about the IBLM at the school.

Parents of the school communicated a lack of specific knowledge of the IBLM while also praising characteristics of the IBLM. Parents expressed positive feelings toward the academic program and the characteristics of the IBLM without being able to connect the dots that the two are intertwined. The recommendation is that the school provide targeted programming to educate prospective parents and current parents about the IBLM. This education would sell the uniqueness of the IBLM to new parents and establish a deeper understanding of the IBLM to current parents. This would give current parents the ability to articulate the nuances of the program to prospective families that may have an interest in the school.

### **Implications of Study on Professional Practice**

The themes that emerged through the study provided tremendous insight into the effectiveness of the IBLM at SA as well as parent, faculty, and administrator perceptions

regarding the program. SA's desired state was to utilize an IBLM that created a student-centered learning environment, increased enrollment, decreased the attrition rate, and maintained the current academic standard while developing 21st century skills in its students. The quantitative data collected helped speak to the academic standard and enrollment portion of the desired state. ACT scores increased slightly during the four-year time period. There was an overall increase of the mean score by 1.35 points from 2013-14 to 2016-17. The most statistically significant change happened between the 2014-15 school year and 2016-17 school year. The change in mean was 1.68 points from 26.68 to 28.36. Although the comparison between the 2014-15 and the 2016-17 years was the only one to show a statistical significance in post hoc tests, the small increase in the mean ACT score and lack of a significant dip bodes well for the IBLM at SA. For the purposes of this study, the school needed to yield ACT score results that were not significantly different from the previous year's mean ACT scores. The increase in ACT scores during this time substantiates the efficacy of the IBLM at SA regarding academic performance. This study also confirmed positive enrollment trends for the school. The total school enrollment stabilized and slightly grew. The US, which was the focus of the study, grew by 41 students. This number is half a grade level and significant. The attrition rate also decreased from 8.6% to 5% for the total school, and from 11% to 5% for the US. The reduction of the attrition rate to 5% met the attrition goal set for the school by the board of trust and head of school. Two areas mentioned in the desired state of the school were increased enrollment and decreased attrition rate. The quantitative data collected in this study confirms that these two markers were achieved by the second full year of implementation of the IBLM at SA.

The remaining components of SA's desired state were developing a student-centered learning environment and developing 21st century learners. The qualitative data collected in this

study spoke to perceptions of the student-centered nature of the school and the development of 21st century skills of their students. In speaking to a student-centered learning environment, parent, faculty, and administrator qualitative survey and interview data expressed the following themes:

- Parents believe SA's faculty is excellent, caring, and centered around the individual success of their children.
- Parents seem to be generally pleased with the product they receive from the school and the direction of the school in general.
- Parents have mainly positive perceptions of the IBLM program at SA, but they also articulate a lack of understanding of the IBLM and the 21st century skills associated with the program. They do, however, reference the characteristics of the IBLM and 21st century skills when speaking about the academic program at SA.
- Parents believe that SA is providing a student-centered environment for their children with student-centered instruction that develops an engaging environment.
- Parents, faculty, and administrators believe the IBLM is developing 21st century skills in its students in an environment that parents, faculty, and administrators believe students enjoy.

The data supports the notion that in the eyes of its constituents, SA has developed a student-centered culture that fosters 21st century learning skills. In conjunction with the quantitative data collected in this study, SA has moved to its desired state in its actual state. The quantitative and qualitative data collected and analyzed in this study support the notion that SA has moved to its desired state of utilizing an IBLM that created a student-centered learning environment,

increased enrollment, decreased the attrition rate, and maintained the current academic standard while developing 21st century skills in its students.

The researcher intends to present the results of this study to the administration at SA. The data yielded from this study will provide the first evaluation of the IBLM at SA. The information gleaned from this study will provide the school's administration the opportunity to discern how to best use the information to impact the school. The school's administration has been extremely supportive in this research with the hopes the study would yield data that will inform decision-making at the school. Permission to do the study was granted by the head of school with the hope the study would yield insight into how to continue to move the school forward in a positive direction.

SA is unique in its market in the sense that it is the only school that subscribes to the IBLM as its primary learning culture. This gives SA the opportunity to differentiate itself from similar independent schools in the area. The data suggests that parents are choosing SA for many of the traditional reasons that are cited by parents of independent school students, and the IBLM and student-centered culture have the opportunity to enhance the experience of its students. Caring faculty, individual attention, college preparation, and small class sizes were listed as reasons for choosing SA in this study, and these are many of the traditional reasons given for attending an independent school. SA has the capacity to capitalize on calls for higher education to develop 21st century learners (Davidson, 2017). SA can use its innovative IBLM curriculum to build on its tradition of excellent college preparation in a unique manner that coincides with changes on the horizon in higher education (Davidson, 2017).

