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## Increasing Social and Emotional Learning Competencies Through Use of Tabletop Role-Playing Games

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INCREASING SOCIAL AND EMOTIONAL LEARNING COMPETENCIES THROUGH USE  
OF TABLETOP ROLE-PLAYING GAMES

by

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An Improvement Science Dissertation in Practice  
Presented to the Faculty of the Doctor of Educational Leadership Department  
in partial fulfillment for the degree of  
Doctor of Education

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March 24, 2021



GEORGE FOX  
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COLLEGE OF EDUCATION | EdD

“INCREASING SOCIAL AND EMOTIONAL LEARNING COMPETENCIES THROUGH THE USE OF TABLETOP ROLE-PLAYING GAMES,” a Doctoral research project prepared by TIA RUFF in partial fulfillment of the requirements for the Doctor of Education degree in Educational Leadership.

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## ABSTRACT

This Improvement Science Dissertation in Practice (ISDiP) aimed to investigate the use of tabletop role-playing games in supporting the social and emotional development of students in upper elementary grade levels. Using a mixed-methods approach, this ISDiP follows a team of invested school community members as they planned, implemented, studied, and reflected on the outcomes of initiating targeted social and emotional learning interventions to 16 students from a small alternative school in Anchorage, Alaska. Through a 90-day cycle, the School's Network Improvement Community (NIC) organized and executed an after-school SEL club after data on a district-wide survey indicated that social and emotional learning (SEL) was a necessary focus for the school context. The NIC utilized a self-assessment SEL screener, anecdotal observations, as well as parent, teacher, and student testimonies to justify the outcomes of this study. The researcher found that tabletop role-playing games (TTRPGs) are a viable, effective, and fun way to help students develop their social and emotional skills. This result was evident based on the mySAEBRS survey results, which demonstrated an average increase of 6.6% across all participants. This data was justified further by the anecdotal observations made by a diverse pool of stakeholders. Based on these results, the NIC was able to expand the SEL/TTRPG intervention to their entire school community and would like to encourage other school contexts to do so as well.

## ACKNOWLEDGEMENTS

The lead researcher would like to thank many people for their help, support, and commitment to this project. This ISDiP would not have been possible without the dedication and devotion of many.

To the team, thank you for your time, energy, and passion in helping to develop an authentic hybrid between Dungeons and Dragons and an SEL intervention. The adventures we created and led students on were legendary, and I appreciate your artistry along with your commitment to helping our students thrive.

To our participants, the students of the K-12, thank you for your continued resilience and adaptability in uncertain times. Your enthusiasm for learning and your love for adventure is inspired. To the many researchers that have come before us, in special recognition to the founders of Games to Grow, thank you for the inspiration to continue your great and timely work.

And lastly, to my family, thank you for your endless and selfless love.

## TABLE OF CONTENTS

Abstract .....	i
Acknowledgements .....	ii
Table of Contents .....	iii
List of Tables .....	vi
List of Figures .....	vii
Chapter 1: Plan.....	1
Background.....	1
Educational Problem of Practice.....	3
Review of Literature .....	6
The Importance of Social And Emotional Learning.....	6
Game-Based Methodologies.....	9
Tabletop Role-Playing Games.....	11
Purpose & Significance Statement.....	13
Hypothesized Outcomes.....	14
Chapter 2: Do.....	16
Theory of Improvement .....	16
The Network Improvement Community.....	16
Methodology: Driver Diagram.....	18
Study Participants.....	20
ISDiP Implementation Plan.....	22

Explanation of Treatment Intervention ..... 23

Explanation of Measures..... 26

Ethical Considerations ..... 28

Chapter 3: Study ..... 29

Quantifiable Findings And Analysis: The Results of The mySAEBRS Student Self-  
Assessment Screener..... 29

    Analysis of Quantitative Measures. .... 33

Qualitative Findings: Skill Transference ..... 34

    Verbal and Written Testimonies. .... 34

        Testimonies From Students..... 34

        Testimonies From Parents..... 35

        Testimonies From Teachers..... 37

    Anecdotal Observations. .... 38

    NIC Conversations..... 42

Qualitative Analysis: Implications For The Future At The K-12 School..... 44

    Immediate Benefits To The K-12 School Context. .... 45

Limitations ..... 46

Summary of Findings..... 47

Chapter 4: Act..... 48

Discussion of Findings..... 48

    Impact of Change at the K-12 School..... 48

    Impact of Change to Field..... 50

Next Steps/ Recommendation for Future Research .....	52
Final Summary & Conclusion .....	54
References.....	56
Appendice .....	59
Appendix A.....	60
Appendix B.....	64
Appendix C.....	66
Appendix D.....	68
Appendix E.....	70



## LIST OF TABLES

Table 1: Percent Favorable Responses on the SEL Related Measures on the Climate & Connectedness Survey .....	3
Table 2: The Results of the mySAEBR Student Self-Assessment Screener .....	30
Table 3: The Analysis of the mySAEBRS Sub-Scales for Those Considered “At-Risk” .....	32
Table 4: Anecdotal Observations Collected by the NIC Leads .....	40

## LIST OF FIGURES

Figure 1 The Root Cause of the Low and Decreasing SEL Competencies of Students at The K-12 School, as Indicated by The NIC. ....	5
Figure 2 The Five Core Sel Competencies, as Outlined by The CASEL Organization (Casel, 2017). ....	7
Figure 3 The Seven Main Benefits of Game-Based Learning, as Depicted by John Spencer (2018). ....	9
Figure 4 The Connection Between Game-Based Learning and SEL Competency Development.	11
Figure 5 The Plausible Results of this ISDiP. ....	15
Figure 6 The Network Improvement Community. ....	16
Figure 7 ‘Plan, Do, Study, Act’ Outline for this SEL/TTRPGs ISDiP. ....	19

## Chapter 1: Plan

### Background

Academic and cognitive aptitude has been the longstanding foci of administrators, researchers, politicians, community stakeholders, and other decision-making bodies for centuries. However, the importance of developing social and emotional competencies in school-aged children has gained recent recognition in education. Social and emotional learning competencies include a child's ability to recognize, understand, and manage their feelings and emotions and identify others' unique feelings and emotions. These competencies allow children to empathize and relate to others on a more grounded level, which increases their success when collaborating and communicating with peers. These two skills are undeniably necessary in today's world. That said, the general scarcity of targeted social and emotional learning in schools has created an overall deficit in our school-aged children. This deficit was recognizable at a small alternative school in Anchorage, Alaska, and a group of teachers, community members, and stakeholders came together to rectify the problem.

The unnamed K-12 School is an alternative public school located in the largest urban city in Alaska. The school serves 486 students in Kindergarten through twelve, all of whom attend by choice, based on a lottery system. The K-12 School functions under an open-optional philosophy that builds from a student-centered, project-based approach. At the school, teachers and staff strive to provide a foundation for students that offers a supportive, collaborative, and emotionally safe learning environment where instruction is rigorous and will set students up for success in school and life. Beyond academics, teachers and staff aim to support students in their social and emotional health.

In the past, the *Habits of Mind* curriculum created by Bena Kallick and Arthur Costa was utilized school-wide to promote positive mindfulness regarding self, others, and the world. This curriculum was later replaced with the *6 C's of Education*, first introduced by Brian Miller, to promote the learning and development of SEL skills relating to creativity, collaboration, character, critical thinking, communication, and citizenship (Miller, 2015). Additionally, from the onset of the schools' founding in 1994, *Kelso's choices*, developed by Diane Hipp and Barbara Clark, have been used with the younger students to promote positive student relations. While these SEL-focused initiatives have been utilized school-wide, implementation has mainly been unsystematic. The Network Improvement Community (NIC) hypothesized that the unsystematic approach to SEL-focused instruction was a proponent of the ineffectiveness teachers, administrators, and support staff were noticing within the student population. This hypothesis is specifically evident by the disheartening decline in positive SEL responses from students across grade levels when assessed on a voluntary-based survey instrument. This survey and the data disclosed will be further addressed in the following section.

This study is grounded in ISDiP principles, which sets this work apart from a traditional action research dissertation in four unique ways. First, "Improvement science is what educators and organizational leaders do inherently every day: strive to improve their contexts systematically" (Perry, Zambo, & Crow, 2020, p. 28). In this ISDiP, the NIC focused closely on their context to determine the root causes of low and decreasing SEL scores as well as implement a unique intervention strategy. Second, an ISDiP also encourages the use of theoretical frameworks that allow for iterative work. In this study, the NIC used the Plan, Do, Study, Act Framework, as outlined in Perry, Zambo, and Crow (2020), to prepare, implement, modify, and repeat, as necessary, the proposed SEL intervention throughout a 90-day cycle. Third, unlike

traditional action research dissertation studies, an ISDiP does not happen by the researcher alone. Instead, an NIC is established to “embrace the wisdom of crowds” – essentially, working closely with interested and invested stakeholders throughout the project (Perry, Zambo, & Crow, 2020, p. 15). Therefore, the Network Improvement Community was organized for the sake of this study.

Lastly, an ISDiP sets itself apart from a traditional dissertation based on the intended outcomes. Unlike traditional dissertations, which aim to extend theory or discover something new, improvement science dissertations aim to advance professional knowledge and the researcher as a scholarly practitioner, educator, and school leader. That was the NIC’s intent as an outcome of this work and to directly support the K-12 School’s students.

### **Educational Problem of Practice**

Based on data collected from students enrolled in grades 3-5 at the K-12 school over five years, noticeable declines in positive social and emotional perspectives towards self, peers, and context were discernable. Data collected from the School Climate and Connectedness Survey (SCCS) from 2015- 2019 demonstrated an overall decline of 6% from students in grades 3-5 on the SEL-specific measures. This data is displayed visually in Table 1.

**Table 1**

*Percent Favorable Responses on the SEL Related Measures on the Climate & Connectedness Survey*

<i>% Favorable Responses on The Climate &amp; Connectedness Survey SEL Specific Related Measures</i>							
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Change*</b>
<b>3-5</b>	69%	65%	68%	67%	67%	63%	(-) 6%
<b>6-12</b>		82%	78%	78%	75%	72%	(-) 10%

The Student and Staff Climate and Connectedness Survey (SCCS), administered annually, is a voluntary-based survey tool used in the state of Alaska to provide perspective on students' and staffs' attitudes and perspectives relating to social and emotional learning, perceptions of school climate, connectedness between school community members, and risk behaviors within a school context (Association of Alaska School Boards, 2006). The SCCS was developed by the American Institutes for Research (AIR) in partnership with the Association of Alaska School Boards in 2006. Alaska School districts are invited each spring to measure student, staff, and family perceptions of: (1) how students, staff, and families view school climate, (2) how connected students feel to adults and peers within the context, (3) any observed risk behaviors at school and school events, and (4) social and emotional learning (SEL) taking place within the context. The fourth and last component of this survey is the focal point for this ISDiP.

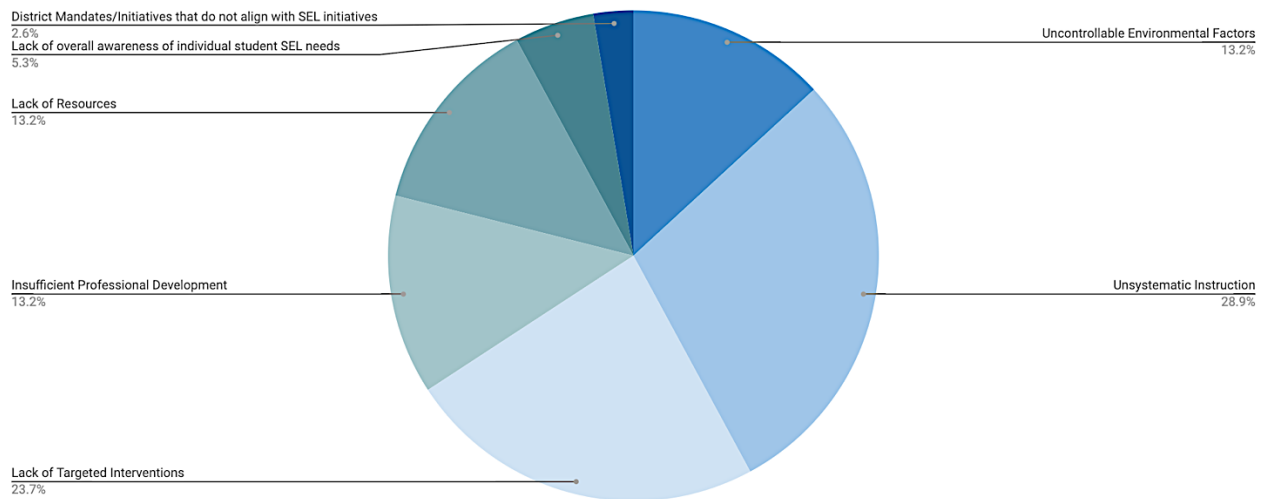
These noticeable decreases, made evident on the SCCS, came before the onset of the turbulent times that global communities began facing at the closure of the 2019/20 school year, including an unprecedented health crisis vis a vis COVID-19. Teachers, administrators, and support staff feared for the continued decline in social and emotional related skills and competencies given the already low and decreasing social and emotional levels within their student population. They hypothesized that the SEL competencies in the upper elementary student population would be even lower than expected when returning to school in Fall 2020.

Based on data that surfaced around the same time, the hypothesis from the NIC was viable. YoungMinds, a charity organization based in the United Kingdom, surveyed over 2,000 "young people" to determine the adverse effects of the COVID-19 pandemic on students' mental health. According to the survey conducted in September 2020, 83% of young people, defined as

anyone under the age of 25, agreed that the COVID-19 pandemic worsened pre-existing mental health conditions mainly due to school closures, routine loss, and restricted social connections (YoungMinds, 2020). Based on this information, teachers and staff members were asked to comment on the root causes they believed could have influenced the continued decline to the SEL scores. Of the various root causes mentioned, which are displayed in Figure 1, unsystematic instruction and the lack of targeted interventions were the top two root causes indicated by staff.

