

COLLABORATIVE ECOLOGICAL CONSULTATION:
PSYCHOLOGIST, CLASSROOM TEACHER AND EMBEDDED INTERVENTIONS

A Thesis

Submitted to the Faculty of Graduate Studies and Research

In Partial Fulfillment of the Requirements

For the Degree of

Doctor of Philosophy

in

Education

University of Regina

By

Tammy Anne Ferguson

Regina, Saskatchewan

December 7, 2018

UNIVERSITY OF REGINA
FACULTY OF GRADUATE STUDIES AND RESEARCH
SUPERVISORY AND EXAMINING COMMITTEE

Tammy Anne Ferguson, candidate for the degree of Doctor of Philosophy in Educational Psychology, has presented a thesis titled, ***Collaborative Ecological Consultation: Psychologist, Classroom Teacher and Embedded Interventions***, in an oral examination held on November 28, 2018. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

External Examiner:	*Dr. Sonya Corbin Dwyer, Memorial University
Supervisor:	Dr. Scott Thompson, Educational Psychology
Committee Member:	Dr. Wanda E. Lyons, Adjunct – Educational Psychology
Committee Member:	**Dr. Twyla Salm, Curriculum & Instruction
Committee Member:	Dr. Katherine Arbuthnott, Department of Psychology
Chair of Defense:	Dr. Kathleen Irwin, Faculty of Media, Art, and Performance

*via ZOOM conferencing

**Not present at defense

ABSTRACT

The focus of this dissertation is on collaboration between classroom teachers and psychologists at the intervention stage of consultation. A teacher's request for further implementation supports from the psychologist was the catalyst for an initial pilot case study. Teachers and psychologists worked in partnership to select and then to embed interventions within a curricular unit of study. Theoretically, social constructivism and Bronfenbrenner's ecological model framed this research as participants deliberated through factors at the classroom and teacher level that impede or support implementation of various interventions.

The dissertation data, analyzed from interviews, journals, observations and artifacts, suggested psychologists working in schools persist in utilizing an expert, rather than a collaborative model at the intervention implementation stage. Psychologists continued to present a report with a list of recommendations for teachers to implement. Further, the data indicated all of the participants realized benefits from collaborative ecological consultation to support intervention implementation, in addition to the students.

Keywords: collaboration, psychologist, classroom, intervention

ACKNOWLEDGEMENT

I would like to thank the Director and Superintendent of the school division that supported this study. I would also like to acknowledge the teachers and psychologists who participated in this study. You had time and energy, beyond your already very full workday, to organize, to collaborate and to reflect on improving practises of psychologists working in schools. I am very privileged to have had the opportunity to work with each of you to make a difference for students.

I appreciate the guidance and leadership provided by my advisor, Dr. Scott Thompson. You always maintained a balance of questions and challenges along with encouragement throughout the dissertation process. Thank-you for being always available as I sought advice, reassurance and direction.

I would like to thank the members of the dissertation committee. Drs. Katherine Arbuthnott, Wanda Lyons and Twyla Salm. Your guidance, at every stage of the dissertation was always supportive and insightful.

As well, to The Dr. Stirling McDowell Foundation, the research grant I had received supported this research with release time for teachers.

DEDICATION

This dissertation is dedicated to my parents, Betty and Barry Halbgewachs, who encouraged me to pursue a doctorate degree and to my husband, Bond Ferguson and my son, Beckett Ferguson, for reassurance and unwavering support.

Table of Contents

ABSTRACT.....	i
Acknowledgements.....	ii
Dedication.....	iii
Table of Contents.....	iv
Definitions of Terms.....	viii
Chapter One: Introduction.....	1
Pilot Study: Catalyst for Dissertation.....	2
Pilot Study Overview.....	4
Conclusion.....	9
Chapter Two: Literature Review.....	12
The Evolving Role of Psychologists in Schools.....	12
Psychological Consultation.....	15
Consultation Definition.....	16
Indirect Process.....	16
Problem Solving and Collaboration.....	17
Practice Documents.....	17
Canadian Guideline Documents.....	18
Consultation Models.....	19
Theoretical Background: Social Constructivism and Ecology.....	32
Behaviorism.....	33
Cognitive/Cognitive Constructivism.....	34
Social Constructivism.....	36
Ecological Approach to Consultation.....	41
Conclusion.....	48
Chapter Three: Methodology.....	49
Research Questions.....	50
Action Research.....	51
Action Research Theoretical Foundation.....	51

Social Constructivism	53
Ecological Theory.....	54
Researcher’s Practical Philosophical Stance.....	55
Practical Participation and Local Context.....	56
Practical Reflections and Improvements within the Local Context.....	57
Research Design and Process.....	59
Action Research Example.....	60
Research Process.....	61
Planning (With Participants).....	64
Acting and Observing	66
Reflecting.....	74
Data Collection for Evidence of Credibility and Trustworthiness.....	74
Researcher Reflectivity.....	81
Data Analysis.....	86
Conclusion	91
Chapter Four: Findings	92
Participants and the Setting.....	92
Classroom Teachers.....	93
Psychologists.....	93
School Contexts	93
Theme One: Consultation Without Collaboration “Dump and Run” or “Consult and Hope”..	94
Current Consultation Model: Teachers “Dump and Run”.....	96
Current Consultation Model: Psychologists ‘Consult and Hope’.....	97
Debrief Meeting.....	98
Psychological Report and Intervention List.....	101
Follow-Up: Inconsistent and Informal Check-ins.....	103
Conclusion.....	104
Theme Two: Completely Collaborative Consultation	106
Sub-Theme 1: Authentic Collaboration and Relationship Building.....	107
Sub-Theme 2: Embedded Professional Development.....	109
Sub-Theme 3: Empowering Experience.....	112
Theme Three: Consultation Completely Contextualized.....	113

Sub-Theme 1: Teaching Experiences and Style.	114
Sub-Theme 2: Inclusive Practice.	115
Sub-Theme 3: Classroom Dynamics and Student Characteristics.	120
Theme Four: Consultation, Collaboration and Completely Positive Student Outcomes	121
Student J (Teacher 1).	123
Student C (Teacher 2).	125
Student L (Teacher 3).	126
Theme Five: Not Without Collaboration	127
Conclusion	133
Chapter Five: Discussion	136
Incomplete Psychological Consultation.....	138
Distinct Psychologist Role.	139
Time Constraints.	140
Response To Intervention (RTI).	142
Consultation Completely Collaborative.....	147
Collaborative Ecological Consultation Advantages.....	148
Micro-Level Factors.....	150
Classroom Composition and Dynamics Count.	152
Embedded Professional Development.	155
Implementation Integrity and Fidelity.	162
Implications for Practice	165
Summary	170
Future Research: Collaborative Ecological Consultation in Schools	171
Inter-Professional Collaboration.	171
Dissertation Limitations.....	172
Participant Number and Localized Setting.	173
Confidentiality and Micro-Politics.....	174
Bronfenbrenner Conceptual Framework.....	175
Qualitative Student Outcome Data.	177
Conclusion	177
References.....	181
Appendices.....	210