The researcher also has plans to work with his dissertation chair to find opportunities to present this data to help contribute to the field of research in independent schools. Beyond this,

the researcher also hopes to present this data at a future Tennessee Association of Independent Schools (TAIS) conference and the Southern Association of Independent Schools (SAIS) conference. There is scant research on independent schools specifically, and this study will be a small contribution to the field of research regarding independent schools.

### **Plans for Future Research**

This study examined the effectiveness of the IBLM in an independent school environment. Quantitative archival enrollment and student achievement data, as well as qualitative parent and faculty, and administrator surveys and as parent, faculty, and focus group interviews were conducted in this study. The results from the archival quantitative data and qualitative survey and interview data were used to develop a list of future possible research.

Future considerations and recommendations for additional research include:

- To expand upon this study, this study could be replicated by other independent schools of similar size to evaluate their current academic program and constituent satisfaction.
- Further research is warranted regarding the IBLM program at SA specifically. This study concluded two years post implementation. It would be worthwhile to revisit the major tenets of this study at five and seven years post implementation to ascertain the impact the program has had on the school.
- Further research is warranted regarding the IBLM in independent schools. The focus of this study was very much centered on the IBLM as a vehicle to deliver a student-centered learning environment at SA. A study specifically looking at the academic performance of the IBLM in an independent school environment may provide more insight into that specific measure.

- Due to the significant differences in the culture and structure of independent schools, further research is needed regarding independent schools in general and specifically regarding the implementation of different academic programs and individual school schedules in this setting.
- Due to significant differences in the culture and structure of independent schools, further research is needed regarding professional development, academic performance, and customer satisfaction at independent schools specifically.
- Further research is warranted specifically on teacher and student engagement, 21st century skills, and student-centered learning.

This study examined many components of the areas recommended for further research, but additional research will be needed to continue to add rich and useful data to independent schools, student-centered learning, and the IBLM.

### **Impact of Research on the Scholar-Practitioner**

The process of conducting this study has had a profound impact on the scholar-practitioner. The doctoral process has been transformative from start to finish. The skills required to complete a problem of practice were extensive. Conducting research, evaluating research, and critically evaluating research are key components of executing a successful problem of practice. Proficiency in these areas is crucial to the success of school leaders. Making decisions through an analytical lens is critical for the scholar-practitioner in this process. The use of data enhances the scholar-practitioner's ability to make decisions more systematically and productively. The ability to conduct valid research is a skill that must be consistently utilized in effective school leadership at all levels. This study has elucidated the notion that detailed research can provide much deeper understanding and context regarding specific educational problems of practice.

Another major takeaway from this study is the positivity the development of a student-centered learning environment can create in a school. The shift to a more student-centered learning culture improved SA from an enrollment and constituent satisfaction standpoint. The results of the study was powerful regarding the improvement of perceptions toward the school due to the belief that the school had made a successful shift toward a student-centered environment. It is this scholar-practitioner's belief student-centered learning will continue to grow in independent schools specifically. The results of this study highlighted SA's parents' desire to have more individual attention in a student-centered learning environment. Parents who are paying to send their students to independent schools are willing to incur the cost to ensure this is the case. It will be incumbent upon independent schools to deliver in this area moving forward if this trend holds. Due to the experiences of this study, the scholar-practitioner will continue to view work in independent schools through a student-centered educational lens no matter the context. The scholar-practitioner would change one element of the study, and that would be to add student-voice to the conversation. The lack of student-voice negatively did not impact this study due to the nature of its design, but the addition of student-voice could yield a different perspective that may not have had the opportunity to surface in this particular study.

The scholar-practitioner believed this study turned out as expected with some unforeseen twists and turns. The increase in enrollment over the last few years was something that the scholar-practitioner was aware of going into the study, but the nature of the growth was unexpected. Positive enrollment trends are used by independent schools as an indicator of customer satisfaction, so there was a belief that parent perceptions were moving in a positive direction toward the school. It was a bit unexpected that parents cited many of the reasons traditionally associated with why people choose independent school for why they chose SA as



their school of choice. SA has been intentional about finding differentiating programs and reasons for families to choose the school, but many of these differentiators were not referenced by SA parents. The enrollment increase in the upper school division was interesting and gave cause for deeper research. Because the school did not have a large increase in its student population overall, the amount of growth of the upper school division was a bit of a surprise. The upper school division not only reduced attrition during this time, but also grew at a significant pace. The rise in student achievement scores during the study's time span was also surprising. The expectation going into the study was a belief that ACT scores would remain relatively static. The rise of the mean ACT score from 27.01 to 28.36 was also unexpected but welcome. Overall, the study went as expected, but yielded some interesting results in certain areas.