Based on the information outlined above, the NIC came together to examine a plausible solution to the SEL challenges facing students at the K-12 school. The NIC's goal was to support students in upper elementary on their SEL competency development by implementing a research-suggested method of SEL intervention, namely, utilizing tabletop role-playing games to support the SEL development, beginning with students in grades 4 and 5.

Root Cause of Low/Decreasing SEL Competencies of Students at Polaris K-12



**Figure 1**

*The root cause of the low and decreasing SEL Competencies of students at the K-12 School, as indicated by the NIC.*

## Review of Literature

This ISDiP is grounded in leading research that spans various fields, concentrations, and topics. To help achieve their goal, the NIC sought research describing the importance and history of social and emotional learning, game-based methodologies, and the use of tabletop role-playing games as a means to support SEL competency development in school-aged children. This section outlines and explains the predispositions relating to these three foci.

**The importance of social and emotional learning.** The history of social and emotional learning dates back to Plato in ancient Greece when he wrote *The Republic* in 375BC. In this early text, Plato proposed that in order to have a holistic curriculum, one would need to balance the implementation of focused training between core-academic areas, including math and science, as well as between some ‘softer disciplines,’ including character development and moral decision-making (George Lucas Educational Foundation, 2011). Then, in the late 1960s, James Comer began piloting an SEL program centered on his assumption that a child’s experience at home and those at school deeply affect their psychosocial development. Comer’s program demonstrated plausible benefits to targeted SEL interventions when behavior problems and truancy declined in the two low-performing schools where his SEL program was piloted (O’Neill & Comer, 1997).

Later, the Collaborative for Academic, Social, and Emotional Learning (CASEL) was founded to help teachers implement SEL-related lessons and activities into their classrooms. However, SEL-related instruction often becomes unprioritized in educational settings due to the continued emphasis on academic-related competencies. Despite this, SEL has had a foothold in educational settings for a long time. For this reason, there is a well-accepted, well-utilized



definition of SEL and SEL-related competencies. According to the National Education Association (2018):

SEL is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, establish and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships and make responsible decisions (p. 1).

CASEL, a leading SEL-focused institution, has a well-publicized graphic that visually displays the five core competencies that are meant to be learned and instilled in school-aged students. This SEL core-competency graphic is displayed in Figure 2.



**Figure 2**

*The five core SEL Competencies, as outlined by the CASEL organization (CASEL, 2017).*

Note: Source: ©2021 CASEL. All Rights Reserved. [Source URL]

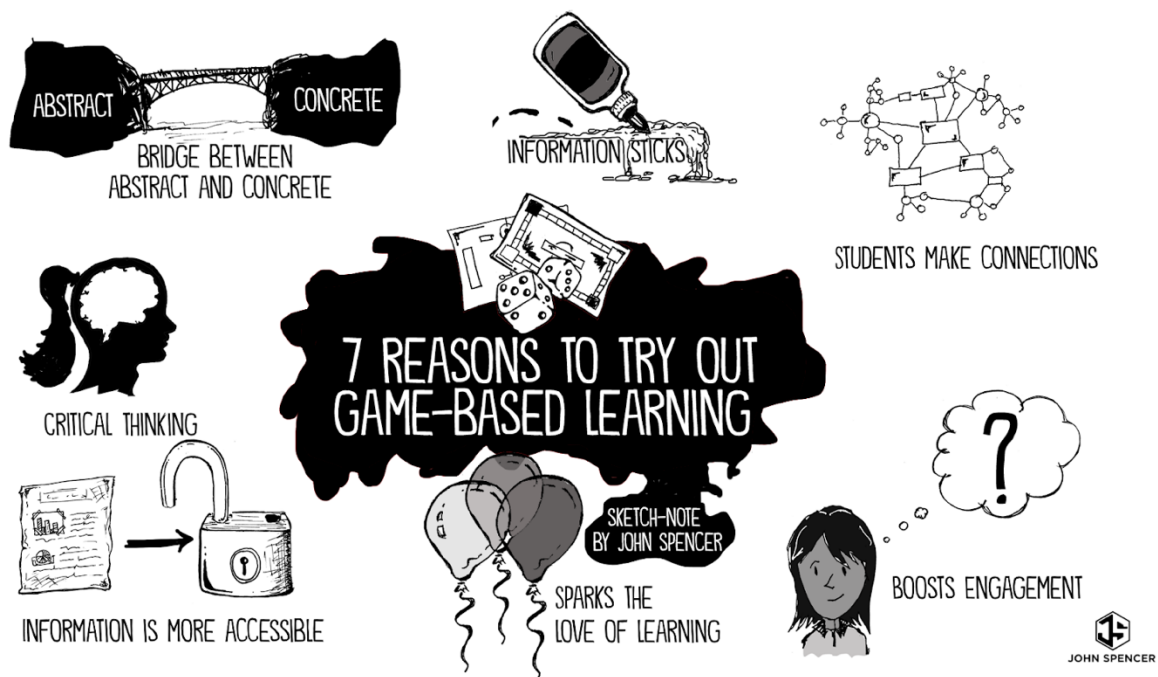
As indicated in Figure 2, school-age students must learn, understand, and apply five core SEL skills, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. According to the CASEL organization, these skills can help prepare students for success in school and life (CASEL, 2021).

SEL has also been found to promote life skills that support students outside of the classroom setting as well. According to a large-scale review of over 300 SEL-focused studies, researchers found that the addition of SEL programs in elementary schools can lead to “several real-life benefits for students” (Durlak & Mahoney, 2019, p. 2). These benefits include skill development, academic achievement, prosocial behavior, lower emotional distress levels, and decreases in conduct problems (Durlak & Mahoney, 2019). It was also found that students who receive quality SEL instruction during elementary school demonstrate better academic performance, improved attitudes and behaviors, fewer negative behaviors, and reduced emotional distress (National Education Association, 2018).

With that said, even when focused and systematic SEL instruction is implemented to an entire class, research has shown that some students require even more support. According to McConaughy & Skiba (1993), students identified as “at-risk” for SEL competency deficiencies will suffer from a wide range of external and internal behaviors without targeted small-group SEL interventions. These external behaviors include noncompliance, defiance, aggression, and internal behaviors such as anxiety, withdrawal, and depression (McConaughy & Skiba, 1993). Students who suffer from these external and internal behaviors are more likely to have impaired social relationships, underachieve in academic situations, and have higher disciplinary actions than their peers (Lane, Wehby, & Barton-Arwood, 2005). Outside of the classroom, these

students are also more likely to “experience unemployment, be involved in motor vehicle accidents, and require mental health services” (Lane et al., 2005, p. 7).

**Game-based methodologies.** While the main focus of this ISDiP is on SEL competency development—the heart of this study revolves around the way the NIC aims to implement the targeted SEL interventions. The NIC aims to use game-based learning methodologies, which have been defined as “The use of games to enhance the learning experience,” to increase students’ SEL core-competencies (Nistor & Iacob, 2018, p. 309). As displayed in Figure 3, there are seven plausible reasons how game-based learning can benefit students.



**Figure 3**

*The seven main benefits of game-based learning, as depicted by John Spencer (2018).*

These benefits of game-based learning include boosted engagement, increased retention of content, the creation of more concrete connections between concepts and ideas, a bridge between abstract and concrete concepts, making information more accessible, supporting critical

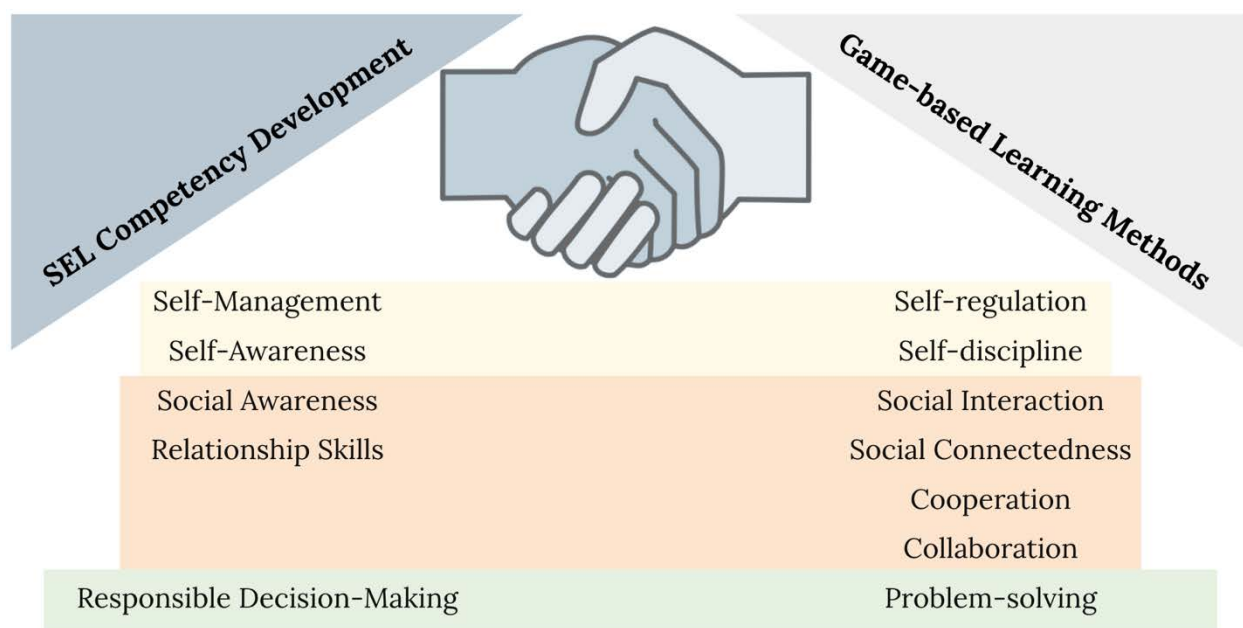
thinking, and creating a love for learning. With these plausible benefits, the use of game-based methodologies to help students increase SEL competencies is viable.

The theoretical foundations of game-based learning are grounded in the theory of play. Based on the work of Ginott (1961), Gumaer (1984), Landreth (1993, 1987), and Oaklander (1978), play is considered a child's natural form of communication. Elementary school counselors first adopted the use of play as a counseling tool; however, this has since expanded to include play therapy and learning through play in classrooms around the world (Landreth, 1987, p. 253). Play, according to Campbell (1993), also provides children with opportunities to "develop and practice new and more productive behaviors that may be applied to everyday life" (p. 13). Moreover, children may learn more thoroughly through "creative drama and role-play" (Campbell, 1993, p. 13).

In further support of this notion, an empirical and theoretical literature review conducted by Hromek & Roffey (2009) dictated that "games are a powerful way of developing social and emotional learning in young people" (p. 626). Additionally, based on research by Vygotsky, Gardner, and Goleman, Hromek et al. noted that "the interactional nature of games is what makes them especially suitable for delivering SEL" (as cited in Hromek et al., 2006, p. 632). Furthermore, according to the meta-analysis conducted in 2006, "games are a powerful way of developing social and emotional learning in young people" because of "the interactional nature of games (as cited in Hromek et al., 2006, p. 632). In this meta-analysis, researchers explain that games provide the potential for transformative learning of SEL skills due to the social interaction, social connectedness, cooperation, and collaboration intertwined into game-play. They also state that self-regulation, role-playing, problem-solving, and self-discipline are some

of the multifaceted learning layers that game-play brings to learners (as cited in Hromek et al., 2006, p. 632).

As displayed in Figure 4, significant parallels exist between the outcome goals of SEL competency development and the process and implementation components of what game-based learning methods can plausibly provide. For example, self-management and self-awareness relate very closely to self-regulation and self-discipline. Similarly, the SEL competencies of social awareness and relationship skills correlate with research suggested outcomes of game-based learning methods, including proper social interaction, social connectedness, cooperation, and collaboration.



**Figure 4**

*The connection between game-based learning and SEL competency development.*

**Tabletop role-playing games.** A specific branch of game-based methodologies uses tabletop role-playing games (TTRPGs) as the focused implementation approach for intervention. According to a teacher in Vermont who has utilized this approach in their classroom, TTRPGs

“genuinely help students achieve their social-emotional goals” (as cited in Darvasi, 2019, para. 2). Other teachers who have practice implementing TTRPGs have also commented that TTRPGs allow students to practice empathy, negotiation, problem-solving, teamwork, and social maneuvering (as cited in Darvasi, 2019, sec. Real-World Fantasy, para. 3).

While research on the topic of TTRPGs is limited due to the relatively new resurgence of these games, especially their use in educational settings, several studies have found plausible connections between TTRPGs and improvements in SEL. For example, a study conducted by Stephane Daniau in 2016 to raise awareness about TTRPGs and its transformative potential showed that TTRPGs are “particularly effective in fostering knowledge acquisition, develop role-play skills, strengthen team building, encourage collaborative creativity, and explore one’s personal development” (p. 423). Daniau (2016) suggests this is possible because TTRPGs provide a safe space for students to learn real-life lessons without the risk. For example, “as in reality, [players of TTRPGs] must deal with the rules of society, adapt to environmental changes, manage priorities, and assume the consequence of their actions” (Daniau, 2016, p. 439). Additionally, a case-study conducted to examine social interaction and emotional psychoeducation using TTRPGs found that students became more aware of their own interaction patterns. Rosselet and Stauffer (2013) state that students “temper reactions to scenarios and engaged more appropriately with others” through the use of TTRPG as an intervention (p. 189).