Appendix A: Ethics Approval..... 210

Appendix B: Psychologist Recruitment..... 211

Appendix C: Classroom Teacher Recruitment Information Letter..... 212

Appendix D: Initial Interview Semi-Structured Questions..... 213

Appendix E: Final Interview Semi-Structured Questions..... 215

Definitions of Terms

1. **Registered Psychologist** – The term Registered Psychologist (R. Psych.) when working in schools in Saskatchewan refers to an individual who is registered or provisionally registered with the Saskatchewan College of Psychologists. To be a R. Psych. requires at least a master's degree with a majority of courses in psychology. A R. Psych. will generally list education within their area of competency when working within the education systems (Saskatchewan Ministry of Education, 2008). The title 'psychologist' throughout this paper indicates a R. Psych.
2. **Curricular Unit of Study** – Effective instruction integrates the student outcomes from subject areas for each grade into curricular units of study. Planning curricular units of study also includes adapting instructional materials, methods, and environment to meet diverse students' needs (Saskatchewan Ministry of Education, 1991, 2010).
3. **Student Outcome** - The Ministry of Education in Saskatchewan has developed curriculum outcomes for each grade level. These outcomes define the learning expectations for students by the end of a specific grade for each subject area (Saskatchewan Ministry of Education, 2010).
4. **Stirling McDowell Foundation Grant** – The McDowell Foundation in Saskatchewan provides research grants for the exploration of innovative ways to meet the educational needs of students.
5. **Learning from Practise Conference** - Learning from Practice Conference is the McDowell Foundation's annual conference to share research completed through the support of a foundation grant.

6. **Consultation** – Consultation is a core competency of psychologists in Saskatchewan (Saskatchewan Ministry of Education, 2008). As a member of a collaborative school team, psychologists provide knowledge of human development and current effective practices to support teachers in addressing student needs (Gutkin & Curtis, 2009).

7. **Collaborative School Team** – Collaboration as members of an education team provides an opportunity for two or more individuals to cooperatively problem solve, and to share knowledge and skills between disciplines (Saskatchewan Ministry of Education, 2001; Dettmer, Knackendoffel and Thurston, 2013).

8. **Student Support Services Teacher** – The student support services teacher, also known as the learning resource teacher or special education teacher, is a school-based professional providing a variety of direct and in-direct supports to meet diverse needs of students (Saskatchewan Ministry of Education: The Adaptive Dimension in Core Curriculum, 1992; Dettmer et al., 2013).

9. **Response to Intervention (RTI)** – RTI is a tiered approach or a multi-tiered system of supports (MTSS) to enhance learning and decision making for students with diverse needs (Saskatchewan Ministry of Education, 2008; Jimerson, Burns & VanDerHeyden, 2016).

Chapter One: Introduction

There is extensive literature on a shift in the role of the psychologist working in schools, from what was once a focus on assessment of individual students to prioritizing consultation with teachers (Bernes & Witko, 2009; Fagan, 2002; Fagan & Wise, 2007; Farrell, 2010; Kennedy, Frederickson & Monsen, 2008; Sheridan & Gutkin, 2000; Stoiber & Vanderwood, 2008; Ysseldyke et al., 2006; Ysseldyke, Burns & Rosenfield, 2009). To maximize the school psychologist's impact on supporting students through consultation with teachers, researchers have argued that it is imperative to have an understanding of the classroom context or ecology (Farrell, 2006; Gutkin, 2009; Sheridan & Gutkin, 2000). Furthermore, researchers have also called for an ecological approach to consultation, with an emphasis on exploring contextual factors via teacher and psychologist collaboration (Curtis, Chesno Grier & Hunley, 2004; Gutkin, 2009; Gutkin, 2012; Sheridan & Gutkin, 2000; Wizda, 2004). In an ecological approach to consultation, the psychologist must look beyond the individual learner to understand the systemic factors that are impacting the child, such as the learning environment and curriculum (Gutkin, 2009; Jeary & Schwean, 2012; Meyers, Meyers, Graybill, Proctor & Huddelston, 2012; Sheridan & Gutkin, 2000; Wizda, 2004).

The theory of social constructivism underpins an ecological approach to consultation to emphasize the connections between an individual and their environment (McMahon, Mason, Daluga-Guenther, & Ruiz, 2014). The psychologist who utilizes an ecological approach to consultation connects the individual student needs and the classroom factors to form a comprehensive picture of the learning situation (Fine, 1985; Neal & Neal, 2013;

Rosa & Tudge, 2013). Gutkin and Curtis (2009) argued that it is important for psychologists to work with teachers to design interventions compatible with the ecological factors of the classroom. Furthermore, psychologists need to collaborate with the classroom teachers to impact intervention implementation and the instruction of students (Curtis et al., 2004; Gutkin, 2009; Gutkin, 2012; Sheridan & Gutkin, 2000).

The purpose of this action research study was to explore teachers and psychologists working together, through collaborative ecological consultation. This was utilized in the research to support an ecological approach to the implementation stage of psychological consultation. Each teacher and psychologist partner worked to deliberate through possible interventions and to embed those selected within a curricular unit of study for the teacher to implement within the classroom.

A collaborative ecological process at the implementation stage of psychological consultation was researched in this dissertation. It centred on the deliberation of the realities of the teacher's classroom, such as the students and the curriculum, to understand the application of interventions and their potential impact within the context of the classroom (Truscott et al., 2012). This dissertation is organized into five chapters: (1) Introduction; (2) Literature Review; (3) Methodology; (4) Findings; and, (5) Discussion.

Pilot Study: Catalyst for Dissertation

The pilot study emerged from a classroom teacher's concerns with the implementation phase of psychological consultation within a Saskatchewan school division. This teacher requested further collaboration, beyond a team meeting in which

the psychological assessment report and the list of recommended interventions are debriefed.

I worked as a psychologist in a school division that utilized a student services team consultation model. This is multi-disciplined approach for sharing of skills to problem solve and to support student needs within the school or classroom. The implementation stage involves debriefing of the psychological report to the school team. The recommended intervention list is included within the report for the teacher to implement within the classroom. This team meeting often formally ended the psychological consultation process, although, there may be infrequent and informal follow-up between the classroom teacher and myself.

In February 2011, after I communicated the student assessment results and recommendations from the report at the meeting, the classroom teacher asked for further support. The teacher indicated that it would be difficult to implement the interventions from the list within the context of her classroom. This teacher asked, specifically, for an opportunity for further collaboration to review and to embed interventions within a curricular unit of study to support implementation. The teacher's apprehension resonated with me, for like a "stone in your shoe" (Baumfield, Hall & Wall, 2013, p. 38), on many occasions I had queried whether this current psychological consultation process was sufficient in meeting teacher and student needs.

We completed one cycle of action research to explore this request for further collaboration. I include this overview of the pilot study, to assist in forming a rationale for the research questions and forthcoming dissertation (Herr & Anderson, 2005,

McAteer 2013). I conclude this chapter with an analysis of the pilot study data and a brief discussion. An in-depth exploration of the background for the pilot study and dissertation is located within the literature review of this paper.

Pilot Study Overview

The purpose of the pilot study was to explore formal collaboration in the intervention implementation stage of consultation between a classroom teacher and myself, the psychologist. The teacher and I had several years of experience in our roles; in addition, I am also a qualified teacher with previous teaching experience. We invited an assistant professor in a Faculty of Education to lead and to facilitate the research process, and developed the following research questions:

1. How can a school psychologist provide support for a classroom teacher in a manner that is embedded in the teacher's planning and instruction?
2. How do a classroom teacher and psychologist co-plan a unit to incorporate recommendations for students with identified exceptional learning needs?
3. How do unit co-planning and follow-up help determine the strategies that may be effective for the identified student in other units and subject areas?