The research provided through this study has produced valuable information regarding SA's enrollment data, student achievement, and parent, faculty, and administrator perceptions regarding the school. The scholar-practitioner will forever view the school differently due to the information collected in this process. The scholar-practitioner had the fortune of researching an area of the school not directly involved with his role daily. This has helped the scholar-practitioner to walk away from this with an enhanced understanding of the academic program as well as the performance and perceptions of the IBLM at SA. The scholar-practitioner will also walk away from this research with an enhanced respect for colleagues involved in the academic program daily. They are truly dedicated professionals that have the students at SA at the center of their work and decision-making processes. The scholar-practitioner is eternally grateful for the lessons learned and skills attained during this research process. Although this experience has ended, the scholar-practitioner has been forever changed through the experiences of this journey.

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## Appendices

### Appendix A

#### Example Faculty Interview Protocol

##### Background Questions

- 1.) Tell me about your life outside of work? Family, hobbies, etc.?
- 2.) Where did you go to college?
  - a. What was your major?
  - b. What activities did you participate in?
- 3.) Describe your previous professional experience and how you ended up in your current position at SA?
  - a. What was your major?
  - b. What activities did you participate in?
- 4.) How long have you been teaching at SA?
  - a. What department do you serve in at SA?
  - b. How long have you served in your current role?
  - c. What differentiates SA from other schools where you have been employed?

##### Perceptions of Student Centered/IBLM Classrooms

- 1.) How do you define Student Centered?
- 2.) Walk me through a typical class in your subject area?
- 3.) Did you subscribe to a different style of instruction before the implementation of IBLM?
  - a. If so, what was this type of instruction, i.e.
- 4.) What activities do you use to facilitate a student-centered environment?
  - a. Do you have a favorite IBLM activity that is utilized in your classroom?
  - b. What is the frequency of this type of activity in an individual class period?
  - c. What is the frequency in a week?

##### Perceptions Questions

- 1.) How have students responded to the IBLM in your classroom?
  - a. Positives?
  - b. Challenges?
- 2.) How do you feel the IBLM program has been received by faculty?
  - a. Positives?
  - b. Challenges?
- 3.) What expectations have been set by administration regarding IBLM and the development of a student-centered environment?
- 4.) If you could make any adjustments to the current format of the program, what would those be?
- 5.) What type of professional development and training has been provided regarding IBLM?



- a. What have been the positives of this?
  - b. Challenges?
  - c. Is there anything that could be done to improve the PD program?
- 6.) Have you received parent feedback regarding the IBLM at SA?
- a. What has been the nature of this feedback?
- 7.) Do you feel parents seem satisfied with the instruction received at SA?
- a. Quality?
  - b. Type?

### **Engagement Questions**

- 1.) How do you define engagement in your classroom?
  - a. What steps do you take to facilitate this?
  - b. What characteristics do you feel an engaged student exhibits both in and out of the classroom?
- 2.) What do you feel engagement looks like for faculty at SA?
- 3.) What is the most engaging aspect of IBLM?
- 4.) What aspect of the IBLM is the most challenging for engagement in your opinion?

### **Concluding Questions**

- 1.) What challenges and opportunities do you see moving forward with the IBLM at SA?
- 2.) How can you be best supported to implement an IBLM that will be most beneficial to your students?
- 3.) Any concluding thoughts?

## Example Administrator Interview Protocol

### Background Questions

- 1.) Tell me about your life outside of work? Family, hobbies, etc.?
- 2.) Where did you go to college?
  - a. What was your major?
  - b. What activities did you participate in?
- 3.) Describe your previous professional experience and how you ended up in your current position at SA?
- 4.) How long have you been working at SA?
- 5.) How long have you served in your current role?
- 6.) What differentiates SA from other schools where you have been employed?

### Characteristics of Student Centered/IBLM Classroom

- 1.) How do you define a student-centered classroom?
- 2.) Walk me through what you think a typical student-centered class should embody?
- 3.) What type of instruction are you the most familiar in your education career?
- 4.) What activities do you advise teachers to use to facilitate a student-centered environment?
- 5.) Do you have a favorite IBLM activity?

### Perception Questions

- 1.) How do you feel SA students have responded to a more student-centered culture?
  - a. What impact has this had on the school?
  - b. What have the challenges been?
- 2.) How do you feel the IBLM program has been received by faculty?
  - a. Positives?
  - b. Challenges?
- 3.) What expectations have been set by administration regarding IBLM and the development of a student-centered environment?
- 4.) If you could make any adjustments to the current format of the program, what would those be?
- 5.) What type of professional development and training has been provided regarding IBLM?
  - a. What have been the positives of this?
  - b. Challenges?
  - c. Is there anything that could be done to improve the PD program?
- 6.) Have you received parent feedback regarding the IBLM at SA?
  - a. What has been the nature of this feedback?
  - b. Do you feel parents seem satisfied with the instruction received at SA?
    - i. Quality?
    - ii. Type?