These benefits may derive from the fundamental structure of TTRPGs. While many games emphasize competition, TTRPGs focus on cooperative play. According to Richard Stubbs (2018), a music and TTRPG therapist in Southern Oregon, in TTRPGs the group “rises and falls together—each player has a specific role to play within their group and each person will have their moment of triumph, but it is a moment that is shared by all the members of the team” (sec.

social-emotional learning, para. 2). Furthermore, “during campaigns, players will collaboratively solve problems, negotiate differing opinions, and take the perspective of their own character which leads to higher levels of self-confidence, self-control, empathy, perspective-taking, and social- and self-awareness” (Stubbs, 2018, sec. social-emotional learning, para. 3).

A specific TTRPG curriculum, Critical Core, shows promising outcomes for specific, targeted, and systematic SEL interventions with elementary grade students. According to the Critical Core team, this TTRPG can aid in developing “confident, creative, and socially capable” youth (Games to Grow, n.d., sect. Tabletop Role-Playing Games, para. 2). While the NIC were interested in utilizing this curriculum, upon a more in-depth investigation, the NIC decided that this curriculum would not be appropriate for use in this ISDiP. This decision will be explained further in the following section; however, the research on the Critical Core Curriculum was still beneficial to this ISDiP. It inspired the NIC in the method of facilitation for the treatment intervention utilized in this study, i.e., using tabletop role-playing games to help support SEL skill development.

### **Purpose & Significance Statement**

This Improvement Science Dissertation in Practice (ISDiP) aims to examine a plausible solution to the SEL challenges facing students at a K-12 school by implementing a research-suggested method of SEL intervention. The NIC aim to utilize Table Top Role Playing Games (TTRPGs) to support students’ SEL competency development within their context. This ISDiP was guided by answering the following question: To what extent does a focused SEL TTRPG intervention aid in the development of SEL competencies?

This ISDiP can add to existing knowledge relating to what is currently known regarding Table Top Role Playing Games and their use in SEL interventions. This study can also be immediately beneficial to the K-12nschool community students.

**Hypothesized outcomes.** There were three likely outcomes that the NIC hypothesized if this ISDiP was conducted, each outcome more ideal than the one that precedes it. These plausible outcomes are displayed in Figure 5. First, if this ISDiP was implemented, but no significant results were found immediately, or by the end of the implementation timeline, there would be no harm done to participants, context, or field. The NIC agreed to continue to revise and make modifications to the SEL interventions. The null-effect results would be disseminated, and the participants, while receiving no specific increase in SEL competency, would have received an opportunity to engage with peers and teachers on a smaller scale during non-instructional times. Second, if this ISDiP was implemented and some results were favorable while others were not, the NIC would have gained invaluable knowledge about what did and did not work. Finally, if this study saw favorable results, participants would have observed direct improvements in SEL competencies. Furthermore, the NIC would have localized knowledge of an SEL intervention requiring little scaling for further use within the school's context.

However, several positive results that were unforeseen relate directly to the COVID-19 pandemic that was occurring during the duration of this ISDiP. These findings will be discussed in the following chapter.



Null-effect	- effect	+ effect
<ul style="list-style-type: none"> <li>- Insignificant** positive increases in SEL competency development</li> <li>- Insignificant** positive transference to general education classroom</li> <li>- Need for continued modification/improvement with preliminary participants (no ability to expand).</li> </ul>	<ul style="list-style-type: none"> <li>- Decreases in SEL competency development and/or increases in negative SEL behaviors</li> <li>- Negative transference to general education classroom.</li> <li>- Need for significant programmatic changes to study intervention (need to condense)</li> </ul>	<ul style="list-style-type: none"> <li>- Significant** positive increases in SEL competency development</li> <li>- Significant** positive transference to general education classroom</li> <li>- Ability to expand SEL intervention using TTRPGs to additional students within Polaris K-12 context.</li> </ul>
<p style="text-align: center;"><b>Based on</b></p> <ul style="list-style-type: none"> <li>- mySAEBRS student self-assessment screener</li> <li>- Polaris NIC member advising</li> </ul>		

\*\*Specific details regarding generalized statements such as 'insignificant', 'moderate', and 'significant' will be decided by the Polaris NIC.

## Figure 5

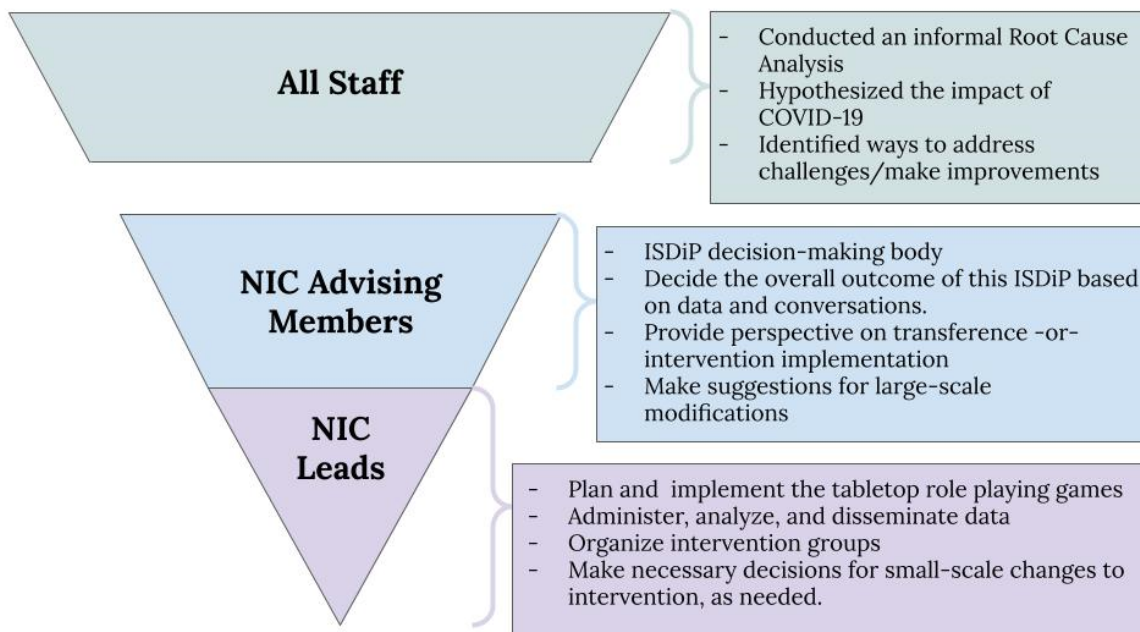
*The plausible results of this ISDiP.*

## Chapter 2: Do

### Theory of Improvement

This ISDiP aims to examine the extent to which tabletop role-playing games help students in upper elementary grade levels develop the necessary SEL competencies to navigate socially and emotionally demanding situations successfully. Established by the Network Improvement Community, this ISDiP will be guided by answering the following question: To what extent does a focused SEL TTRPG intervention aid in the development of SEL core-competencies according to the mySAEBRS student self-assessment screener, anecdotal observations, and testimonies provided by parents, teachers, and student participants?

**The Network Improvement Community.** The NIC comprises three distinct groups, each with unique roles in influencing, supporting, and interacting with this study. These groups are visually described in Figure 6.



**Figure 6**

*The Network Improvement Community.*

The largest group of the NIC comprises the entire staff of the K-12 school. This group consists of 38 members. While formal interactions with this group were limited, mainly to avoid causing overwhelming feelings or adding any additional workload on uninterested staff members, the work conducted with the entire staff greatly influenced this ISDiP in a significant way. The other two groups of the NIC, including the NIC advising members and the NIC leads, had a more central and intentional role in this ISDiP. These two groups consisted of members of the school community that joined this team by choice based on their interest in this work and their willingness to engage in the entire process actively. The NIC advising members were a diverse group of interested teachers, administrators, parents, students, and other community members. Spanning a wide range of ages and professions, these NIC advising members' primary role was to decide the overall outcome of this study as unbiased participants. None of these members acted as intervention coaches with student participants and could objectively speak to the study's outcomes. Additional roles for the NIC advising group consisted of making large-scale decisions based on the necessity of modifications and changes throughout the ISDiP.

Lastly, the NIC leads consisted of the four most active members of this ISDiP. The central role of all four leads was to plan and implement the TTRPG intervention to student participants. While the leads did not hold power to make large-scale changes to the study parameters without the NIC advising members' console, NIC leads could make timely, small-scale changes to the intervention implementation, as needed.

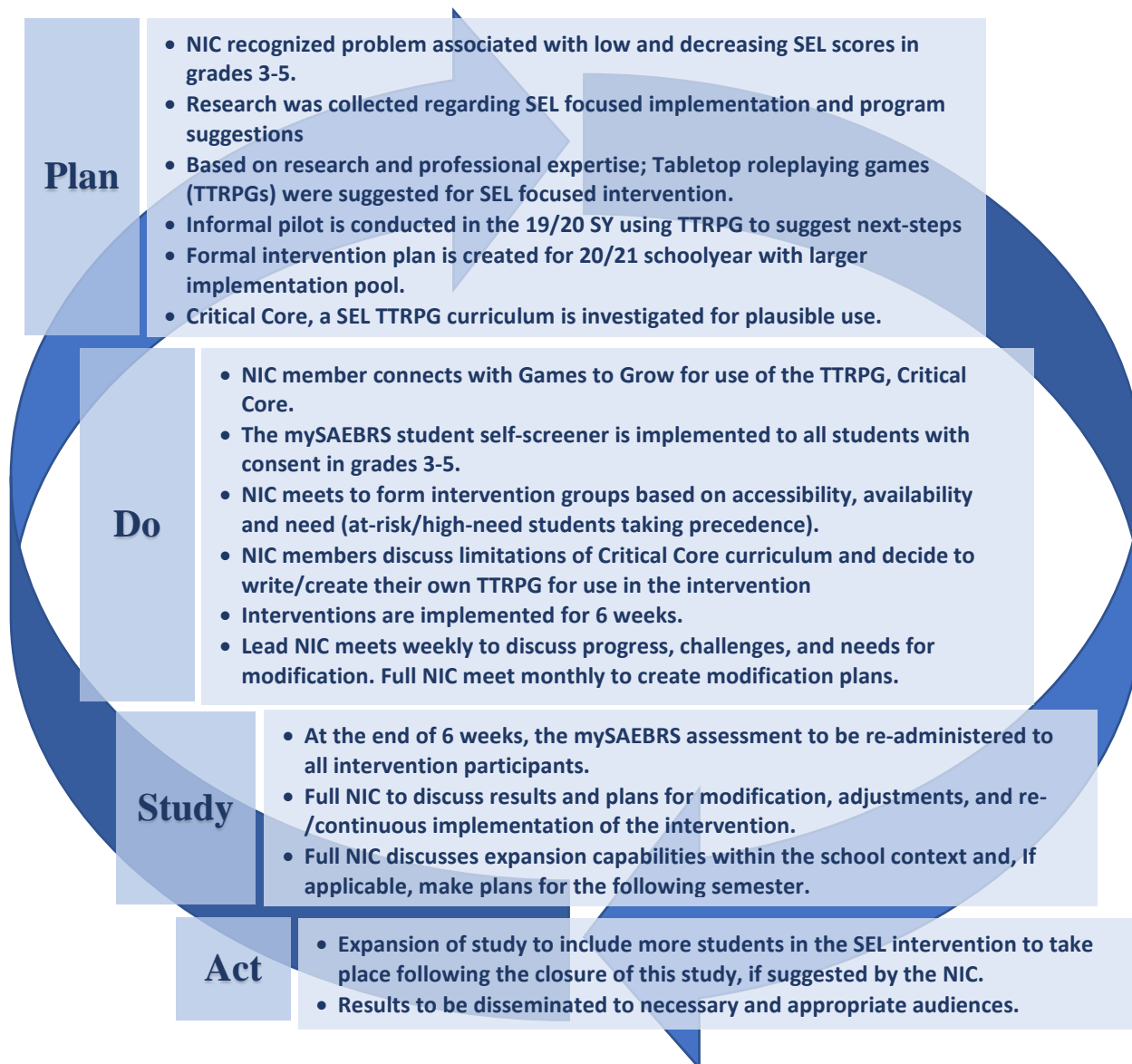
The four NIC leads included the lead researcher for this ISDiP, a 4/5 teacher at the K-12 school. The other leads included a certified SPED teacher, a community member who is also a Dungeons and Dragons expert, and another 4/5 teacher. The NIC leads held the responsibilities outlined in Figure 8; however, each played a specific role within the lead group. The first acted

as lead assessment administrator, administering and scoring the mySAEBRS student-self screener. She also was one of the NIC meeting facilitators, one of the intervention coordinators, and the intervention coach for Group A. The second acted as NIC meeting co-facilitator and co-coordinator for the intervention plan. She also acted as the Intervention coach for group B. The third acted as the lead implementation specialist and was the lead intervention plan coordinator. He also acted as the intervention coach for the third group. Lastly, the fourth lead was the last intervention coach, overseeing and facilitating group D for the duration of the ISDiP.

**Methodology: Driver Diagram.** The NIC used the Improvement Science processes of a ‘Plan, Do, Study, Act’ (PDSA) framework to guide the planning, implementation, and analysis of this ISDiP, as seen in Figure 7.

The NIC began this ISDiP with an evaluation of data from the School Climate and Connectedness Survey. This analysis was followed by a root cause analysis conducted by the staff. From these sources, the NIC recognized a school-wide problem relating to the low and decreasing SEL scores of their student population, the most prevalent within the 3-5 grade band. Based on these results, the NIC gathered research relating to a plausible intervention that could better support their SEL skill development students. As described in the literature review, it was found that tabletop role-playing games may support SEL competency development.