The action research cycle using the model by Kemmis and McTaggart (2008) (see Figure 1) is described in more detail in Chapter 3. The study began with the completion of individual interviews followed by the development of an action plan to guide the research process of act, observe and reflect.

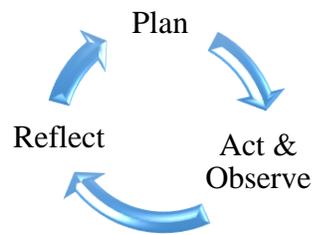


Figure 1. Action Research Cycle. Adapted from Kemmis and McTaggart, 2008.

For the action, the classroom teacher and I worked together to embed interventions within a curricular unit of study. We began a three-hour collaboration time by reviewing assessment results and background information on the student. The teacher chose an English Language Arts unit, as she thought it might pose difficulties for the student. Given that the unit was pre-planned, the focus of our collaboration was to *review* the content, objectives, instructional strategies, and assessment methods. We then identified possible interventions to support the student learning needs.

We chose both instructional and assessment adaptations that would potentially be appropriate for the student. These included working in pairs, using visual organizers, reviewing characters and events from previous chapters prior to each reading, using the Mimio-Board (Clary Business Machines, 2012) to review previous readings, scribing, and having the student record oral responses to questions on the teacher's iPhone.

For observing, I visited the classroom on four separate occasions. The purposes of the classroom visits were to: (a) observe the student as he participated in the listening and writing activities; (b) discuss my observations, review student progress, and reflect on the effectiveness of interventions; and, (c) collaborate with the teacher to adjust interventions

as needed. Each follow-up visit involved 45 to 60 minutes of classroom time followed by 20 to 30 minutes for discussion that typically took place during the lunch hour.

The data was assembled into general themes for analysis and reflection. The themes that emerged were: (1) the current psychological consultation model of recommending interventions within a report and debriefing at a meeting caused concerns for both the teacher and the psychologist; (2) the formal collaboration to support intervention implementation was positive for both the teacher and for the psychologist; and, (3) the student met academic outcomes.

The teacher in the pilot study reported that the school team debriefing meeting was helpful in understanding the student,

it immediately lessens the frustration ...well first of all, there's a reason for this kid's behavior. It's not just that he's refusing to do his work or hasn't bothered to practice writing. It helps you to understand and then be more compassionate to the child and find appropriate ways for them to maintain that parity with what their peers were doing in their own way.

However, the teacher also commented after the meeting she often had to “go on the internet myself and look things up” in order to find specific strategies to apply within the context of her classroom.

I had also questioned whether the discussion of recommendations at the debrief meeting was helpful to teachers. I suggested that teachers may be overwhelmed by the extensive amount of information that is provided.

there were all of the test scores and conversations around the assessment, which is not always something teachers are familiar with so it's a lot of information for them ...then I go into the recommendations at the end and maybe by the end it was almost time to not think too much.

The recommended interventions were also outlined in the assessment report. The teacher commented the reports are helpful but sometimes are not efficient to read and may be difficult to translate into practice as there are also teacher and classroom factors impacting implementation,

I enjoy reading those things when I have time. But when suddenly you're at the start of the year, you find out, oh, I've got this [student] in my class and what do I do? Just give it [intervention] to me. Just tell me, "do this, do this, do this. If this doesn't work, try that" ...not everything works for the teacher. It's just so complicated. You just want to be efficient at what you're doing.

I also shared the teacher's concerns and raised several questions regarding the current model of consultation, particularly with the report to support intervention implementation,

First, I had grappled with the decision of whether to provide a succinct list of recommendations tailored to the current teacher or to provide more comprehensive information to be used by future teachers as well. The recommendations are just another issue for me because I don't know if I need to list everything from A to Z so that every teacher along the way can pick and choose, or if I need to be specific to this teacher; what they think makes sense for them to intervene with the child.

Second, I reflected on whether teachers actually accessed the reports once they were in the student's Cumulative Record.

I get asked frequently about teacher support for a student and there are reports in the cumulative file. All the recommendations are there. Actually, the adaptations are there if you look back ...I just don't feel that they're either (a) reading the information; or (b) they're able to sort through it and make sense of it.

I also expressed concern over the lack formal supports for implementation after the team meeting and report review,

We don't do a lot of follow-up meetings and I think that's the other big gap ... We constantly go through writing recommendations and just assuming because they're best practice and they're research-based that they'd be effective, but I don't know if I know that ... I would give recommendations and I would never know if the teachers thought them to be useful, thought them to be helpful, found them able to use the information and apply it in their classroom in their world. I don't know if the recommendations made a difference for students, which recommendations tended to work better, which ones didn't, what teachers found easier to implement. I just didn't have any feedback generally about my report ... *When the meeting ended, the report was in the file and that was pretty much the end of that process* [emphasis added]

The pilot study data analysis also provided insight into the collaboration process between the classroom teacher and me to embed interventions into a curricular unit of study. The teacher reflected on the formal collaboration in the consultation process,

So, I got the diagnosis and said, "these are his problems." But the solution out of that consultation was for me sitting down and thinking *how "am I gonna solve this"* [emphasis added]? Whereas when [psychologist] and I were doing this together it was okay, we both had these observations; talking together we could try this. "Should I try that?" Yeah, that would work and what about this. So, it was a lot less taxing on me.

I had also reported the formal collaboration to support implementation focused on curriculum rather than on the teacher.

I like the idea of focusing back on the curriculum and on the unit. Not so much what the teacher can do or the child should do, but how the unit could be different or the unit could be presented different or supporting the child in different ways through the unit adaptations or differentiation ... I just felt like I was welcomed and it was comfortable and the teacher was expecting me to be there [follow-up] and we knew the purpose. The purpose was to look at how well that child was responding to that lesson, to that unit. It wasn't to focus on the teacher's ability or the student's inability or the mismatch thereof. It was just looking at the unit that we had already discussed and looked at together. So it gave us a point of reference to have a communication that was very comfortable.

Both the teacher and I commented on the value of collaborating to support intervention implementation,

Well, the benefits, of course, are it was something that pertained directly to me; to what I could do within my classroom; how I could improve my teaching in general because whatever helps any student that already has difficulties is going to be even better for a kid who's got it all going on (teacher).

So I think this process helps me become more focused and targeted and gave the teachers a starting point ... The follow-up gave me more insight and more -- what's the word, more evidence that this is going to be what the student needs (psychologist).

Conclusion

As mentioned, this study initiated from a teacher's expressed concerns regarding the current process for consultation, and the lack of formal implementation support from the psychologist. The school division's current consultation process culminates with a list of recommendations provided in a written report at a student services team meeting.

However, the psychologist often did not know whether interventions were implemented and, if so, whether they were effective for the student and well-suited to the teacher or classroom context. Similarly, the teacher in this study reported that she was typically left on her own to do further research and access resources for implementation of the interventions. Through action research, the teacher and psychologist incorporated formal collaboration within the intervention implementation stage of consultation.