**Engagement Questions**

- 1.) How do you define engagement?
  - a. What should teachers be doing to facilitate engagement in their classrooms?
  - b. What characteristics do you feel an engaged student exhibits both in and out of the classroom?
  - c. What do you feel engagement looks like for faculty at SA?
- 2.) What is the most engaging aspect of IBLM?
- 3.) What aspect of the IBLM is the most challenging for engagement in your opinion?

**Concluding Questions**

- 1.) What challenges and opportunities do you see moving forward with the IBLM at SA?
- 2.) How can you be best supported to supervise those that implement the IBLM at SA?
- 3.) Any concluding thoughts?

## **Example Parent Focus Group Interview Protocol**

### **Background Questions**

- 1.) Tell me your name and what grade your student or students are in?

### **Decision to Choose SA Questions**

- 1.) How were you initially introduced to SA?
- 2.) How long have you been associated with SA?
  - a. What made you decide to choose SA for your student?
  - b. What differentiates SA from other area public schools?
  - c. What differentiates SA from other area private schools?

### **Perceptions of Student Centered/IBLM Classroom**

- 1.) How familiar are you with the academic program at SA?
  - a. What is your perception of the IBLM model at SA?
  - b. What type of feedback does your student give?
  - c. What do you feel should be the most important aspect of your student's education at SA?
  - d. Did any particular element of SA's academic program lead you to choose to send you student here?
- 2.) What do you feel represents a student-centered education?
  - a. Does SA meet this expectation?

### **Overall Academic Program Perception Questions**

- 1.) How does your child feel about the academic program at SA?
  - a. What are their favorite aspects of the academic program?
  - b. What are their least favorite aspects?
- 2.) How do you feel about the direction of the academic program at SA?
- 3.) If you could make any adjustments to the current format of the program, what would those be?
  - a. Do you feel parents seem satisfied with the instruction received at SA?
    - i. Quality?
    - ii. Type?

### **Concluding Questions**

- 1.) Are you satisfied with the product you receive from SA?
  - a. If so, what components stand out?
  - b. If not, what would you like to see change?
- 2.) Any concluding thoughts?

## **Appendix B**

### **Example Faculty Survey**

#### **Demographic Questions**

- 1.) Are you an alumnus of SA?
- 2.) How many years of experience do you have in education?
- 3.) What department do you work in?
- 4.) What is your highest degree level?
- 5.) How many years have you worked at SA?

#### **Likert-Scale Questions**

*Note:* On a 5-point Likert scale where 1 is strongly disagree and 5 is strongly agree, and 3 is neutral:

- 1.) Do you feel supported in your professional development endeavors?
- 2.) Do you feel the IBLM facilitates a student-centered learning culture?
- 3.) Do you feel students enjoy IBLM activities?
- 4.) Do you feel students enjoy lecture-based activities?
- 5.) Do you feel IBLM is being implemented at a high level in SA classrooms?
- 6.) Do you feel IBLM places the student at the center of their own learning experience?
- 7.) Would you say that IBLM is implemented regularly in your classroom specifically?
- 8.) Do you feel the IBLM is a productive teaching and learning style?
- 9.) Do you feel the IBLM significantly contributes to the development of 21<sup>st</sup> century learners?
- 10.) Do you feel your students understand the concept of IBLM?
- 11.) Do students take initiative to direct their own learning in SA classrooms?

#### **Open Response Questions**

- 1.) Does SA provide professional development for IBLM and student-centered learning?
- 2.) How accessible do you feel this professional development is?
- 3.) What is a positive aspect of the professional development program at SA?
- 4.) What is one aspect of the professional development program you might change?

### **Example Parent Survey**

- 1.) Are you an alumnus of SA?
- 2.) How many children do you have at SA?
- 3.) What year did you come to SA as a parent?
- 4.) Why did you choose SA for your student(s)?
- 5.) Was the academic program a major factor in choosing to attend SA?
- 6.) Do you feel SA has been student-centered in regard to your student/students? Why or why not?
- 7.) What has been your student's/students' experience with the IBLM at SA?
- 8.) What do you think differentiates SA's academic program from area public schools?
- 9.) What do you think differentiates SA's academic program from other area independent schools?
- 10.) If you could change anything about your student's/students' academic experience at SA, what would you change?

## Appendix C



**To:** Freddy Ray Eaves  
**From:** Douglas James Adams, Chair  
 IRB Expedited Review  
**Date:** 05/21/2020  
**Action:** **Expedited Approval**  
**Action Date:** 05/21/2020  
**Protocol #:** 2004264291  
**Study Title:** The Effectiveness of The Inquiry Based Learning Method in a Private Independent School Environment  
**Expiration Date:** 04/30/2021  
**Last Approval Date:**

The above-referenced protocol has been approved following expedited review by the IRB Committee that oversees research with human subjects.