Additionally, the NIC conducted an informal pilot trial with a few select students at the end of the 2019/2020 school year. This pilot trial, including three students in grade 5, gave the NIC evidence that this type of intervention held promise in aiding students in their social and emotional skill development. Following these preliminary analyses, the NIC developed plans to expand this trial into a more formal study.



**Figure 7**

***‘Plan, Do, Study, Act’ Outline for this SEL/TTRPG ISDiP.***

Note: This Improvement Science Tool was inspired by the ‘Plan, Do, Study, Act’ Framework, as described in Crow, Hinnant-Crawford, and Spaulding (2019) and has been re-visualized for use in this ISDiP.

Continuing to utilize data procured by the School Climate and Connectedness Survey administration, the NIC selected the 3-5 grade band as their continued foci. The NIC also sought counsel from Games to Grow, a 501 © non-profit organization, regarding their Critical Core

curriculum. This TTRPG curriculum, which was still in the Kickstarter stage at the time of this ISDiP, showed promising outcomes when implemented with students in after-school programs in Seattle, Washington. However, upon a detailed review of the Critical Core Curriculum, which was developed primarily to aid students suffering from neurodivergent disabilities, the NIC recognized limitations in how the TTRPG was written. In the lead NIC member with the most TTRPG experience, the adventures written for the Critical Core curriculum were written too linearly. According to him, “this linear path restricts gameplay and role-playing capabilities. Namely, adventures written linearly do not allow participants’ actions within the game to impact the game itself, therefore creating an impression that their participation in the game is seemingly insignificant. While the Critical Core curriculum is plausibly suitable for students with Neurodivergent disabilities, this linear path was identified as a possible restriction for the participants within this ISDiP. Because of this, The NIC felt the utilization of the Critical Core Curriculum would have limited their participants. Therefore, the NIC decided to write and create original TTRPG adventures for the sake of this ISDiP. These adventures will be further detailed in a later sub-section and are available upon request.

The NIC also established plans regarding the study participants, the overall implementation of this ISDiP, the treatment intervention, and the data analysis measures used during the “do” stage of this ISDiP (see figure 5). These plans are detailed in the following sub-sections.

***Study participants.*** The participants of this study consisted of 16 upper elementary students from the K-12 School. The target population of this ISDiP, namely students in grades 4-5, was chosen based on data, convenience, and accessibility. Students in grades 3-5 were recognized to have the lowest SEL scores and largest decline based on the School Climate and

Connectedness Survey (SCCS) administered in the 2019/2020 school year. There was also a recognizable negative trend over the previous five years based on the data received from this survey's procurement.

That said, narrowing the participant focus to students in grades 4/5, therefore leaving out those currently enrolled in grade 3, was based solely on convenience and accessibility. Two members of the NIC taught the 4/5 grade band. Due to limitations relating to teaching during COVID-19, 3rd graders were mostly inaccessible to the NIC at this study. While the NIC intends to eventually support all students within our context on their SEL competency development, limited resources and COVID-19 related restrictions required precedence to be given to those at-risk and accessible at the time of the study's implementation. Therefore, all students in grades 4 or 5 were invited to take the mySAEBRS student self-assessment screener in October 2020 to determine which 4/5 students would benefit from inclusion in the intervention. Because this population of participants was under-age, parental consent was sought before administering the mySAEBRS screener (see Appendix A).

The choice to utilize the mySAEBRS student-self screener was based on accessibility and recommendation. The mySAEBRS assessment screener was up for pilot trial in the Anchorage School District during the 20/21 school year. While the K-12 School was not an intended participant in this pilot trial, access and permissions were granted to utilize this assessment for this ISDiP. Permissions were also sought and granted by FastBridge©, the developers of this student self-assessment screener.

Of the 78 students in the 4/5 student population, 38 received consent from parents to take the mySAEBRS screener; those students were asked to take the screener online due to the virtual teaching schedule mandated at the time of this study. Of the 38 students with consent, 34

completed the screener; of those, only four were considered ‘at-risk’. Due to the survey’s low turnout numbers, the NIC believed this ‘at-risk’ number to be lower than anticipated. The team hypothesized that this might have been an adverse effect of the COVID-19 pandemic as many community members could have felt inundated with e-mails and information at the time of the distribution of the survey consent. In truth, the NIC received numerous e-mails after the intervention had started inquiring about how to get their child involved, missing the connection between the procurement of the mySAEBRS survey and the after-school club opportunity.

With that said, to still conduct a proper intervention, the NIC invited all students who took the mySAEBRS survey to join the SEL intervention, which NIC members called the After-School Dungeons and Dragons Adventure Club. This decision was based on the present circumstances at the time of procuring participants for this study. The NIC was required to work within the mandates initiated by the local school district and around the challenges created by the COVID-19 pandemic. In the end, 16 students received permission and consent to join the intervention; four 4th graders and twelve 5th graders. These participants were then randomly placed in intervention teams consisting of four students each.

***ISDiP Implementation plan.*** To ensure this ISDiP was implemented as intended, The NIC Leads, those members of the NIC that facilitated the small group interventions, met weekly. During these meetings, the four NIC Leads would plan and organize the interventions and make any small-scale adjustments to the study’s facilitation. For example, the NIC Leads decided to partially fill in character journals to help support the character development for session 0. Additionally, the NIC Leads made a small adjustment to the facilitation by having all players roll dice in a dice tower to help with play management. The NIC Leads also spent time discussing



anecdotal observations from their various intervention groups throughout the treatment intervention's 6-week implementation period.

The Full NIC, which included other teachers, administrators, parents, community members, and secondary students, met once a month, utilizing The K-12 School's Professional Learning Community (PLC) days, which were already built into the school calendar. During these Full NIC meetings, the team would discuss any large-scale adjustments that were necessary to be made and share anecdotal observations and testimonies that were to be considered in determining the outcome of this study.

***Explanation of Treatment Intervention.*** In the attempt to aid participants in developing their SEL core-competencies, the NIC organized an SEL intervention, coined the DnD Adventure Club, that utilized tabletop role-playing games (TTRPG) as the treatment plan. Based on the virtual teaching and learning schedule in the Anchorage School District at the time of this study, the DnD Adventure Club met once a week after school, on Tuesdays, for two and a half hours. Despite the mandate requiring all learning to take place virtually from August-January during the 2020/2021 school year, special permission was sought and granted by the Anchorage School District to host this SEL intervention in-person within our school context. This permission was sought by the standing principal and was received over the phone.

Closely following proper mitigation plans due to the COVID-19 pandemic, participants were randomly sorted into four different intervention groups. Each group was led by one of the NIC Leads and met in a separate classroom. Although the interventions were required to take place in separate locations, all intervention groups received the same treatment, for the same duration, and under the same conditions.

Each intervention group met for six sessions, utilized the same materials, and followed the same TTRPG adventures, collaboratively written by the NIC Leads. Each group was given a set of TTRPG materials that were created and prepared by the NIC. These materials included partially completed character journals, magnetic character cards, spell tables, dice, and adventure documents.

When writing the adventures, the NIC leads closely considered the SEL core-competencies, as detailed previously, and considered vital classroom identifiers typically associated with each competency. For example, a student's ability to be self-aware is typically noticeable by their ability to correctly identify their emotions, accurately describe their perception of themselves, recognize their strengths, and demonstrate self-confidence and self-efficacy.

It was only after detailing these competencies and identifiers that the adventures for each session were written. Each of the five adventures was closely written to cross-correlate with one of the five SEL core-competencies. While each session was given a specific competency to highlight, all five SEL core-competencies were naturally woven into each session. The purpose of this was to allow for students to be exposed to all five of the core-competencies because 'practice time' around these competencies were limited in the past. As mentioned in a previous section, the staff at this K-12 school felt the reason for the lack of SEL competencies in their students was mainly due to the lack of targeted SEL intervention, likely due to the over emphasis on core-academics such as math and reading within the Anchorage School District.

To help correct for this, Session 1 of the Adventure Club Campaign, entitled *The Hidden Library of Photis*, was written to expose participants to targeted practice in self-awareness. Students were asked to navigate an illusionist's labyrinth to find a hidden library. However,

within the maze, students determinately found themselves facing their fears and having to continuously assess how they were feeling in order to succeed in their journey. In session 2, aligned with the SEL competency of self-management, participants faced intense and unforgiving emotions that they had to overcome in appropriate ways to earn the prize they were sent to claim. Session 3 then allowed participants to practice their social-awareness by attending the *Olympic Gala*. They were tasked with speaking to many honored Chiefs, all of whom had different personalities, to convince them to endorse the Queen's plans. Next, session 4 aimed at practicing relationship skills, required participants to work as a team to take down a giant Colossus. Lastly, session 5, which was implemented as the final day of the intervention, was written as an opportunity for participants to practice responsible-decision making and collaboration. In this session they were required to identify problems and plan and execute a team-based strategy in order to slay the formidable black dragon.

Because tabletop role-playing games require students to step outside themselves and role-play a different character, the first day of the intervention, referred to as session 0, was utilized for character development. During session 0, participants were guided in establishing a persona they would bring to life during game-play. The NIC agreed that it was important for participants to create their own characters for these sessions to procure buy-in and establish excitement from the participants. However, to best support first-time players, the NIC set parameters on which DnD class and race participants could choose. These restrictions allowed the NIC to manage game-play more accurately to provide the best DnD-like experience.

The NIC also made adjustments to normal DnD game-play about mortality. Adventures were explicitly written to exclude excessive mortality. For instance, while participants would suffer consequences for their actions, these consequences would not be their character's death.

Similarly, no adventures were written where participants would bring harm to humanoid figures. Instead, battles were faced against fantastical monsters. The decision to make these adjustments were based on the age of the participants in this study.

During each session, the NIC leads would narrate for their intervention group; however, similar to Dungeons and Dragons, the participants determine how the adventure goes. Based on how a participant responds to different situations or how they choose to act in any given circumstance, they determine the follow-up effect. These effects, which can sometimes be planned for, often are decided at the moment by the NIC Leads. Due to this extreme flexibility and numerous unknowns that had the power to make things dissimilar across the intervention groups, the NIC Leads would meet before each session to discuss all plausible outcomes to keep things comparable amongst their groups. Additionally, the NIC Leads would meet following each session to debrief and share anecdotal observations that would later be shared with the Full NIC.

***Explanation of Measures.*** This ISDiP utilized a mixed-method approach to data collection and analysis. The mySAEBRS student self-assessment screener, developed by the FastBridge © organization, lent the quantitative data for this ISDiP. The mySAEBRS screener was chosen by the NIC to be implemented as a diagnostic baseline screener and the post-study growth measure. The NIC utilized the FastBridge © grading scale to score and analyze the screener's results (see Appendix B). The mySAEBRS screener includes 19 questions, each of which uses a 4-point Likert scale allowing students to select either never, sometimes, often, or almost always. Each response is then associated with a point value between 0 and 3. According to the FastBridge © grading scale, students who score fewer than 36 points on the mySAEBRS student self-screener are considered 'at-risk' (FastBridge, 2019). According to a study conducted

to determine the internal consistency of the mySAEBRS survey, the various sub-scales, including the Social Behavior, Academic Behavior, and Emotional Behavior, and the Total Behavior score, have adequate internal consistency with coefficients equaling .89 (Whitley, 2020).

Along with utilizing the mySAEBRS student self-assessment screener, which was administered at both the beginning and end of the ISDiP timeline, the NIC utilized a series of qualitative data sources to help determine the outcome of this study. These qualitative data sources included anecdotal observations from the intervention coaches and NIC members and written and verbal testimonies provided by parents, teachers, and student participants.

The observations were mainly gathered during the time of intervention. NIC Leads were asked to closely observe their participants and, following each session, debrief with the other leads regarding what was observed during each intervention session. These observations were then recorded in the shared observation log, which was available to all NIC members. These observations were presented to the Full NIC during each monthly meeting. They were also considered during the final NIC meeting, which determined the outcome of this study.

The testimonies provided by parents, teachers, and student participants were collected primarily through e-mail and then later read at the Full NIC meetings. These testimonies were neither prompted nor requested. However, following reminder and announcement e-mails sent to the various stakeholders, testimonies were received on behalf of this study. All testimonies were audio-recorded and later transcribed using Descript, an audio/video transcription software.

While the qualitative data sources utilized in this study do not have a validity or reliability score, the level of trustworthiness of their authenticity should be considered acceptable. The observations were grounded and collected by professional teachers and

community members who were asked to remain unbiased as much as possible. Additionally, the testimonies that parents, teachers freely provided, and student participants were neither prompted nor requested in any way by the NIC. The findings of these data sources will be described in the following chapter.

### **Ethical Considerations**

The Anchorage School District has a pre-established policy relating to research, which was used for preliminary guidance throughout this ISDiP. Nevertheless, formal IRB was sought and approved by the lead researchers governing University; attached as Appendix C, to ensure grounded and sound research practices were achieved during this ISDiP.

All participants were required to have formal written consent from a parent or guardian to be included in the screening measure and participate in the treatment intervention. This consent was established to ensure the safety of student participants. To protect students' identities and abide by FERPA regulations, those who participated in the screening/intervention progress were given a pseudonym at the time of data analysis and reporting to keep their identities known only to the NIC Leads. These Leads undergo yearly mandatory training for confidentiality, FERPA, and other reporting regulations.

### **Chapter 3: Study**

This study's results were based on three leading factors, all of which were vetted in a collaborative effort by the NIC. The first factor utilized SEL growth/change data collected from the mySAEBRS student self-assessment screener. The second factor considered was identifiable SEL skill transference from the intervention treatment to the general education classrooms and life situations as identified by parents, teachers, and student testimonies, anecdotal observations, and professional NIC conversations. According to the aforementioned research, TTRPGs may lend themselves to this transfer of skills, which was looked for throughout the treatment intervention duration. Lastly, factor three included the implications for future SEL TTRPG interventions at the K-12 School. As stated previously, this ISDiP has the potential to be immediately beneficial to the school context. With the desire to serve and support more students, the NIC closely considered this TTRPG intervention's expansion potential. Based on the results, which will be detailed below in the following sections, the NIC feels confident in reporting that tabletop role-playing games are a viable and effective way to introduce and expand social and emotional related competencies in upper elementary grade levels.