This pilot study data, compiled from one teacher/psychologist pair, suggested benefits for the teacher, psychologist and student. Observations, interviews, artifacts, and the participant journals revealed student improvement in recall, comprehension,

engagement, and confidence. The teacher reported that recommendations were relevant for the student in this classroom context and were a good fit with her teaching style. The psychologist reported the formal collaboration along with classroom observations provided the opportunity to gain a better understanding of the student's needs and abilities within the instructional context and to determine whether recommendations were appropriate and effective for the student and teacher. Finally, the observation times enabled the teacher and psychologist to have focussed follow-up discussions about the student and class.

The general themes that emerged from this action research pilot study indicated the current school psychologist consultation process may have some gaps in the intervention stage, for as Stoiber and Vanderwood (2008) have argued, fundamental changes are needed in the way psychologists support implementation. This pilot study explored formal collaboration at the implementation stage of psychological consultation, which was effective for the teacher, psychologist and student. A focus on embedding interventions within a curricular unit with direct teacher involvement is consistent with an ecological framework that concomitantly considers student characteristics, teacher style and skills, and curriculum context (Sheridan & Gutkin, 2000; Gutkin, 2012).

As the field of school psychology continues to evolve, Gutkin and Reynolds (2009) reminded researchers an ecological approach to consultation remains a priority. There are few studies to have implemented and researched an ecological approach to the implementation phase of psychological consultation in schools. The dissertation following this pilot study contributes to research by means of expanding the data by

exploring collaborative ecological consultation for a cross-section of teachers, psychologists and students.

This paper includes a comprehensive review of the literature. Chapter 2 provides the background in the examination of a persisting gap within the intervention implementation stage of psychological consultation that necessitates the calls for prioritizing an ecological approach.

Chapter Two: Literature Review

The literature review for this dissertation begins with an overview of the dominant assessment role for the psychologist working in schools and the calls for a shift to consultation. A description of consultation, the common models and the practice documents utilized by psychologists in this role evolution follows. Finally, the review concludes with framing social constructivism and emphasizes calls for an ecological approach to psychological consultation.

The Evolving Role of Psychologists in Schools

School psychology emerged as a profession in the early 20th century (Jordan, Hines, & Saklofske, 2009), perhaps not incidentally, so did the development of the first IQ test. In 1905, Binet and Simon developed a scale to measure intelligence and to diagnose intellectual disabilities in children (Farrell, 2006). This diagnostic process directed children from regular school curriculum into special classes (Farrell, 2006). With the development of the Binet - Simon scale, the role of assessing and diagnosing disabilities in children emerged early in the profession as a distinctive competence for psychologists working in schools.

The historic assessment roots within the role of the psychologist has had a substantial impact on the profession (Farrell, 2006). The assessment and diagnostic practises created a monopoly over the psychologists' area of work and enhanced autonomy for the profession (Labaree, 1992). With this technical competence and workplace autonomy, psychology emerged with a successful claim to a professional status (Labaree, 1992). The distinctive competency of assessment for diagnostic purposes continues to be a

function unique to that of the psychologist and continues to shape their role within schools today. Researchers have verified that assessment activities continue to dominate the psychologist role (Corkum, French, & Dorey, 2007; Hasuik, 2006; Jordan et al., 2009; Watkins, Crosby, & Pearson, 2001). As well, psychologists themselves have reported in surveys that the majority of their time is spent completing psychological tests (Corkum et al., 2007; Jordan et al., 2009) and that the second greatest amount of time is spent on report writing (Jordan et al., 2009).

This role of assessment and diagnosis operated on a medical model of psychological services, in which the problems are child-centred (Farrell, 2010). This service delivery model focused on the student in order to generate explanations regarding an individual's difficulties meeting curricular outcomes (Farrell, 2006). This child-centred approach implied the problem or challenge resides with an individual, therefore the interventions emphasized changes to the student behaviour or motivation (Meyers et. al., 2012) rather than addressing potential changes in instruction and environment. Researchers argued that the majority of psychologists working in schools continue to use a medical model focused on the individual student (Farrell, 2006).

Kibby (2009) asserted that a child-centered approach is a great disservice to students with difficulty learning for as Gutkin (2009) argued, it is generally easier to make changes to the educational environment than to traits of individual students. Ultimately, as Fagan and Wise (2007) have maintained, lengthy and time-consuming psychological assessments have limited impact on student achievement, and as Sheridan and Gutkin (2000) stated "this micro-level perception will always yield micro-level results" (p. 496).

As leaders within school divisions, psychologists must direct attention and time beyond the individual student and to understand the systemic factors influencing learning, such as the classroom environment and curriculum (Jeary & Schwean, 2012; Meyers et al., 2012; Sheridan & Gutkin, 2000). In order to positively influence the instruction of students, the focus will need to shift from an assessment model to working and consulting with the teachers, who largely control the students' educational environment (Curtis et al., 2004; Gutkin, 2009; Gutkin, 2012; Sheridan & Gutkin, 2000).

Indeed, there are countless authors calling for an expansion to the role of psychologist beyond assessment (Bernes & Witko, 2009; Fagan, 2002; Fagan & Wise, 2007; Sheridan & Gutkin, 2000) to consultation (Fagan & Wise, 2007; Farrell, 2010; Stoiber & Vanderwood, 2008; Ysseldyke et al., 2009; Ysseldyke et al., 2006). The psychologist has specialized knowledge of assessment but also evidence-based practices which positions them well for a consultative role in schools (Kemp-Koo & Claypool, 2011; Powers, Hagens, & Busse, 2008). Furthermore, survey results indicated that psychologists' desired increased consultation time within their role (Corkum et al., 2007; Hasiuk, 2006; Jordan et al., 2009; Watkins et al., 2001). As a problem solving resource for teachers (Curtis et al., 2004), consulting psychologists can assist in the provision of effective instructional supports for diverse learners in the classroom (Powers et al., 2008; Ysseldyke et al., 2009). It is unrealistic to expect that as the diversity of student needs increase, one profession would have all of the skills and knowledge needed to be effective (Jeary & Schwean, 2012). Therefore, to support teachers in meeting the

learning needs of a broader range of students, the calls for an expanded psychological consultation role continued (Bernes & Witko, 2009; Fagan & Wise, 2007).

Yet, there is evidence to suggest an enduring gap continues between psychologists' desired role of consultation and the amount of time still spent in assessment activities (Corkum et al., 2007; Hasiuk, 2006; Stoiber & Vanderwood, 2008; Ysseldyke et. al., 2006). Survey data demonstrated assessment activities continue to dominate the role of the psychologist working in schools (Watkins et al., 2001) and a shift toward consultation would impact the time available for assessments (Stoiber & Vanderwood, 2008). Farrell (2004) argued the evidence that psychologists in schools continue to spend the bulk of their time completing assessments and maintain a traditional way of working demonstrates that consultation practices are not clear. Furthermore, the term 'consultation' is so frequently used to describe so many things that it is "almost devoid of meaning" (Gutkin & Curtis, 2009). Sladeczek and Heath (1998) has called on Canadian researchers to "clearly define and operationalize what is meant by 'consultation'" (p. 12) as the definition and procedures, as it relates to psychologists working in schools, are ambiguous (Dennis, 2004; Kennedy et al., 2008; Sladeczek & Heath, 1998).