If the research involves collaboration with another institution then the research cannot commence until the Committee receives written notification of approval from the collaborating institution's IRB.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date.

Protocols are approved for a maximum period of one year. You may not continue any research activity beyond the expiration date without Committee approval. Please submit continuation requests early enough to allow sufficient time for review. Failure to receive approval for continuation before the expiration date will result in the automatic suspension of the approval of this protocol. Information collected following suspension is unapproved research and cannot be reported or published as research data. If you do not wish continued approval, please notify the Committee of the study closure.

**Adverse Events:** Any serious or unexpected adverse event must be reported to the IRB Committee within 48 hours. All other adverse events should be reported within 10 working days.

**Amendments:** If you wish to change any aspect of this study, such as the procedures, the consent forms, study personnel, or number of participants, please submit an amendment to the IRB. All changes must be approved by the IRB Committee before they can be initiated.

You must maintain a research file for at least 3 years after completion of the study. This file should include all correspondence with the IRB Committee, original signed consent forms, and study data.

cc: Kevin P Brady, Investigator

## Appendix D

### Informed Consent for Parent Survey

**Title of Research:** The Effectiveness of the Inquiry Based Learning Method in a Private Independent School.

**The Purpose of the Study:** You have been invited to participate in an electronic survey. The purpose of this study is to examine the effectiveness of an inquiry based learning model (IBLM) in a private independent school.

**Statement of Participants:** An estimated 600 parents who have children at the school are invited to participate in the electronic survey.

**Procedures and Expected Duration:** The survey will take approximately 10 minutes to complete and consists of 10 questions. Questions are open-ended in nature, which collects information as it pertains to the IBLM process. Follow-up interviews will be conducted after the surveys. You may be selected to receive an invitation to participate in these interview sessions. You will have an opportunity to express your willingness to participate in these follow-up interviews at the end of the survey. You will be asked for your contact information in the event you have interest in further participation in the study.

**Compensation or Incentives:** There is no compensation or incentives for participating in this electronic survey.

**Benefits:** The information gathered in this survey will potentially provide valuable feedback to the school, and potentially valuable data for similar schools. Participation in this electronic survey will contribute to the goal of collecting valuable data to inform decision making at private independent schools, especially in regard to the IBLM program.

**Voluntary Participation:** Participation in this electronic survey is purely voluntary. If you decide not to participate in this survey it will have no effect on your relationship with the researcher or the school that your student attends or attended. It will also not affect the care, services, or benefits to which you are entitled through your relationship with the researcher or the school that your student attends or attended.

**Withdrawal:** If you decide to participate in this electronic survey, you may withdraw your participation by exiting the survey at any time without penalty. If you feel uncomfortable in any way with any posed survey question, you have the right to decline to answer any question or to end the survey altogether. If you withdraw from the survey before the end, any responses you provide will be discarded and will not be used in any component of the research study.

**Potential Risks or Discomforts:** There are no known risks associated with participating in this electronic survey.



**Confidentiality:** All responses to the electronic survey will be anonymous and no identifying information will be collected unless you provide your email address if interested in taking part in a focus group or individual interview. Should you decide you want to participate further in the study, and you are selected to take part in a focus group or interview after completing the survey, your email address will be used only for these purposes. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions. Information collected in the survey will be kept confidential to the extent allowed by law and the University of Arkansas policy.

**Data Security:** Data collected from the electronic survey will be stored on a password protected Qualtrics database to which only the principal researcher has access. The researcher will safely keep any electronic or printed survey data on a password protected device or in a locked cabinet in the principal researcher's office.

**Researcher's Contact Information:** The researcher's and University of Arkansas faculty advisor's contact information has been provided to answer any questions pertaining to the study.

Fred Eaves

Dr. Kevin Brady

**Institutional Review Board Contact Information:** For questions or concerns about your rights as a research participant, please contact the University of Arkansas IRB by email at [irb@uark.edu](mailto:irb@uark.edu), by phone at 479-575-2208, or on campus.

**Informed Consent:** I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this survey. I also acknowledge that once I click "I Consent", I will be directed to the survey questions.

I Consent

I do not Consent

## **Informed Consent for Administrator/Faculty Survey**

**Title of Research:** The Effectiveness of the Inquiry Based Learning Method in a Private Independent School.

**The Purpose of the Study:** You have been invited to participate in an electronic survey. The purpose of this study is to examine the effectiveness of an inquiry based learning model (IBLM) in a private independent school.

**Statement of Participants:** An estimated 75 faculty and administrators who are employed at the school are invited to participate in the electronic survey.