#### **Quantifiable Findings and Analysis: The Results of the mySAEBRS Student Self-Assessment Screener**

As stated previously, the mySAEBRS student self-assessment screener was utilized to ascertain any quantifiable changes to participants' SEL-related competencies. For this ISDiP, the mySAEBRS survey was given as a pre-screener before implementing the tabletop role-playing game intervention. It was later given as a post-screener as well, which was administered following the final session. As demonstrated in Table 2, 14 of the 16 participants exhibited an increase in their SEL-related competencies according to the mySAEBRS survey. Of those 14

students who demonstrated positive change, the average increase was +3.78 points, equal to 6.6%. This percentage was calculated based on the allowable range of scores. For example, the mySAEBRS survey allows for a point-based score ranging from 0 to 57 points. Taking the average increase and dividing it by 57 provides the percent growth margin. Furthermore, because higher scores on the mySAEBRS survey are "indicative of more adaptive functioning," this positive change represents the growth and development of participants' SEL skills. This growth also suggests a decrease in SEL-related risks, including social, academic, and emotional behavior problems (Whitley, 2020).

**Table 2**

*The Results of the mySAEBRS Student Self-Assessment Screener*

<i>Student Study ID</i>	<i>Pre-Screener</i>	<i>Post- Screener</i>	<i>Change</i>
T.O.L.	42	45	+3
T.K.W.	45	47	+2
V.A.M.	26	30	+4
A.N.K.	41	43	+2
A.G.F.	32	35	+3
T.K.Be	41	44	+3
T.K.Bch	46	49	+3
A.M.M.	45	45	0
S.K.B.	47	50	+3
S.G.H.	39	44	+5
S.O.J.	25	30	+5
A.E.G.	39	43	+4
T.E.D.	47	50	+3
T.L.P.	39	42	+3
T.A.D.	29	39	+10
T.N.H.	42	42	0
<b>Average Change</b>			<b>+ 3.78</b>
For those "at-risk"			+ 5.5



Looking more closely at the four students who were considered "at-risk" on the pre-screener, highlighted in Table 2 for easy discernment, the average growth was +5.5 points, or 9.6%, indicating positive growth and decreased risk.

One of the "at-risk" students, student TAD, demonstrated enough positive change on the mySAEBRS post-screener survey to move out of the "at-risk" category by the end of the TTRPG intervention. As stated previously, according to the mySAEBRS survey, a student is considered "at-risk" for SEL-related risks if they earn less than 36 points on the mySAEBRS screener. By earning more than 36 points on the mySAEBRS post-screener, student TAD demonstrated enough positive growth to no longer be considered "at-risk." While this is only one data point and cannot be treated as definitive or absolute, after speaking with this student about their personal experience in this intervention, it is clear why this growth was so profound. This student testimony will be spoken to in the following section.

The last piece of quantifiable evidence the NIC collected and analyzed related to the specific sub-scales associated with the mySAEBRS survey. FastBridge ©, the developers of the mySAEBRS student-self assessment screener, suggests that the sub-scales analysis, i.e., the social, academic, and emotional behavior risk, is not to be conducted unless a student is considered "at-risk" on the mySAEBRS survey. Following this recommendation, the NIC only conducted an in-depth analysis of the three sub-scales on the four participants who scored fewer than 36 points on the pre-screener.

According to this sub-scale analysis, displayed in Table 3, all four "at-risk" participants had the highest risk for emotional behavior problems according to the mySAEBRS pre-screener. This is represented by the lower pre-scores in the 'emotional behavior' category when compared to the pre-scores associated with the individual participant in the other two sub-scale categories.

This information was used by the NIC when planning the TTRPG interventions and writing the adventures for each session.

**Table 3**

*The Analysis of the mySAEBRS Sub-Scales for Those Considered “At-Risk”*

	<i>Social Behavior</i>			<i>Academic Behavior</i>			<i>Emotional Behavior</i>				
	Pre-	Post-	Change	Pre-	Post-	Change	Pre-	Post-	Change		
V.A.M.	12	13	+1	8	10	+2	5	7	+2		
A.G.F.	12	16	+4	14	12	-2	6	7	+1		
S.O.J.	10	12	+2	8	11	+3	7	7	0		
T.A.D.	13	15	+2	13	18	+5	3	6	+3		
Average Change			+2.25	Average Change			+1.75	Average Change			+1.5

After calculating the change data for the four "at-risk" participants within each sub-scale, the "average change" for each subscale was computed. It was determined that the emotional behavior sub-scale, receiving an average change of +1.5 points (2.6%), was the sub-scale with the lowest change margin, closely followed by the academic behavior sub-scale, which produced an average change of +1.75 points (3%). The most significant positive average change was in the social behavior sub-scale, which was calculated to +2.25 points (3.9%).

This data did not surprise the NIC because of their preexisting understanding of what tabletop role-playing games could plausibly provide to students. Dungeons and Dragons, or tabletop role-playing games with a similar style, comparable to the adventures written and utilized in this study, are a highly social game. Participants, or players, are asked to band together to defeat common enemies or achieve common goals, often requiring high-levels of communication, teamwork, and collaboration amongst the group. Therefore, the fact that participants in this ISDiP demonstrated the largest positive change in the social behavior sub-scale makes sense. This change data then supports the idea that TTRPGs can aid in students'

social awareness and relationship skills, two of the five core-competencies outlined by the CASEL organization, as spoken to in chapter 1 and represented in figure 2.

However, it is unfortunate that the subscale that received the lowest average change was the emotional behavior subscale, which all four "at-risk" participants indicated they struggled with the most. This discrepancy, or even unfavorable circumstance, could be caused by various factors, including but not limited to DnD being a social game. Despite the attempt and extensive considerations made by the NIC to write in specific components to the adventures that required students to think about their emotions, these written components may have been overshadowed by the other dynamics of the game. Additionally, being that this sub-scale analysis is the only reference to this particular subset of data, the limited data itself restricts the ability to speak further into this occurrence.

Regardless of the emotional risk subscale having the lowest average change overall, three of the four "at-risk" participants still made recognizable growth in this area. Therefore, while the quantitative data does not demonstrate that TTRPGs can support students' SEL development in emotional risk more so than academic or social risk, the quantitative data cannot be ignored as plausible evidence that TTRPGs benefit students' SEL competency development.

**Analysis of Quantitative Measures.** The quantitative data collected for this ISDiP demonstrated that 87.5% of the student participants in this study made growth in their SEL-related skills when assessed using the mySAEBRS student self-assessment screener. Additionally, the detailed sub-scale analysis demonstrated that all four participants flagged as "at-risk" at the beginning of the study made growth across the various SEL risk categories. Based on the above quantitative findings, the NIC is comfortable with concluding that TTRPGs are a

plausible intervention strategy that can help support upper elementary-aged students in the development of several SEL core-competencies; social behavior is the most probable.

### **Qualitative Findings: Skill Transference**

The outcomes of this study were also grounded in qualitative methodologies. Utilizing a variety of data collection methods, including informally collected testimonies, anecdotal observations, and professional conversations, the NIC gathered the following data; outlined in the following sub-sections.

**Verbal and Written Testimonies.** Verbal and written testimonies were received from students, parents, and teachers throughout this ISDiP. All testimonies were collected informally, none of which were prompted in any way. For instance, students, parents, and teachers were never asked to comment on this study or how it affected participants specifically; however, e-mails, letters, and verbal comments were received by many members of the NIC, which lent an unbiased perspective into this study. In truth, this was an unanticipated method of data collection. Only after the treatment intervention concluded did the NIC decide to include these comments as a component of the data analysis to decide the study's overall outcome.

***Testimonies from students.*** One of the most substantial testimonies received came from one of the student participants. Following the conclusion of the final session, participant T.A.D. handed one of the NIC members a thank-you letter that described their overall experience in the DnD Adventure Club and its impact on their lives. This participant spoke to the fact that they are an only child, and up until now, "they have never had an opportunity to play a game like this with anyone else" (5th-grade participant, personal communication, December 15, 2020). They commented that their time in the DnD Adventure Club helped show them that they "do not always have to do things alone." It allowed them to "open up to others when [they] typically like

to keep to [them]self" (5th-grade participant, personal communication, December 15, 2020). This student also mentioned that DnD helped their ability to compute numbers in their head quickly and "increase [their] confidence in math and creative writing" (5<sup>th</sup>-grade participant, 2020).

As mentioned previously, this testimony was received by T.A.D. captured the significant influence this TTRPG experience had on this particular student. This testimony further signifies the rationale for how this participant, who was initially considered "at-risk" for SEL-related behavior problems, was no longer considered "at-risk" after this ISDiP.

Other student testimonies included statements such as "this was the best thing I have done in such a long time" and "goodness, I made so many friends... I love Tuesdays!" (4th-grade participant, personal communication, November 10, 2020). Like the participant just quoted, many students spoke to the friendships they made during the time in the club. Others commented on the more mindful perspective they gained now that they have had the opportunity to learn how to work better with others. Student T.K.Be wrote, "DnD really helped me talk to other people because I had to listen to their ideas during adventures, which were sometimes better than mine. I learned that people can do things their own way, and I don't always have to get mad when they don't do things the way I want to do them" (5th-grade participant, personal communication, December 8, 2020). While not every student participant is represented in these testimonies, the testimonies that have been received further attest to the perceived benefits of TTRPGs in providing a student with SEL skills to help them in school and life.

***Testimonies from parents.*** Testimonies from the parents of student participants also came to NIC members. These testimonies mainly came in the form of written e-mails. Again, these testimonies were not sought out in any way; numerous parents freely gave them. All e-

mails received by NIC members, specifically related to the DnD Adventure Club, were compiled and analyzed for common themes and sub-themes.

Many comments made by parents related to general observations and referenced several students' apprehension about the new/unknown activity, which later turned into undoubted positivity. One parent wrote, "My skeptical little talked nonstop about his Goliath character, Gumba Hornmaster" (Parent of 5th grader, personal communication, November 10, 2020). Another wrote that their child talked to them for hours after each session. After being "so anxious" at the beginning, it was "nice to see him so animated and excited about something again" (Parent of 5th grader, personal communication, November 10, 2020).

Other general observations included the overall excitement and positivity for the activity itself. One e-mail received from a parent stated, "Every Tuesday, I have definitely noticed an increase in energy, he is VERY talkative all throughout the day. It's like he can barely contain his excitement" (Parent of 5th grader, personal communication, November 11, 2020). These general observations speak to the overall plausible benefit that tabletop role-playing games can provide to students but do not necessarily speak to the benefits relating to SEL competency development. However, other parent testimonies spoke to the specific SEL skills they recognized develop in their children.

Several parents spoke to the feelings of connection, to the overall creativity, to the teamwork, as well as to the peer relationships that were recognizably strengthened while their child participated in the DnD Adventure Club. One parent wrote,

My son has always craved connection with peers his own age but has a hard time building and maintaining those relationships on his own. He fervently wishes to have strong peer relationships but often fails to consider how others feel from his actions. I

have noticed that throughout the last six weeks, [name] has been able to express his desire for friends and used strategies that included empathy and compassion to establish the beginnings of a mutual friendship. These are qualities I have never seen him deploy before when trying to connect with others his age. Thank you for everything this club has provided for my son (Parent of 5th grader, personal communication, December 9, 2020).

Another parent spoke to the new-found openness towards others she recognized in her daughter. She explained that her child has often struggled with self-esteem issues derived from bullying incidences in the past. Because of this, her daughter often is reluctant or even "aggressively defiant" about working with others, including peers of a similar age (Parent of 5th grader, personal communication, December 1, 2020). However, throughout the DnD Adventure Club duration, her daughter would often express pride in her leadership abilities. The mother wrote:

My child certainly felt part of a team. She never spoke to being frustrated with anyone else and often spoke about how excited she was that her feelings were never hurt. After every session, she told me about how she "saved" others on her team with her various "skills" and talked at length about what her team did as a whole. This is tremendous based on every other experience she has ever had. I am grateful that she has had this opportunity (Parent of 5th grader, personal communication, December 1, 2020).

***Testimonies from teachers.*** Lastly, student participants' teachers also made unsolicited comments concerning the SEL skill transference they saw within the general education classroom. For example, one teacher mentioned that their student, S.O.J., has struggled with angry outbursts and the inability to "wait his turn" for several years. This particular teacher has had SOJ in class for over two years due to the multi-age class configurations. She writes:

[SOJ] has often screamed at his peers in class if he is angry with them or if he did not get his way during a game or team-building activity. We also started this year by muting him during class lessons [in reference to virtual learning]. However, now that he has had some specifically targeted practice in teamwork and managing his emotions, I can tell that he is more mindful of his peers' reactions when working in groups. I also have not had to mute him ONCE during a lesson. He now waits his turn before adding a comment or asking a question (Teacher of 4th grader, personal communication, November 24, 2020).

SOJ was also one of the participants flagged as "at-risk" at the beginning of this study, so this observation of the transference that the teacher is seeing is highly promising. Another teacher mentioned that their student, who has been known to keep to themselves preferring to complete activities independently, has since requested opportunities to work with peers in breakout rooms, again referring to virtual learning. Other teachers commented on the general excitement they hear amongst their classes as Tuesdays' approach.

These voluntary testimonies received from this study participants, their parents, and their teachers speak powerfully to what this SEL TTRPG intervention provided for this study's participants. However, it should be noted that while it is plausible that these results were generated solely from the TTRPG intervention, other spurious variables may have had an impact on these specific observations. These limitations will be discussed in an upcoming section.