Psychological Consultation

There is limited research on what comprises consultation practices for psychologists working in schools (Kennedy et al., 2008). This section begins with a definition and a summary of key characteristics of consultation, which is followed by an analysis of three Canadian documents, created to influence psychological practises in Canada and more

specifically, in Saskatchewan. This section concludes with an overview of two commonly utilized models of consultation: behavioural and instructional.

Consultation Definition. Baynham (2000) asserted for psychologists, consultation is a conceptual framework and “not a way of working” but “a description of what we do”

(p. 1). Erchul and Martens (2010) provided the following definition:

School consultation is a process for providing psychological and educational services in which a specialist (consultant) works cooperatively with a staff member (consultee) to improve the learning and adjustment of a student (client) or group of students. During face-to-face interactions, the consultant helps the consultee through systematic problem solving, social influence, and professional support. In turn, the consultee helps the client(s) through selecting and implementing effective school-based interventions. In all cases, school consultation serves a remedial function and has the potential to serve a preventive function (p. 12).

The two main characteristics of consultation detailed next are ‘indirect process’ and ‘problem solving and collaboration’ (Lopez & Nastasi, 2008).

Indirect Process. The practice of consultation for psychologists is to improve outcomes for students by utilizing an indirect approach (McGarry Klose, Plotts, & Lasser 2012). Simply put, psychologists would not provide direct services to students but rather work with the teachers of the student (Gutkin & Curtis, 2009) (see Figure 2). A teacher would seek psychological support when there is a problem with the progress of a student in their classroom they have been unable to solve (Gutkin & Curtis, 2009). Indirect support is the defining characteristic of consultation (Gutkin & Curtis, 2009) and is professional support for “translating researched knowledge into practice” (Gravois, 2012, p. 86).



Figure 2. Indirect Service Delivery Model. Adapted from Gutkin & Curtis, 2009.

Problem Solving and Collaboration. The second essential characteristic of consultation is a mutual problem solving process between classroom teachers and psychologists (Lopez & Nastasi, 2008). Collaborative problem solving is one of the best strategies to support the needs of students (Fagan & Wise, 2007). A collaborative consultation process should encourage a greater use of ‘we’ between the psychologist and the teacher (Watkins & Hill, 2010). This parity between participants fosters shared decision-making, goals making and accountability (Cook & Friend, 1991). As well, collaboration between the psychologist and the teacher is a major contributor to the success of the consultation process (Gutkin & Curtis, 2009).

The definition and key attributes of consultation for psychologists in schools outline a consultation role for psychologists in schools. There are also practice documents that highlight the evolving emphasis of consultation for psychologists in schools (Canadian Psychological Association [CPA], 2007). These documents expand the understanding of consultation and are another mechanism to clarify this approach for psychologists (White & Kratochwill, 2005).

Practice Documents

The role of psychologists working in schools has been the focus of a number of published practice documents in Canada between 2001 and 2008. There are three main

guideline documents in Canada to provide direction in the current and future practice of psychology in Saskatchewan schools. These practice documents, dating fifteen years, reflect increased advocacy for consultation supports in schools by researchers and psychologists (CPA, 2007; Kennedy et al., 2008).

Canadian Guideline Documents. The Government of New Brunswick published one of the first key documents, *Guidelines for Professional Practice for School Psychology*, in 2001. The intention here was to reflect best practices in psychology and to ensure consistent inclusionary practices to those within the provincial schools of New Brunswick (New Brunswick Department of Education, 2001). The CPA built upon the New Brunswick document and in 2007 published the *Professional Practice Guidelines for School Psychologists in Canada*. This national document established guidelines for psychologists within Canadian schools, along with information on the role of psychologists for other professionals working within the school system (CPA, 2007).

In 2008, as a supplement to the CPA document, the Saskatchewan Ministry of Education partnered with the Saskatchewan Educational Psychology Association and produced the living document *Guidelines for the Practice of Professional Psychology in Schools within Saskatchewan*. This document comprises knowledge on the role of the psychologist that is unique to schools in Saskatchewan, as well continues to promote collaboration and consultation (Kemp-Koo & Claypool, 2011).

Consultation has been emphasized as a ‘practice for psychologists’ yet Gravois (2012) argued “possibly the greatest challenge facing effective use of consultation service in schools is consensus as to what is and what is not consultation” (p. 84). In all three

practice documents, consultation is recorded as an indirect collaborative intervention that psychologists can use within their role. The word ‘consultation’ frequently describes the role of the psychologist within the documents, as well as even mixed with other terms, such as: (1) collaborative consultation; (2) professional consultation; (3) teacher centered consultation; and, (4) student-centered consultation. The documents describe consultation as a collaborative process for information sharing on individual student needs and/or classroom needs. The focus within the practice documents is on psychologist engagement in these activities as part of collaborative teams or student support services teams. Yet, the psychologist’s role continues to require clarity, as practice documents do not outline steps or stages of a collaborative consultation process (Sladeczek & Heath, 1998; Dennis, 2004; Kennedy et al., 2008).

The vagueness of what constitutes consultation for psychologists in schools is also hindered by the fact that these processes are less-often investigated in research (Kennedy et al., 2008). Gravois (2012) argued “the need to conceptualize consultation services is an important starting point when researching its effectiveness. If form, focus, and function are lacking at the development level, then research becomes cumbersome (p. 85).” Therefore, an overview of two common psychological consultation models, Instructional Consultation and Behavioural Consultation follows.

Consultation Models. The literature describes various consultation models utilized by psychologists working in schools. The models differ in the theoretical backing and in the framework of activities (Lopez & Nastasi, 2008) and as Gutkin and Curtis (2009) argued, this variance warrants further investigation. This section begins with a brief

overview of the evolution of consultation models in schools. A description of the process for two common models, instructional consultation and behavioural consultation, follows. This section then concludes with an overview of collaborative consultation, to highlight the current gaps in the intervention implementation stage of consultation.

Mental Health Consultation (MHC) was developed in the 1960s by psychiatrist Gerard Caplan (Conoley & Conoley, 1988; Larney, 2003). Caplan believed that consultees require emotional support to work through difficulties arising from a loss of professional objectivity (Conoley & Conoley, 1988). The primary focus of MHC in schools is to help a teacher who is having difficulties with a student and to help the teacher overcome these difficulties (Larney, 2003). MHC is hierarchical, with a consulting expert and a consultee professional (Sladeczek & Heath, 1998).

As the consultation practices continued to advance, the Consultee Centered Consultation (CCC) model was developed. The main shift in CCC was that the consultant moved from external to internal, or to within the organization (Knotek, Kaniuka & Ellingsen, 2008). The relationship between the consultant and the consultee in the CCC model was less hierarchical (Knotek, 2005; Newman, Ingraham, & Shriberg, 2014) and more collaborative with shared goals (Sandoval, 1996). As consultation progressed to more of a partnership (Newman et al., 2014) the process became generally less prescriptive and coercive (Hylander, 2012). The evolution of CCC also emphasized the development of a new understanding of the student (Sandoval, 1996) and for altered student interventions (Knotek, 2005).

Instructional Consultation (IC) is a process targeted on student academic interventions (Rosenfield, Silva, & Gravois, 2008). This consultation model evolved into a team structure (Rosenfield et al., 2008). The goal of the team is to build a collaborative problem-solving process utilizing the instructional triangle (see Figure 3). A psychologist utilizing the IC model encourages teachers to approach a student's learning difficulties from a different perspective. The instruction triangle is a model to demonstrate this perspective and the belief that success results from a better match between the student, the curriculum and instruction, as well as the classroom procedures (Rosenfield, 2008).