**Procedures and Expected Duration:** The survey will take approximately 10 minutes to complete and consists of 20 questions. Questions are composed of multiple-choice responses and open-ended questions, both of which collect information as it pertains to the IBLM process. Follow-up interviews will be conducted after the surveys. You may be selected to receive an invitation to participate in these interview sessions. You will have an opportunity to express your willingness to participate in these follow-up interviews at the end of the survey. You will be asked for your contact information in the event you have interest in further participation in the study.

**Compensation or Incentives:** There is no compensation or incentives for participating in this electronic survey.

**Benefits:** The information gathered in this survey will potentially provide valuable feedback to the school, and potentially valuable data for similar schools. Participation in this electronic survey will contribute to the goal of collecting valuable data to inform decision making at private independent schools, especially in regards to the IBLM program.

**Voluntary Participation:** Participation in this electronic survey is purely voluntary. If you decide not to participate in this survey it will have no effect on your relationship with the researcher or school in which you are employed. It will also not affect the care, services, or benefits to which you are entitled through your relationship with the researcher or the school in which you are employed.

**Withdrawal:** If you decide to participate in this electronic survey, you may withdraw your participation by exiting the survey at any time without penalty. If you feel uncomfortable in any way with any posed survey question, you have the right to decline to answer any question or to end the survey altogether. If you withdraw from the survey before the end, any responses you provide will be discarded and will not be used in any component of the research study.

**Potential Risks or Discomforts:** There are no known risks associated with participating in this electronic survey.

**Confidentiality:** All responses to the electronic survey will be anonymous and no identifying information will be collected unless you provide your email address if interested in taking part in

a focus group or individual interview. Should you decide you want to participate further in the study, and you are selected to take part in a focus group or interview after completing the survey, your email address will be used only for these purposes. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions. Information collected in the survey will be kept confidential to the extent allowed by law and the University of Arkansas policy.

**Data Security:** Data collected from the electronic survey will be stored on a password protected Qualtrics database to which only the principal researcher has access. The researcher will safely keep any electronic or printed survey data on a password protected device or in a locked cabinet in the principal researcher's office.

**Researcher's Contact Information:** The researcher's and University of Arkansas faculty advisor's contact information has been provided to answer any questions pertaining to the study.

Fred Eaves

Dr. Kevin Brady

**Institutional Review Board Contact Information:** For questions or concerns about your rights as a research participant, please contact the University of Arkansas IRB by email at [irb@uark.edu](mailto:irb@uark.edu), by phone at 479-575-2208, or on campus.

**Informed Consent:** I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this survey. I also acknowledge that once I click "I Consent", I will be directed to the survey questions.

\_\_\_\_ I Consent

\_\_\_\_ I do not Consent

## Informed Consent for Administrator Focus Group Interviews

**Title of Research:** The Effectiveness of the Inquiry Based Learning Method in a Private Independent School.

**The Purpose of the Study:** You have been invited to participate in a focus group. The purpose of this study is to examine the effectiveness of an inquiry based learning model (IBLM) in a private independent school.

**Statement of Participants:** An estimated 10 participants who are administrators who have experienced the school both before and after the implementation of the IBLM program will participate in this focus group. The format of this participation is in a focus group interview format. If you decide to participate, you will be paired with four other administrators in a group of five.

**Procedures and Expected Duration:** The participant will be interviewed with a group of four other administrators. The interview will be recorded by an audio recorder. If you are not willing to be recorded, you will not be able to participate in the focus group. The researcher will guide the focus group discussion with posed initial questions and follow-up questions. The researcher will take notes during the interview as well. All interviews will be conducted via the Zoom platform virtually. Your participation will involve one meeting of approximately 60 minutes.

**Compensation or Incentives:** There is no compensation or incentives for participating in this focus group.

**Benefits:** The information gathered in this focus group will potentially provide valuable feedback to the school, and potentially valuable data for similar schools. Participation in this focus group will contribute to the goal of collecting valuable data to inform decision making at private independent schools, especially in regards to the IBLM program.

**Voluntary Participation:** Participation in this focus group is purely voluntary. If you decide not to participate in this focus group, it will have no effect on your relationship with the researcher. It will also not affect the care, services, or benefits to which you are entitled through your relationship with the researcher or the school in which you are employed.

**Withdrawal:** If you decide to participate in this focus group, you may withdraw your participation at any time without penalty. If you feel uncomfortable in any way during the interview session, you have the right to decline to answer any question or to end the interview. If you withdraw from the focus group, any responses you provide will be discarded and will not be used in any component of the research study.

**Potential Risks or Discomforts:** There are no known risks associated with participating in this focus group.

**Confidentiality:** No identifying information will be used in any reports or publications resulting from this research. Participants will be assigned an alias code in any written transcription.

Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions. You will be asked to respect the privacy and anonymity of other focus group participants by not sharing or discussing any information shared during the focus group session. Only the researcher will have access to raw notes or transcripts. This precaution will prevent your individual comments from having any negative repercussions to focus group participants. Information collected in the focus group will be kept confidential to the extent allowed by law and the University of Arkansas policy.