**Anecdotal Observations.** Another set of qualitative data came from anecdotal observations collected by Lead NIC members. Following each session, Lead NIC members would meet to debrief from that day's intervention. Lead NIC members, who, again, led the interventions to student participants, would share any pertinent observations they discerned during that days' session. While no official prompting or note-taking occurred during the



conversation, the lead researcher would jot key take-aways following each debrief to share with the full NIC during their scheduled meetings. Table 4, on the following page, is a copy of the lead researcher's log kept. This log, or table of notes, provides the key observations taken during each session. As you can see, there were some noteworthy data collected throughout the intervention timeline that represents several participants' increases in SEL skill development.

Table 4

*Anecdotal Observations Collected by the NIC Leads*

<i>Lead NIC's Observations</i>	
Session 0	<ul style="list-style-type: none"> <li>- While some students were (obviously) more attuned with creating fictional characters—they were able to develop mature backstories and choose personality traits and limitations that matched their characters perfectly; others were less capable. One student in particular refused to choose a name for his character and struggled with the ability to “step outside himself” to become a different person.</li> <li>- Others really loved the idea of the “law of the dice” (whatever the dice says goes) which perhaps shows a high-need for structure in their lives.</li> </ul>
Session 1	<ul style="list-style-type: none"> <li>- Today was the first adventure and it was truly fun to see how different students brought their different characters to life. One Lead commented that all one of her players wanted to do was “kill/harm” anything and everything in his way.... Including his other campaign members. The consequences for this were swift, and by the end of the session that student commented, “maybe I need a different approach.”</li> <li>- Other Leads recalled how interesting it was to see how the other students physically acted in the classroom; several students were noted to not be able to sit-still for long periods of time; one in particular who would respond poorly (bang his fist of the table) whenever something didn't go as planned, or impacted his character in a negative way. Others just paced the classroom from time to time.</li> </ul>
Session 2	<ul style="list-style-type: none"> <li>- This adventure required students to embrace intense emotions and Leads commented how fun it was to watch them grow in the session itself. One student, who's character became infatuated with skeletons that were trying to take over the ship, was extremely frustrated at the beginning of the session when she was unable to do much (other than be drawn to the skeletons). She stormed out of the room at one point and needed to be guided back in by the Lead. However, by the end she embraced this emotion and persuaded the skeletons to join her as a skeleton army. She rolled high enough and it worked. She was noticeably excited.</li> <li>- The student that continually pounded his fist onto the table when upset, as well as pace around the room for the first few sessions, was able to get through today's entire session without doing either—even though his character fell unconscious at one point, which is not ideal in a DnD campaign.</li> </ul>
Session 3	<ul style="list-style-type: none"> <li>- The player that refused to name himself at the beginning, and who was being referred to as the Rogue with No Name by his Dm/Lead, embraced this moniker today and was introducing himself as such to members in the other campaign parties.</li> <li>- Also, during today's session, the student who began the club wanting to injure/maim/kill everything, demonstrated high-levels of compassion today as he went out of his way to “heal” a fellow player.</li> </ul>
Session 4	<ul style="list-style-type: none"> <li>- All participants are really demonstrating high-levels of interest and engagement into the role-playing game at this point; referring to themselves and each other by their character names throughout the entire session.</li> </ul>
Session 5	<ul style="list-style-type: none"> <li>- Today's session was all about teamwork, and all Leads noted how impressed they were with their campaign teams. One lead even commented that one of their players refused to proceed alone and waited for their team to join them before proceeding into the dungeon. They noted that this was interesting to witness because typically, this player has “raced ahead” of the team to try to solve the problem/beat that “level” alone.</li> <li>- Many students also commented how “sad” they were that today was the final session and asked when they would get the opportunity to do this again.</li> </ul>

As noted in Table 4, several participants demonstrated strength in numerous areas from the beginning of the intervention, including their ability to take on different perspectives and create complex characters, which shows high levels of self-and social-awareness. However, other participants struggled and needed time and support to demonstrate success in this activity and success in several SEL-related concepts. For example, the one student who refused to name his character in session 0, suggesting low self-awareness/self-confidence, could embrace a name given to his character several weeks later. He became excited by whom he was when playing his character, which showed tremendous growth in his ability to open up to others and feel confident enough in himself to take on that alternate perspective. This growth could represent the skill of self-awareness. This student demonstrated his ability to recognize his own strengths and weaknesses, demonstrating a positive increase in this SEL skill for this particular participant.

Other participants who demonstrated growth included three players who demonstrated varying levels of aggression during the intervention's earlier stages. As noted in Table 4, one player wanted to attack anything they approached, including his other campaign members. Another physically pounded his fist on the table whenever something did not go his character's way. Lastly, the third player became so frustrated with circumstances her character was in that she physically stormed out of the room. All three of these participants demonstrated that their SEL skills, specifically self-management, relationship skills, and responsible decision-making were not necessarily well-attuned at the beginning of this study. However, all three demonstrated growth in these areas either by the end of the intervention timeline.

For example, the participant who became frustrated and stormed out of the room re-entered and utilized skills that their character had to persuade the skeletons to become her army. Here, this player demonstrated their capability of honing in on their self-management skills when

role-playing. Additionally, the player who repeatedly pounded their fists on the table out of anger overcame this physical display of anger throughout the multiple sessions. While this student was never asked why he stopped, the Lead NIC member who led his group stated the following: This player became "more a part of the team as the sessions went on, which may have allowed him to feel more of a sense of purpose on their adventures" (Lead NIC Member, personal communication, November 17, 2020).

Lastly, the player who was unnecessarily fighting everything in their path demonstrated significant growth in self-management and responsible decision-making while role-playing his character. He even mentioned that after consequences came his way in the first session, he might have to use a "different approach." While it may have taken several sessions for him to demonstrate this learning, by the end, he showed intricate qualities of compassion and mindfulness as he saw other players in need and "healed them" using his character's unique abilities. Based on these collected notes, it is plausible that role-playing games provide students with unique opportunities to learn SEL skills in a safe space.

**NIC Conversations.** The last component of qualitative evidence collected in this ISDiP were transcripts of the conversations held during the full NIC meetings. These conversations were structured in a way to allow for consistency across the various meetings. A list of conversation topics, which the NIC decided on during the first formal meeting, guided the conversation during each subsequent meeting. These conversation topics, which acted as the meeting agenda for the NIC meetings, are attached as Appendix D. As seen in this document, the five conversation topics span a variety of [topics] and allow for holistic conversations around the study's plausible outcomes. Because conversation points one and two were addressed in the previous sub-section, and conversation point five will be addressed in the next, the data

presented in this section will address conversation points three and four. I.e., the identifiable SEL skill transference that NIC members recognized from the intervention treatment to the general education classrooms and life situations and the recognized limitations or challenges with the intervention that needed to be addressed during that session.

Since the first two Full NIC meetings took place before the intervention implementation, the final two meetings, which took place concurrently with the treatment intervention, were recorded and transcribed. The lead researcher compiled the transcriptions' pertinent notes, which are attached as Appendix E and summarized below. The NIC also reviewed this data before publishing it to ensure that authenticity and accuracy were maintained.

It was found that several student participants in this study demonstrated SEL-skill transference that stretched outside of the intervention itself. One student showed increases in self-regulation and control, while another demonstrated higher self-management levels when it came to long-term inappropriate behavior issues. The administrator at the K-12 school even commented that there were fewer behavior referrals for several students in this intervention, suggesting it was the risk of them losing the opportunity to participate in the DnD Adventure Club that encouraged them to be on their best behavior in class. Based on their unique roles and perspectives, these observations add to those presented previously and plausibly increase the authenticity, credibility, and reliability of those previously shared.

Additionally, challenges with the intervention were discussed during these meetings. The first challenge regarded management issues during the first campaign. The first session was written with an element that required participants to wait for a long time as others completed side missions. This led to some disruptive behaviors as students grew bored while waiting. It was suggested that the Lead NIC members avoid writing independent side missions into the

campaigns to avoid this down-time. Lastly, when the NIC discussed the possibility to expand this study to more students at the school, the concern regarding preparation time was addressed. It was suggested that pre-built campaigns be sought and utilized in the future, this being an alternative to writing new adventures. While these challenges do not necessarily add or take away from the theory that this intervention worked or did not, they do lend perspective to the usefulness and feasibility of this type of intervention in a school setting.

### **Qualitative Analysis: Implications for The Future at the K-12 School**

The qualitative data described in the previous section demonstrated many exciting and plausible connections between SEL skill development and the use of TTRPGs as an intervention method. For example, several students demonstrated a direct connection between the DnD Adventure Club and their ability to apply specific SEL skills previously absent in their typical classroom or life behaviors. Additionally, other participants were able to speak to their increases in social communication and their willingness to engage with peers their age. This further supports the theory that Tabletop Role-Playing games are a viable way to help support students' social and emotional competency in upper elementary grade levels.

Beyond these connections to student growth in SEL skills, the qualitative data collected in this ISDiP also demonstrated several additional benefits to student participants, including the deepening of connections between students and teachers, students and students, and aiding in mental health. Much of the qualitative data gathered in this ISDiP demonstrated the overwhelming positivity generated for students who had the opportunity to participate in this intervention. Students were seen as happy, uplifted, and genuinely excited, some of whom had appeared sad or even depressed, based on the current state of the world at the time of this study. Hosting, planning, and facilitating this DnD Adventure Club was beyond rewarding. It gave

those who were Lead NICs a sense of purpose as we engaged with students in person again, helping them to develop critical skills that will benefit them well beyond their years in school.

For these reasons, the NIC decided to expand this SEL TTRPG intervention to more students in the K-12 context while also permanently establishing the NIC as an organized group within the school.

**Immediate Benefits to the K-12 School Context.** As mentioned previously, the final conversation topic during the Full NIC meetings related to overall outcomes of this study and, therefore, the ability to expand to more students within the K-12 context. From the beginning, the Administrator of the school was excited by the prospect of a program that focused exclusively on SEL-related competencies. However, after hearing the data presented at the various Full N.I.C. meetings, she was encouraged and hopeful that this could be expanded and continued for other students within our context. She stated, "I believe this is well on its way to becoming an invaluable part of our program. My only wish is that we could get it to more students faster" (Administrator of the K-12 school, personal communication, November 18, 2020). Additionally, a secondary teacher made the following comment:

"When I initially heard that students were having such a positive time in the DnD Adventure Club and were demonstrating positive behaviors, my first reaction was "well, of course." This club is giving them an opportunity to get attention from a trusted adult, and they have been invited to be a part of a program that allows them to connect with friends or make new ones. However, when you shared that students were actually changing behaviors, putting positive behaviors in place of old ones that truly goes to show that they were not only enjoying themselves, they were learning skills that benefit them now and well into the future. This is something that many of my students need, and

this Club is something that they would truly want to be a part of." (Secondary Teacher, personal communication, December 16, 2020).

Based on these findings and suggestions, this TTRPG intervention will expand and continue to allow students of all ages to engage in TTRPGs that allow for interaction with peers while also encouraging specific SEL skill development. Additionally, the NIC will be established as a permanent focus group within the schools' context. This group of teachers, administrators, community members, and stakeholders will continue to focus on SEL competency development for the students of the school.

### **Limitations**

While this study generated some inspiring data to support the idea that tabletop role-playing games can positively benefit students' SEL competency skills, other unavoidable factors could have either produced these outcomes or significantly aided the success seen in this ISDiP. The quantifiable data presented demonstrated overall positivity, excitement, and the ability to relate better to peers. These positive impacts could have been created or aided by the fact that this DnD Adventure Club was the first time many of these students had seen someone outside of their immediate family in over eight months. Additionally, it was the first time any of these students entered the school building in that same amount of time.

At the time of the study, the COVID-19 pandemic was plaguing the world, and the city of Anchorage, where this ISDiP took place, was not unaffected. The city had been in-and-out of full lock-downs that shut down most of the city and forced people to stay in their homes. Students in the Anchorage School District, including those who attended the K-12 school and were participants in this study, had been learning from home since March of the previous school year. Therefore, when students were finally invited to re-enter their school building, reconnect with



teachers, staff members, and community members that they had not seen in-person in a while and laugh and play again with their peers, the positive benefits of these interactions were naturally there. Therefore, some of the positive experiences could have been produced by the opportunity to engage with others in-person once again.

Additionally, while this ISDiP did not intend to help rectify specific negative behavior issues, several incidences were observed and noted for their improvement. These behavior incidences were not intentionally addressed in this ISDiP as they could have been. For instance, the NIC could have observed the two participants who demonstrated physical outbursts of anger in the hope of determining the specific decrease in the number of occurrences, the intensity of the occurrence, or both during the treatment intervention. This oversight should be noted as a limitation of this study and should act as a suggestion for future research.

### **Summary of Findings**

Based on the data collected and presented in this ISDiP, the NIC feels confident in reporting that tabletop role-playing games are a viable and effective way to introduce and expand social and emotional related competencies in school-age children. This determined outcome will be further addressed in the following chapter.

## Chapter 4: Act

### Discussion of Findings

The data collected in this ISDiP, which was presented in the previous chapter, highlights the plausible positive correlation between the utilization of tabletop role-playing games and students' SEL competency development. As seen in both the quantitative and qualitative data, student participants in this study demonstrated increases in their SEL competency scores, displayed positive behavior changes, showcased increases in their ability to socialize and work well with peers of a similar age, and showed increases in their mental health throughout this study. NIC members and other community members gave testimonies that commemorated the positive influence the TTRPG intervention had on their students.

While limitations could have aided the positive outcomes this study produced, these proclaimed limitations should not deter from the overall benefit this study has had on the K-12 school context where this study took place. Nor should they distract from the impacts this study could have on other school contexts or on the larger field of education.