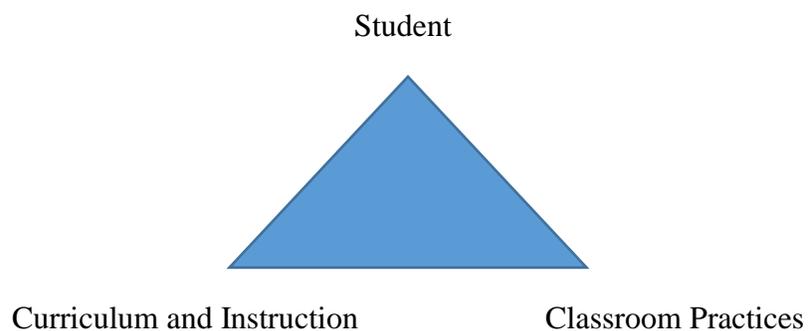


Figure 3. The Instructional Triangle. Adapted from Rosenfield, 2008 and Rosenfield, Silva, & Gravois, 2008.

The aim of this model is to provide children with effective interventions by supporting the professional development of teachers (Rosenfield & Humphrey, 2012). The IC process is outlined as a set of stages (see Table 1) and a description of each follows.

Stage 1	Stage 2	Stage 3	Stage 4
Referral	Assessment, Report, Meeting	Intervention Implementation	Follow-up
-identify the problem -analyze the problem -gather further information	-review current and background data -assessment -report review and conference	-collaborative intervention implementation support	-progress monitoring and data collection

Table 1. Instructional Consultation Process Stages. Adapted from Rosenfield et al. 2008.

The Referral Stage is an initiation of consultation support; ideally, the psychologist meets with the referring teacher and other personnel from the student support services team. This IC team reviews the completed referral form to identify and to complete an initial analysis of the problem. At times, the recommendation for a psychological assessment is an outcome of the problem analysis. The necessity of an assessment, whether formal or informal, would be determined through the team's discussion of the problem presented.

A psychological assessment involves various steps to gather further student information. One of the first activities of the assessment process is to compile information on the child's current functioning. The psychologist dialogues with the teacher and parents/guardians to get a more complete picture of the student. Often, a direct observation is completed to gather data on student response to the current curriculum and interventions. The psychologist also completes a thorough examination of the student Cumulative Record. The record review will summarize any previous

relevant data on the student's educational history. Once current and background information is reviewed, an individual assessment is conducted as part of Stage 2.

Stage 2 is the time when assessment and reporting is conducted. An individual psychological assessment is multi-factored (Gutkin, 2009) and may involve formal standardized assessments of an individual's cognition, achievement and/or behavior. Once the assessment is complete, there is a comparison of the results with previous standardized group assessments or informal teacher assessments and checklists. The psychologist will then compile all of the information into a *Psychological Assessment Report*. The assessment results and report is recounted at a school and parent team conference (Fagan & Wise, 2007). The psychologist's reported intervention recommendations are reviewed at this conference. This stage also presents an opportunity for the psychologist to introduce research-based interventions to the teacher (Rosenfield, 2008). The teacher implements interventions within the classroom to support the student's achievement at this third stage of consultation.

The Stage 3 and 4 comprises implementation and follow-up. The psychological supports at these stages are often incidental and not prescribed. Recently, a Response to Intervention (RTI) or a multi-tiered system of support (MTSS) model is emphasized within these stages (Vujnovic, et, al., 2014). This model is to assist with continued collaboration through implementation and follow-up and has three main objectives: "remediate academic difficulties, prevent the development of future academic difficulties, and ensure all students have adequate opportunities to learn" (Sullivan & Long, 2010, p. 1059). The perceived benefit of a RTI model for intervention is to shift from a vague to a

formal problem solving or collaboration process to support implementation, the evaluation of student progress and the effectiveness of the interventions (Skinner, McCleary, Skolits, Poney & Cates, 2013).

The guideline document in Saskatchewan for the practice of psychology in schools outline describes a RTI model utilizing three tiers of support: Tier 1 - interventions are effective practice for all students; Tier 2 - interventions are targeted for small groups of students; and, Tier 3 - interventions are intensive for individual students (see Figure 4) (Kemp-Koo & Claypool, 2011). The Saskatchewan Ministry document, *Actualizing a Needs-Based Model* (2015) is an updated model which highlights activities at three tiers (see Figure 5). The assumption within a RTI model is the student response to the interventions are measured for sufficient progress prior to moving to a more intensive intervention or tier (Sullivan & Long, 2010). The follow-up, Stage 4, provides a psychologist an opportunity to collaborate with teachers on the effectiveness of the recommended interventions within the school (Stoiber & Vanderwood, 2008). Monitoring and direct observation of the intervention must be conducted next (Lilles, Griffiths, Santiago Cardenas, Chacko, & Jimerson 2008; Sladeczek & Heath, 1998) and data collected. One key aspect of positive student results is the degree to which the interventions are correctly implemented (Lilles, et. a., 2008). As well, the progress monitoring and data collection is important to determine the student's response to the invention and to make decisions about the next steps for a student.

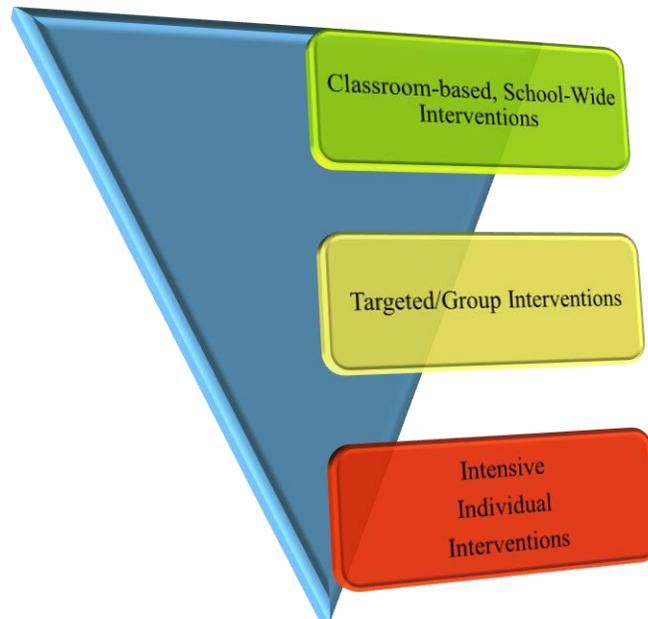


Figure 4. RTI Model. Adapted from the Saskatchewan Ministry of Education, 2008.