**Data Security:** The researcher will safely keep all collected files and data in a locked cabinet in the principal researcher's office. Once the data has been analyzed, it will be destroyed.

**Researcher's Contact Information:** The researcher's and University of Arkansas faculty advisor's contact information has been provided to answer any questions pertaining to the study.

Fred Eaves

Dr. Kevin Brady

**Institutional Review Board Contact Information:** For questions or concerns about your rights as a research participant, please contact the University of Arkansas IRB by email at [irb@uark.edu](mailto:irb@uark.edu), by phone at 479-575-2208, or on campus.

**Informed Consent:** I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I also acknowledge I have been provided a copy of this consent form.

---

Participant Signature

---

Participant Printed Name

---

Date

## **Informed Consent for Faculty Focus Group Interviews**

**Title of Research:** The Effectiveness of the Inquiry Based Learning Method in a Private Independent School.

**The Purpose of the Study:** You have been invited to participate in a focus group. The purpose of this study is to examine the effectiveness of an inquiry based learning model (IBLM) in a private independent school.

**Statement of Participants:** An estimated 10 participants who are faculty that have experienced the school both before and after the implementation of the IBLM program will participate in this focus group. The format of this participation is in a focus group interview format. If you decide to participate, you will be paired with four other faculty members in a group of five.

**Procedures and Expected Duration:** The participant will be interviewed with a group of four other administrators. The interview will be recorded by an audio recorder. If you are not willing to be recorded, you will not be able to participate in the focus group. The researcher will guide the focus group discussion with posed initial questions and follow-up questions. The researcher will take notes during the interview as well. All interviews will be conducted via the Zoom platform virtually. Your participation will involve one meeting of approximately 60 minutes.

**Compensation or Incentives:** There is no compensation or incentives for participating in this focus group.

**Benefits:** The information gathered in this focus group will potentially provide valuable feedback to the school, and potentially valuable data for similar schools. Participation in this focus group will contribute to the goal of collecting valuable data to inform decision making at private independent schools, especially in regards to the IBLM program.

**Voluntary Participation:** Participation in this focus group is purely voluntary. If you decide not to participate in this focus group, it will have no effect on your relationship with the researcher. It will also not affect the care, services, or benefits to which you are entitled through your relationship with the researcher or the school in which you are employed.

**Withdrawal:** If you decide to participate in this focus group, you may withdraw your participation at any time without penalty. If you feel uncomfortable in any way during the interview session, you have the right to decline to answer any question or to end the interview. If you withdraw from the focus group, any responses you provide will be discarded and will not be used in any component of the research study.

**Potential Risks or Discomforts:** There are no known risks associated with participating in this focus group.

**Confidentiality:** No identifying information will be used in any reports or publications resulting from this research. Participants will be assigned an alias code in any written transcription. Subsequent uses of records and data will be subject to standard data use policies which protect

the anonymity of individuals and institutions. You will be asked to respect the privacy and anonymity of other focus group participants by not sharing or discussing any information shared during the focus group session. Only the researcher will have access to raw notes or transcripts. This precaution will prevent your individual comments from having any negative repercussions to focus group participants. Information collected in the focus group will be kept confidential to the extent allowed by law and the University of Arkansas policy.

**Data Security:** The researcher will safely keep all collected files and data in a locked cabinet in the principal researcher's office. Once the data has been analyzed, it will be destroyed.

**Researcher's Contact Information:** The researcher's and University of Arkansas faculty advisor's contact information has been provided to answer any questions pertaining to the study.

Fred Eaves

Dr. Kevin Brady

**Institutional Review Board Contact Information:** For questions or concerns about your rights as a research participant, please contact the University of Arkansas IRB by email at [irb@uark.edu](mailto:irb@uark.edu), by phone at 479-575-2208, or on campus.

**Informed Consent:** I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I also acknowledge I have been provided a copy of this consent form.

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Participant Printed Name

\_\_\_\_\_  
Date

## **Informed Consent for Parent Focus Group Interviews**

**Title of Research:** The Effectiveness of the Inquiry Based Learning Method in a Private Independent School.

**The Purpose of the Study:** You have been invited to participate in a focus group. The purpose of this study is to examine the effectiveness of an inquiry based learning model (IBLM) in a private independent school.

**Statement of Participants:** An estimated 15 participants who are parents of students who have experienced the school both before and after the implementation of the IBLM program will participate in this focus group. The format of this participation is in a focus group interview format. If you decide to participate, you will be paired with four other parents in a group of five.

**Procedures and Expected Duration:** The participant will be interviewed with a group of four other parents. The interview will be recorded by an audio recorder. If you are not willing to be recorded, you will not be able to participate in the focus group. The researcher will guide the focus group discussion with posed initial questions and follow-up questions. The researcher will take notes during the interview as well. All interviews will be conducted via the Zoom platform virtually. Your participation will involve one meeting of approximately 60 minutes.