**Impact of change at the K-12 School.** This study came at a critical time for the K-12 community where it took place. As discussed, students at the K-12 school were demonstrating a significant gap in SEL-related skills, discernable over a five-year trend on survey data procured on the School Climate and Connectedness Survey. Despite the overall focus on SEL-related competencies school-wide, students were still demonstrating declines in their social and emotional health and increases in long-term SEL-related risks. This heightened risk understandably concerned teachers and staff and they were already discussing ways to rectify the situation. However, the onset of the COVID-19 pandemic exaggerated these concerns and required an immediate focus to help the students within their community.

Using this ISDiP to provide immediate benefit to her community's students, the lead researcher organized the Network Improvement Community to focus on specific strategies and make actionable plans to support students' SEL competency development. After conducting a root cause analysis with the entire school staff, it was recognized that unsystematic instruction and the lack of targeted interventions were the hypothesized reasons why SEL competencies were continuing to decline amongst students. To address these causes, the newly formed NIC devised a plan to implement specifically targeted SEL instruction to small groups of students using a research suggested intervention method. Thus, the DnD Adventure Club was formed, and both the SEL NIC and this DnD Adventure Club are now staples within the school community.

As outlined in Chapter 3, the data collected from the DnD Adventure Club's first installment demonstrated that all students who participated in the club benefited from their involvement. One might be wondering, however, if this study's success was attributed more to the attractiveness of the content itself, or to the alignment between childhood and things that aren't traditionally academic, such as games. Knowing what we do about game-based learning theory, we can easily assume that one of the reasons this study was successful was because of the heavy utilization of games to implement the context. However, the success of this study should also be attributed to the age-appropriate content that was developed for the sake of the SEL interventions. As outlined in a previous chapter, the context that was designed for this ISDiP was closely tailored to be age appropriate. The NIC team members who designed the SEL curriculum campaigns worked closely with research that outlined best practices for SEL curriculum, game-based theory, and the theory of play while also looking at curriculum that was already created under this scope. After discussing the success of this ISDiP with additional NIC team members, the team commented that the curriculum designed for this ISDiP could easily be implemented

across multiple grade levels and disciplines, however, if it were to be expanded to students younger than third grade, or older than eighth grade, the content would need to be adjusted to better meet their developmental level.

Based on the data collected in this ISDiP and the knowledge outlined above, the NIC immediately got to work and expanded this club to include more students, including students of varying ages within the student population. The second installment, which began shortly after the conclusion six-week intervention outlined in this ISDiP, now included 36 students ranging in grades from 3rd through 11th. Because of the extension of grade levels, the content was readjusted to represent more age-appropriate adventures based on the students within each group.

**Impact of change to Field.** While this study was immediately beneficial to the K-12 community, NIC members feel confident that the data procured in this ISDiP can also positively influence the larger field of education.

As demonstrated in the data already presented, tabletop role-playing games are a viable way to support the SEL competencies development in school-age students. Moreover, it provides a unique and fun way to engage students in this type of focused work. Two NIC members, who act as the SPED director and a SPED teacher within the K-12 community, noted the following at the closure of the first installment of the DnD Adventure Club:

“The transference that I have seen in my SPED students, and based on the data that you have all presented, it is clear to me that this is an opportunity that would be wasted if we were to not continue this, at least in our own setting. But in truth, this needs to be broadcast to a wider audience as I am sure that it would be invaluable to anyone working with kiddos that struggle with these SEL skills.” (SPED Director, personal communication, December 16, 2020)

“I agree [with the above statement] and I think it comes down to the curriculum—typically I use a canned curriculum to help my students learn and understand the same skills you were highlighting in this study, but this is a totally different take on building those skills. Based on what has been presented, this gives students a chance to engage with these skills in a safe place and under fun circumstances. Typically, I see kiddos that are therapied so much in these skills that they know all the right answers but they can never take those answers and apply them to real life. Here, in this intervention, students are showing that they can take these skills they deployed using characters and role-playing and attach them to real life situations.” (SPED Teacher, personal communication, December 16, 2020))

For these reasons, the NIC would like to encourage other teachers and other schools to deploy this type of intervention strategy within their context. I.E., using role-playing games similar to those modeled after a Dungeons and Dragons campaign to help their students learn vital social and emotional related skills, as these skills are only getting more critical. It should be noted, that while this ISDiP highlighted the plausible application of TTRPGs as an after-school extracurricular, the application of using TTRPGs to assist in the SEL competency development of grade-level students can also be realized as a cohesive component of any academic learning task within a classroom setting. For instance, TTRPGs are not limited to one function, instead, they can be utilized across many content areas including math, reading, and writing as well as the exploration of topics in social studies, geography, civics, humanities, and many more. While this study did not explore the correlation between TTRPGs and the success of utilizing this method as a form of delivery instruction, Lead NIC members would like to encourage the research be done on this topic as they can see the application being fruitful.

SEL skills, including those highlighted in this study, are vital for our ever-changing world, and the necessity for students to develop these skills early in life is only increasing. As we have seen recently, children are being asked to navigate a world where challenges are ever-apparent. As educators, we need to support our students in navigating these challenges in appropriate and successful ways. The ability to understand personal emotions and manage them appropriately, identify and empathize with others' feelings, work with other people, and make responsible decisions even during a crisis is necessary now more than ever.

Additionally, it is equally important that schools are made aware of the SEL risks that some students may have in order for the necessary supports, such as a focused intervention as suggested in this study, to be put in place. Based on this study's outcomes, The NIC would like to recommend that all students of all ages be routinely screened for SEL risk, as procured in this study using the mySAEBRS screener developed by FastBridge ©. Those results should be immediately addressed by school personnel by incorporating targeted SEL interventions for those students. This ISDiP, and the NIC that has conducted this study, justifiably suggest that TTRPGs be a suggested method of addressing those risks, which has been shown to support students in SEL skill development in a fun and engaging way.

Lastly, while this ISDiP did not intend to add to existing research in the way a traditional action research dissertations study would have, it is reasonable to believe that the findings recorded here could continue to support the pre-existing idea that tabletop role-playing games benefit the SEL competency development of school-aged students.

### **Next Steps/ Recommendation for future research**

There are three actionable next steps that the NIC intends to complete or recommend to others now that this study has concluded. These next steps include (1) the publication of the DnD

Adventures that were written for the TTRPG intervention utilized in this study, (2) the dissemination of the results of this study to various stakeholders and publication outlets, and (3) the recommendation for future research to continue to explore the plausible benefits of TTRPG on students SEL competency development.

As mentioned, The NIC intends to put the final touches on the DnD adventures created for use in this ISDiP and make them available for use by others. The NIC feels that these adventures will be applicable in other settings and with other populations and ages of students successfully without editing or amending. Additionally, and unmentioned until this time, the NIC strongly believes that any teacher could pick up one of the adventures written for this ISDiP and use it immediately with students. This belief comes out of the recollection that one of the Lead NIC members in this ISDiP was not familiar with DnD before their involvement in this study. They were able to take the adventures written for each session and facilitate the campaign with little to no support, suggesting that others can too.

The lead researcher also intends to disseminate this study's results to various local and national stakeholder groups. These include the SEL department of the Anchorage School District and various SEL-related journals, TTRPG magazines and blogs, and research-related conferences if the opportunity would present itself.

Lastly, as stated previously, there is always a need for more data in improvement science work. The results of this study would be elevated if this study were to be conducted in different programs, with larger groups of students, and with varying ages of students. Additionally, as previously mentioned, the NIC would like to encourage future research on the specific aid that TTRPGs can bring to students who suffer from emotional outbursts. As noted in the limitation section, more could have been done in this study to determine the specific decrease in physical

displays of emotions. However, this study does demonstrate a reasonable likelihood that TTRPGs could aid students in this area. Future researchers could create a visual code and log behavioral outbursts hoping that over time they show a decrease in number, intensity, or both.

### **Final Summary & Conclusion**

This ISDiP aimed to investigate the plausible benefits of utilizing tabletop role-playing games as a means of a targeted SEL intervention to support the upper elementary students at a small alternative school in Anchorage, Alaska. Based on district-wide data, students have demonstrated over multiple years that targeted SEL interventions were necessary to help support their growth and development in social and emotional-based skills. Furthermore, timely research relating to the COVID-19 pandemic, which was occurring at the time of this study, created an urgency for this focused-work. The NIC, a diverse group of invested teachers, staff, and community members, which was established for the sake of this study, put together an SEL-focused after-school program for 16 4th and 5th graders using TTRPGs as the means of intervention. From the NIC perspective, this ISDiP has lent immediate positive benefits to the context where it took place and its students. It has also inspired long-term benefits that span well outside of this study.

To the K-12 context, this ISDiP has established two long-term programs that aim solely to support the students within the school. The NIC will continue to be a professional learning community within the school to support the students with unique opportunities to develop and enhance their SEL skills. Additionally, the DnD Adventure Club, which has already expanded to reach more students within the school's community, will continue as an after-school club, providing students the opportunity to focus on SEL through fun and adaptive ways. Both of these programs will continue to support the students of the K-12 school in their SEL competency



development for years to come, with the added intention of evolving and expanding to meet all students' needs better.

Beyond this specific K-12 context, this study has added to existing research for the field of education that suggests using tabletop role-playing as a reasonable means to supporting students' SEL competency development. The NIC believes that tabletop role-playing games are an authentic method of SEL competency development that any teacher, or any school context, could utilize to support their students in developing vital life-long social and emotional skills. Lastly, this ISDiP has inspired long-term professional and personal growth to the lead researcher and the other most active NIC members. Together, they were able to institute lasting change in their community and offer a robust solution to a problem that has been instilled in their institution for a long-standing period of time.

## References

- Association of Alaska School Boards. (n.d.). *Alaska's School Climate & Connectedness Survey (SCCS)*. <https://aasb.org/alaskas-school-climate-connectedness-survey-sccs-access-alaskas-statewide-results-here/>
- Campbell, C. A. (1993). Play, the fabric of elementary school counseling programs. *Elementary School Guidance and Counseling, 1*(28), 10–16.
- CASEL. (2017). *SEL: What Are the Core Competence Areas and Where are they Promoted?*  
CASEL. <https://casel.org/sel-framework/>
- CASEL. (2021). *Benefits of SEL*. <https://casel.org/impact/>
- Crow, R., Hinnant-Crawford, B., & Spaulding, D. (2019). *The educational leader's guide to improvement science*. Myers Education Press.
- Daniau, S. (2016). The transformative potential of role-playing games: From play skills to human skills. *Simulation & Gaming, 47*(4), 423–444.
- Darvasi, P. (2019). *How Dungeons & Dragons Can Help Kids Develop Social-Emotional Learning Skills*. KQED. <https://www.kqed.org/mindshift/51784/how-dungeons-dragons-can-help-kids-develop-social-emotional-learning-skills>
- Durlak, J., & Mahoney, J. (2019). *The Practical Benefits of an SEL Program*. CASEL.
- FastBridge. (2019). *What is Behavior Screening and Why Should I Do It?* - FastBridge. <https://www.fastbridge.org/2019/09/what-is-behavior-screening-and-why-should-i-do-it/>
- Games to Grow. (n.d.). *What exactly is a tabletop role-playing game anyway?* Games to Grow. <https://gametogrow.org/what-we-do/what-exactly-is-a-tabletop-role-playing-game-anyway/>
- George Lucas Foundation. (2011). *Social and Emotional Learning: A Short History*. Edutopia. <https://www.edutopia.org/social-emotional-learning-history>

- Ginott, H. (1961). *Group psychotherapy with children: The theory and practice of play therapy*. McGraw-Hill.
- Gumaer, J. (1984). *Counseling and therapy for children*. MacMillian.
- Hromek, R., & Roffey, S. (2009). Promoting social and emotional Learning with games: “It’s fun and we learn things.” *Simulation & Gaming*, 40(5), 626–644.
- Landreth, G. (1987). Play therapy: Facilitative use of child's play in elementary school counseling. *Elementary School Guidance & Counseling*, 21, 253-261.
- Landreth, G. (1993). Child-centered play therapy. *Elementary School Guidance & Counseling*, 28, 17-29.
- Lane, K. L., Wehby, J., & Barton-Arwood, S. M. (2005). Students with and at risk for emotional and behavioral disorders: Meeting their social and academic needs. *Preventing School Failure: Alternative Education for Children and Youth*, 49(2), 6–9.
- McConaughy, S. H., & Skiba, R. J. (1993). Comorbidity of externalizing and internalizing problems. *School Psychology Review*, 22(3), 421–436.
- Miller, A. B. S. (2015, June 1). The 6 c’s squared version of education in the 21st century. *BAM! Radio Network*. <https://www.bamradionetwork.com/the-6-c-s-squared-version-of-education-in-the-21st-century/>
- Nistor, G. C., & Iacob, A. (2018). The Advantages of Gamification and Game-Based Learning and their Benefits in the Development of Education. *The International Scientific Conference ELearning and Software for Education*, 1, 308–312.
- Oaklander, V. (1978). *Windows to our children*. Real People Press.

O'Neil, J., & Comer, J. (1997). Building Schools as Communities: A Conversation with James Comer. *Social and Emotional Learning*, 54(8), 6–10.

Perry, J.A., Zambo, D., & Crow, R. (2020). *The improvement science dissertation in practice: A guide for faculty, committee members, and their students*. Myers Education Press.

Rosselet, J. G., & Stauffer, S. D. (2013). Using group role-playing games with gifted children and adolescents: A psychosocial intervention model. *International Journal of Play Therapy*, 22(4), 173–192.

Spencer, J. (2018). Seven reasons to pilot a game-based learning unit. *John Spencer*.