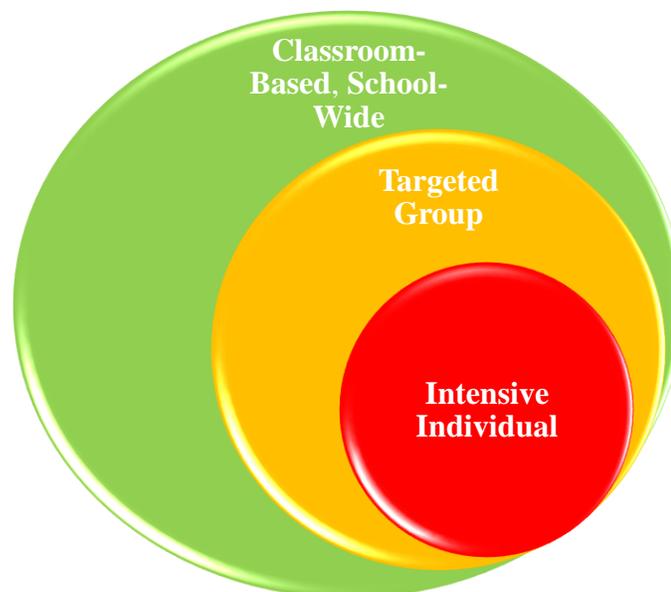


Figure 5. Tiers of Supports. Adapted from the Saskatchewan Ministry of Education, 2015.

Psychological consultation can prioritize the instruction of students but can also focus on student behaviour. The Behavioural Consultation (BC) model is one of the major consultation models used by psychologists working in schools in the United States (Sladeczek & Heath, 1998) and it is the most frequently listed model on school psychology program consultation course syllabi (Hazel, Laviolette, & Lineman, 2010). There is also an emphasis in the literature on researching BC within schools (Knotek et al., 2008). The expanded utilization of BC in schools in the past fifteen years can be attributed to the prominence of inclusion, positive behavioral intervention strategies and supports, and effective school discipline (Luiselli, 2008). The goal of BC in schools is to improve the observable behaviors of an individual student (Lopez & Nastasi, 2008).

This behavioral approach prioritizes environmental modification, antecedents, and consequences (Conoley & Conoley, 1988) to impact existing behavior problems (Akin-Little, Little, & Delligatti, 2004). A Functional Behavioural Assessment (FBA) is currently the systemized approach within consultation to understanding and assessing the relationships between behaviour and consequences (Hadaway & Brue, 2016). The definition of the BC consultation model is, “a comprehensive model of service delivery that includes behavioral assessment of client problems, formulation and implementation of treatment plans and evaluation of treatment outcomes” (Witt, Gresham, & Noell, 1996, p. 331).

Bergan’s (1977) four step problem solving process has been the most prominent behavior consultation model used in schools (Gutkin & Curtis, 2009). The psychologist using BC’s four stage model in schools works with the consultee to define the problem

behavior, analyze the function of the behaviour, develop a solution and then evaluate the outcome (Luiselli, 2014) (see Table 2).

Step 1	Step 2	Step 3	Step 4
Problem Identification	Problem Analysis	Intervention Plan Implementation	Intervention Plan Evaluation
-identify challenging behaviors -design and implement baseline data collection	-complete functional behavioral assessment -develop behavior hypothesis (in consideration of current reinforcements and punishments) -format and design behavior plan	-implement plan -refine and modify intervention	-evaluate intervention effects

Table 2. Steps of Behavioral Consultation. Adapted from Luiselli, 2014.

A teacher with concerns of a student exhibiting a difficult behavioural problem initiates BC consultation with the psychologist (Fagan & Wise, 2007).

In the first step of the BC process, the psychologist works with the teacher to clarify what the problem is (Fagan & Wise, 2007; Gutkin & Curtis, 2009). The goal of this step is to determine a concrete, behavioral description of the problem and to collect baseline data (Gutkin & Curtis, 2009; Martens & DiGennaro, 2008). The goal of Step 2 is to assess and hypothesize why the behaviors are occurring and to develop a behaviour plan (Gutkin & Curtis, 2009). This step takes a behavior modification approach to attempt to increase positive consequences and to avoid negative consequences (Martens & DiGennaro, 2008). It involves investigating the student's behaviour by analyzing the antecedents and consequences to determine the function of the behaviour (Fagan & Wise,

2007). The psychologist and teacher will then brainstorm possible intervention strategies (Gutkin & Curtis, 2009) and utilize behavior analysis to reinforce desired and punish undesired behaviors (Martens & DiGennaro, 2008).

Implementation and evaluation occur during step three and four of the BC model (Fagan & Wise, 2007). In step three, the teacher implements the interventions (Gutkin & Curtis, 2009) and collects the data on student response to the plan (Conoley & Conoley, 1992). Frequently, a Multi-Tiered System of Supports (MTSS) approach frames the behavioural interventions. Positive Behavioural Interventions and Supports (PBIS) is an approach to address student behavioural needs. PBIS is consistent with the core principles of MTSS or RTI (Positive Behavioural Intervention and Supports: Office of Special Education Programs (OSEP), the Technical Assistance Center, 2007) and is a continuum of evidence-based interventions.

The implementation of behavioural interventions occur along with academic interventions (Positive Behavioural Intervention and Supports: Office of Special Education Programs (OSEP), the Technical Assistance Center, 2007) (see Figure 6). The psychologist assists the teacher to design a data collection system that is feasible and may participate in data collection as needed (Conoley & Conoley, 1992). The treatment data, along with the baseline data, goals, and assessment information are collected and utilized to determine the impact of the plan (Gutkin & Curtis, 2009). Once the effectiveness of the plan is determined, the teacher will continue with implementation (Martens & DiGennaro, 2008) and the psychologist will provide critical follow-up support (Gutkin & Curtis, 2009).

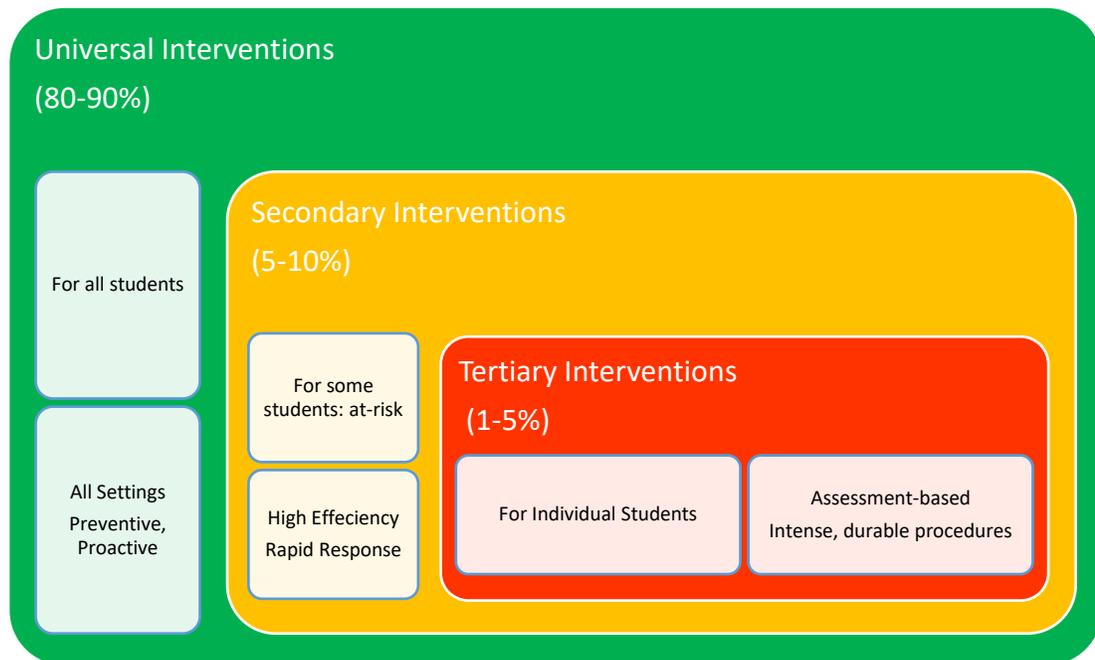


Figure 6. PBIS Intervention Continuum. Adapted from Positive Behavioural Intervention and Supports: Office of Special Education Programs (OSEP), the Technical Assistance Center, 2007.