**Compensation or Incentives:** There is no compensation or incentives for participating in this focus group.

**Benefits:** The information gathered in this focus group will potentially provide valuable feedback to the school, and potentially valuable data for similar schools. Participation in this focus group will contribute to the goal of collecting valuable data to inform decision making at private independent schools, especially in regards to the IBLM program.

**Voluntary Participation:** Participation in this focus group is purely voluntary. If you decide not to participate in this focus group, it will have no effect on your relationship with the researcher or school your student attends or attended. It will also not affect the care, services, or benefits to which you are entitled through your relationship with the researcher or the school your student attends or attended.

**Withdrawal:** If you decide to participate in this focus group, you may withdraw your participation at any time without penalty. If you feel uncomfortable in any way during the interview session, you have the right to decline to answer any question or to end the interview. If you withdraw from the focus group, any responses you provide will be discarded and will not be used in any component of the research study.

**Potential Risks or Discomforts:** There are no known risks associated with participating in this focus group.

**Confidentiality:** No identifying information will be used in any reports or publications resulting from this research. Participants will be assigned an alias code in any written transcription.



Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions. Faculty and administrators from your student's school will neither be present at the interview nor have access to raw notes or transcripts. This precaution will prevent any individual comments from having any negative repercussions to focus group participants. Information collected in the focus group will be kept confidential to the extent allowed by law and the University of Arkansas policy.

**Data Security:** The researcher will safely keep all collected files and data in a locked cabinet in the principal researcher's office. Once the data has been analyzed, it will be destroyed.

**Researcher's Contact Information:** The researcher's and University of Arkansas faculty advisor's contact information has been provided to answer any questions pertaining to the study.

Fred Eaves

Dr. Kevin Brady

**Institutional Review Board Contact Information:** For questions or concerns about your rights as a research participant, please contact the University of Arkansas IRB by email at [irb@uark.edu](mailto:irb@uark.edu), by phone at 479-575-2208, or on campus.

**Informed Consent:** I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I also acknowledge I have been provided a copy of this consent form.

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Participant Printed Name

\_\_\_\_\_  
Date

## Appendix E

### Survey Recruitment Email

Email Subject: Inquiry Based Learning Method Feedback Survey

I am seeking participants that have experience with the inquiry based learning model (IBLM) for a research study investigating the academic program at your school. I would greatly appreciate your participation and feedback with this project. The purpose of this study is to examine the effectiveness of an inquiry based learning model (IBLM) in a private independent school.

If you decide to participate in the survey, it will take approximately 10 minutes of your time. All participants in this study have had experience with the IBLM program. If you decide to participate, the responses from the electronic survey will not collect or record personally identifiable information unless you select to provide your email address at the conclusion of the survey to take part in a focus group or individual interview.

Your participation in this survey is completely voluntary. If you decide you do not want to participate, you have the option of not completing the survey. If you are interested in participating, I have included the link that will direct you to a detailed explanation of the research study and the survey itself.

#### Hyperlink

Thank you for considering being part of this research process. I am grateful for your time and consideration. Follow-up interviews will be conducted after the surveys. You may be selected to receive an invitation to participate in these interview sessions. You will have an opportunity to express your willingness to participate in these follow-up interviews at the end of the survey. You will be asked for your contact information in the event you have interest in further participation in the study.

My contact info is included below for any questions you may have:

Many thanks,

Fred Eaves

## Focus Group/Individual Interview Recruitment Email

Email Subject: Inquiry Based Learning Method Interview Group

Thank you for expressing interest in participating in a focus group or individual interview. I greatly appreciate your willingness to take part in this research study. The purpose of this study is to examine the effectiveness of an inquiry based learning model (IBLM) in a private independent school.

If you decide to participate in a focus group or individual interview, it will take approximately 60 minutes of your time. All interviews will be conducted via the Zoom platform virtually, scheduled at the most convenient time for you. No identifying information will be used in any reports or publications resulting from this research.

Your participation in this focus group or interview is completely voluntary. If you decide you no longer wish to take part in a focus group or interview, please indicate so by replying to this email.

Interviews will be scheduled according to your convenience and availability. I will work to meet your needs in order to facilitate a smooth process. The interviewee will have the option to opt out of the interview process at any time.

Thank you for considering being part of this research process. I am grateful for your time and consideration, and I understand schedules can be very busy. Please select a few dates and times below that will be most convenient for you to take part in a focus group or individual interview.

Prospective Dates and Times for Focus Groups or Individual Interviews:

- 1)
- 2)
- 3)
- 4)
- 5)

My contact info is included below for any questions you may have:

Many thanks,

Fred Eaves