<http://www.spencerauthor.com/game-based-learning/>

Stubbs, R. (2018). *Tabletop Role-Playing Game Therapy (TRPG Therapy)*. Stubbs Music Therapy and Counseling. <https://www.stubbsmtc.com/tt-rpg/>

National Education Association. (2018). The importance of social emotional learning for all students across all grades. *ERIC*. <https://files.eric.ed.gov/fulltext/ED581059.pdf>

YoungMinds. (2020). *Coronavirus Report: Impact on Young People with Mental Health Needs*.

<https://youngminds.org.uk/about-us/media-centre/press-releases/coronavirus-having-major-impact-on-young-people-with-mental-health-needs-new-survey/>

Whitley, S. F. (n.d.). *Generalizing and Predicting Across Time: An Exploration of the Psychometric Adequacy of Data Collected from an Abbreviated Self-Report Rating Scale for*

*Adolescents*. <https://www.ilispa.org/assets/Generalizing%20and%20Predicting%20Across%20Time->

[20Time-](https://www.ilispa.org/assets/Generalizing%20and%20Predicting%20Across%20Time-%20An%20Exploration%20of%20the%20Psychometric%20Adequacy%20of%20Data%20Collected%20from%20an%20Abbreviated%20Self-)

[Report%20Rating%20Scale%20for%20Adolescents.pdf](https://www.ilispa.org/assets/Generalizing%20and%20Predicting%20Across%20Time-%20An%20Exploration%20of%20the%20Psychometric%20Adequacy%20of%20Data%20Collected%20from%20an%20Abbreviated%20Self-Report%20Rating%20Scale%20for%20Adolescents.pdf)

**APPENDICE**

APPENDIX A

PARENTAL CONSENT FORM FOR THE ADMINISTRATION OF THE MYSAEBRS  
ASSESSMENT

Dear [REDACTED] 4/5 Families,

The [REDACTED] K-12 community is committed to supporting every student's academic growth as well as their social, emotional and behavioral growth. This year, students in grades 4/5 have the opportunity to be participants in a study being conducted by Tia Ruff as part of her Doctoral Dissertation. This study will focus on supporting a students' social and emotional learning competency through use of table-top role-playing games as an intervention method. As part of this process all students in grade 4/5 will be asked to complete a screener in the fall, called mySAEBRS student self-assessment screener or My Social, Academic, Emotional, Behaviors Risk Screener. The screener will ask students a total of 20 questions (questions are below).

This data will then be gathered and the [REDACTED] Network Improvement Community, a team of teachers, administrators, and parents, will review the data to form virtual or after school support groups to help our most at-risk students develop their SEL competencies through use of games.

### SAEBRS Screener Questions

<b>Social Behavior</b>	<b>Never</b>	<b>Sometimes</b>	<b>Often</b>	<b>Almost Always</b>
I argue with others.				
I get along with my peers.				
I lose my temper.				
I disrupt class.				
I am respectful.				
Other people like me.				
I have trouble waiting my turn.				
<b>Academic Behavior</b>				
I like school.				
I am ready for class.				
I get good grades.				
I have trouble working alone.				
It's hard to pay attention in class.				
I participate in class.				
<b>Emotional Behavior</b>				
I feel sad.				
I feel nervous.				

I like to try new things.				
I am happy.				
I am worried.				
When something bad happens...				

If you **are willing to have your child/children participate please complete the form below and return it to the [REDACTED] front office, or email the completed form to Tia Ruff at [ruff\\_tia@asdk12.org](mailto:ruff_tia@asdk12.org).**

Please let us know if you have any questions or would like to discuss further.

Sincerely,

Tia Ruff  
4/5 Teacher, Elementary Chair, [REDACTED] TIC; [REDACTED] K-12  
Doctoral Candidate; George Fox University

#### **WRITTEN CONSENT FORM**

I have read the information provided. I understand that my child/children's participation in the Survey is *voluntary*. I understand that data from this survey will be shared for the purposes of a dissertation study; however, my child's name will not be associated with their data, instead an alias will be given to maintain confidentiality.

**I agree** to having my child/children listed below to complete the mySAEBRS Screener. I understand that there is no penalty for my student(s) for not completing the Survey.

Please return this form with your child's name and your name signed below to the building's school office if you do not want your child to participate.

Names of child/children who will participate in completing the brief mySAEBRS survey online for Fall 2020.

\_\_\_\_\_  
Child Name

\_\_\_\_\_  
Grade

\_\_\_\_\_  
Child Name

\_\_\_\_\_  
Grade

\_\_\_\_\_  
Child Name

\_\_\_\_\_  
Grade

\_\_\_\_\_

\_\_\_\_\_





APPENDIX B

THE FASTBRIDGE © GRADING SCALE FOR THE MYSAEBRS ASSESSMENT

## Behavior and Social-Emotional Development/Risk

FAST™ reports a student's overall performance on each SAEBRS scale as a sum of item scores within each scale. Scores range from 0–18 for **Social Behavior**, 0–18 for **Academic Behavior**, 0–21 for **Emotional Behavior**, and 0–57 for **Total Behavior**. The Total Behavior score is calculated by summing the Social Behavior, Academic Behavior, and Emotional Behavior subscale scores. Although SAEBRS scores can often be used as continuous variables, it is sometimes convenient to classify scores as *at risk* and *not at risk*. Using the ranges in Table 3, subscale and scale score can be dichotomized in terms of risk categories within the domains. SAEBRS risk ranges have been established based on comparison of the SAEBRS to multiple criterion gold-standard behavior rating scales, including the *Social Skills Improvement System* (Gresham & Elliot, 2008) and the *Behavioral and Emotional Screening System BASC-2* [Kamphaus & Reynolds, 2007].

Table 3 SAEBRS Score Ranges for Risk and No Risk

SAEBRS Scale/Subscale	Not At Risk	At Risk
General Behavior	37–57	0–36
Social Behavior	13–18	0–12
Academic Behavior	10–18	0–9
Emotional Behavior	18–21	0–17

**Risk for social behavior problems** – student displays behaviors that limit his/her ability to maintain age-appropriate relationships with peers and adults.

**Risk for academic behavior problems** – student displays behaviors that limit his/her ability to be prepared for, participate in, and benefit from academic instruction.

**Risk for emotional behavior problems** – student displays actions that limit his/her ability to regulate internal states, adapt to change, and respond to stressful/challenging events.

APPENDIX C

IRB APPROVAL DOCUMENT

2201038

**GEORGE FOX UNIVERSITY HSRC INITIAL REVIEW QUESTIONNAIRE**

Title: Increasing Social and Emotional Learning Competencies Using Table Top Role-Playing Games

Principal Researcher(s): Tia Ruff

Date application completed: 9/19/2020

**(The researcher needs to complete the information above on this page.)**

**COMMITTEE FINDING:**

  X   (1) The proposed research makes adequate provision for safeguarding the health and dignity of the subjects and is therefore approved.

       (2) Due to the assessment of risk being questionable or being subject to change, the research must be periodically reviewed by the **HSRC** on a \_\_\_\_\_ basis throughout the course of the research or until otherwise notified. This requires resubmission of this form, with updated information, for each periodic review.

       (3) The proposed research evidences some unnecessary risk to participants and therefore must be revised to remedy the following specific area(s) on non-compliance:

       (4) The proposed research contains serious and potentially damaging risks to subjects and is therefore not approved.

  
\_\_\_\_\_  
Chair or designated member

10-6-20  
\_\_\_\_\_  
Date

APPENDIX D  
NIC MEETING AGENDA

## **NIC Meeting Agenda**

### Conversation Topics

- |   |                    |
|---|--------------------|
| 1. Sharing of anecdotal observations  | - Lead NIC Members |
| 2. Sharing of data specific to the four “at-risk” participants                        | - Lead NIC Members |
| 3. Identifiable SEL skill transference from intervention to classroom/life situations | - All NIC members  |
| 4. Limitations/challenges with the TTRPG intervention                                 | - All NIC members  |
| 5. Study Outcomes/Ability to expansion  | - All NIC members  |

APPENDIX E

TRANSCRIPTION NOTES FROM THE NIC MEETINGS



Meeting Date	Role	Identifiable SEL Skill Transference	Recognized Limitations / Challenges with the Intervention	Suggested Resolution	Outcome of Resolution	Study Outcome/Ability to Expand
11/18	Support Staff	Increased self-regulation and control of S.O.J.- “When supporting his teacher during virtual lessons, the impulsivity I saw that the beginning of the year, and even up to a few weeks ago, what better maintained. S.O.J. was able to wait his turn.”				
11/18	Administrator	Less behavior referrals for several student’s participating in this Club, likely because disciplinary action would excuse them from this opportunity.				
11/18	Parent	Son/student participant has ADHD and is Autistic. Has had significant behavior problems in the past involving blurting inappropriate things. The structure of this role-playing really makes a difference- “I find that he is better able to self-manage even after the first two sessions.”				
11/18	Teacher	“It is interesting the level of creative writing I have seen out of the kids in your Club—A.G.F. has been writing the most well put-together quick writes in the last two weeks than I have seen in two years. He has also been more willing to have his video on during Live Zoom classes.”				
11/18	Lead NIC Member		Behavior Management Issue: The first session, <i>The Library of Photis</i> , had a section where each individual would go through a portion of the adventure alone (as the focus on this session was on self-awareness); however, this cause some management issues: “students became bored/uninterested, started getting squirrely as they were waiting for their turn as some individuals took 10-15 minutes to complete their portion of the mission.”	The NIC Leads were advised to no longer write adventures in that manner, instead, make time between separate players’ actions minimal to keep engagement high.	Management was no longer an issue in later session.	
11/18	Lead NIC Member		Aggressive/Anger Issue: “One participant was wanting to just ‘kill’ everything that we came across, which was really distracting and taking away from the other players- I did my best to give appropriate consequences for his actions while also guiding him to make better decisions, but it only seemed to work so well.”	The NIC Lead was advised by unbiased members of the NIC (those that were not leads themselves) to continue to use positive reinforcement for behaviors/actions/decisions that were ideal, and provide swift consequences for his character to hopefully deter from those negative intentions.	This participant no longer demonstrated those aggressive tendencies by the end of the intervention; in fact, he was the one encouraging team work in the final session.	
11/18	Administrator					“Based on the data presented today, I believe this is well on its way to becoming a really invaluable part of our program. My only wish is that we could get it to more students faster.”

Meeting Date	Role	Identifiable SEL Skill Transference	Recognized Limitations / Challenges with the Intervention	Suggested Resolution	Outcome of Resolution	Study Outcome/Ability to Expand
12/16	Parent	“My girl has put up so many walls when it comes to interacting with peers her own age, that hearing how she has been doing in this club brings tears to my eyes. I can see this also in other clubs/activities she is in. She has been way more willing and open to engaging with kids her own age then she ever has been before.”				
12/16	SPED Director	“Many of the students who are participants in this study are either on 504s or have IEPs; it has been such a joy to have conversations with them about their experience because not only do they speak to what their characters did or how the adventures went, but they can also speak to how this experience has served them—one student spoke to the fact that he is always scared, and that’s how his character acted at the beginning, but then by the end, his character became confident and brave during the adventures so he can be too.”				“The transference that I have seen in my SPED students, and based on the data that you have all presented, it is clear to me that this is an opportunity that would be wasted if we were to not continue this, at least in our own setting. But in truth, this needs to be broadcast to a wider audience as I am sure that it would be invaluable to anyone working with kiddos that struggle with these SEL skills.
12/16	SPED Teacher					“I agree [with the above statement] and I think it comes down to the curriculum—typically I use a canned curriculum to help my students learn and understand the same skills you were highlighting in this study, but this is a totally different take on building those skills. Based on what has been presented, this gives students a chance to engage with these skills in a safe place and under fun circumstances. Typically, I see kiddos that are therapied so much in these skills that they know all the right answers but they can never take those answer and apply them to real life. Here, in this intervention, students are showing that they can take these skills they deployed using characters and role-playing and attach them to real life situations.”
12/16	SPED Teacher	“For instance, (continuation from previous statement), a student who I have been working with all year, that actually had to transfer out of █████ and instead do ASD Virtual due to significant behavior issues, has been able to rejoin his peers in class now that he has been demonstrating some new skills in empathy and compassion—these are skills that I have been working with him on all year so far, but it wasn’t until he joined your intervention club that it really started clicking for him.”				
12/16	Parent	“I agree [with the above statement]. I have seen a definite shift in V.A.M.s ability to apply these skills at home. He has empathized more with his siblings and has been able to connect with peers his own age, which has been a long-time struggle for him. All he has been doing the past few weeks is asking when Tuesday is and when he can play DnD again.”				

Meeting Date	Role	Identifiable SEL Skill Transference	Recognized Limitations / Challenges with the Intervention	Suggested Resolution	Outcome of Resolution	Study Outcome/Ability to Expand
12/16	Secondary Teacher					<p>“When I initially was hearing that students were having such a positive time in the DnD Adventure Club and were demonstrating positive behaviors, my first reaction was “well, of course”. This club is given them an opportunity to get attention from a trusted adult and they have been invited to be a part of a program that allows them to connect with friends, or make new ones. However, when you shared that students were actually changing behaviors, putting positive behaviors in place of old ones that truly goes to show that they were not only enjoying themselves, they were learning skills that benefit them now and well into the future. This is something that many of my students need, and this Club is something that they would truly want to be a part of.”</p>
12/16	NIC Lead		<p>Being that the intent is to expand this study to our secondary population, I would like to address the potential challenge regarding the time/energy required in writing the adventures. It took hundreds of hours to develop the adventures for this study, which is not sustainable should this continue.</p>	<p>Utilize pre-built/developed campaigns and convert them into an adventure that highlights/focuses on SEL skills.</p>	<p>This is highly doable, and was already applied when this study was expanded in the [REDACTED] context to include secondary students.</p>	