The BC and IC consultation models outline potential stages of a team approach to psychological consultation within Saskatchewan schools. The implementation stage is significant, as the main outcome of consultation for a psychologist working in schools is to determine the appropriate interventions (Fagan & Wise, 2007; Farrell, 2010). As well, in surveys, recommending appropriate interventions was the highest-ranking function in the psychologist role (Jordan et al., 2009). The goal of the intervention stage of psychological consultation is to assist teachers with implementation (Hasiuk, 2006). The intention of this stage is to provide an opportunity for the classroom teacher and psychologist to discuss interventions for a specific situation (Conoley & Conoley, 1992). The stage of implementation is critical as teachers report they have difficulty applying the

interventions in their classrooms or with certain students (Kaiser, Rosenfield, & Gravois, 2009).

Both the BC and the IC consultation models describe the intervention stage as the responsibility of the classroom teacher, yet the process has frustrated psychologists because of the perceived lack of implementation (Fagan & Wise, 2007). Researchers reveal psychologists have continued to focus on the initial stages of assessment and report writing in consultation, which leaves less time for supporting the critical stage of implementation (Kennedy et al., 2008). Psychologists have also relied on team meetings and written reports as the primary means for communicating the assessment results and interventions to the individual teacher (Sheridan & Gutkin, 2000).

Researchers argued the written reports and team meetings provide insufficient information for teachers to implement the recommended interventions correctly (Sheridan & Gutkin, 2000). Collaboration at the intervention implementation stage is necessary as teachers indicated they generally did not follow the recommendations by the school psychologist (Doll, Spies, & Champion, 2012). Surveys also show that teachers lack the skills to implement the interventions as often they were too complicated or required too much time (Doll et al., 2012; Fagan & Wise, 2007; Hasiuk, 2006). Noell et al. (2005) argued that “simply meeting and talking about implementation was not enough to support implementation” (p. 101). Researchers have revealed implementation support beyond the team meeting and report debrief is not often provided in the psychological consultation process in schools; all of the responsibility is placed on the teacher. This current “consult and hope strategy” (Wilkinson, 2006, pg. 434) does not address the

major challenge for psychologists of assuring accurate implementation of interventions (Wilkinson, 2006). A focus on further collaboration for the psychologist working in schools is critical, as the teacher is 'pivotal' to effective consultation and to accurate implementation of interventions (Gutkin & Curtis, 2009).

In short, teachers must be substantively involved in the design and implementation of the interventions within a model of increased collaboration and consultation (Sheridan & Gutkin, 2000). To achieve effective implementation, teacher acceptability of the interventions is critical and they must build upon practices that already exist in the classroom (Conoley & Conoley, 1992; Kelliher, Riley-Tillman & Power, 2008; McDougall, Nastasi, & Chafoulaus, 2005; Nastasi et al., 2000). An ecological approach to consultation is incongruent with the historic psychological support in schools (Meyers et al., 2012). Psychology will need to shift consultation toward an ecological model (Gutkin, 2009) in which the classroom context and individual teacher variables are taken into account. Researchers argue that in the future there will need to be an ecological consultation approach in which psychologists work collaboratively with teachers to gain knowledge of the environment in which the interventions are to be implemented (Gutkin, 2009; Sheridan & Gutkin, 2000; Wizda, 2004).

The next section will elaborate on an ecological approach to psychological consultation in schools. The section begins with a summary of relevant developmental learning theories in the evolution of social constructivism. Then an expansion of the theoretical underpinnings of social constructivism as the theoretical basis of an ecological approach to consultation is presented. Finally, an exploration of research on the necessity

for an ecological approach to consultation, more specifically, the intervention implementation stage is described.

Theoretical Background: Social Constructivism and Ecology

This section will summarize the basic assumptions and principles of developmental learning theories as related to psychological consultation in schools. Learning for the teacher and the psychologist occurs through the consultation process, and knowledge of the theories demonstrates this further. The theory of social constructivism will be the primary focus in order to establish the foundation of an ecological approach to consultation and more specifically to the intervention implementation phase. Finally, I will connect Bronfenbrenner's Ecological Theory model as an appropriate perspective for framing the environmental factors at the micro or classroom/teacher level for this dissertation.

As Ertmer and Newby (2013) summarize, "learning is a complex process that has generated numerous interpretations and theories of how it is effectively accomplished" (p. 44). There are at least three traditional theories on learning and development that highlight the evolution of social constructivism. The theories of behaviorism, cognitivism, and constructivism (as outlined in Table 3, below) assist in relating the teacher and psychologist learning and development to an ecological approach to consultation. It is important to contextualize the activities of the consultant and consultee pertaining to the three theories, in particular the role priorities within ecological consultation.

Role of Psychologist in Consultation	Transmitter	Facilitator	Collaborator
Theoretical Tradition	Behaviorism	Cognitivism/Cognitive Constructivism	Social Constructivism
Activity of Consultant (Psychologist)	-disseminate information incrementally -demonstrate procedures -reinforce during practice	-guide through problem solving activities -monitor reflective thinking	-elicit and adapt to individual beliefs -engage in open-ended inquiries -guide individual to resources and procedures
Activity of Consultee (Teacher)	-listen, rehearse, recite	-assimilate new information -develop new schemes to deal with novel experiences -reflect on discoveries	-manufacture situated understandings -engage in open-ended inquiries -reflect on co-construction of meaning

Table 3. Traditional Learning Theories. Adapted from Scheurman, 1998.

Behaviorism. It should be acknowledged that John Watson introduced behaviourism in 1913. This theory was developed further by the work of Skinner and colleagues in the early 20th century (Ledoux, 2012). In B. F. Skinner's behavioral analysis theory or operant conditioning (Hadaway & Brue, 2016), emphasis is on the individual's response to an event and its influences on future behavior (Moore, 2011) in short, prioritizes a learning and performance connection (Adams, 2006; Ertmer & Newby, 2013; Moore, 2011). For the behaviorist, learning is an instillation of information (Scheurman, 1998) with little reference to the individual mental processes (Moore, 2011).

The behaviorist tradition describes learning as the reactions displayed during the development process by the individual (Scheurman, 1998). Behaviorism focuses on how to determine and to control the variables of behavior-related problems (Ledoux, 2012).

The theorist S. W. Bijou, outlined the ABC model of behavior modification, to determine the antecedent, behaviour and consequence (Hadaway & Brue, 2016). The approach is to recognize that the behavior occurs under the functional control of stimuli or a reinforcement schedule (Ledoux, 2012). A behavioral approach involves observing behaviour and then withholding and providing consequences that are negative and positive to promote change (Conoley & Conoley, 1988).

In a behaviorist consultation approach, a psychologist may demonstrate or model an implemented intervention for teacher learning. The observational learning from a step-by-step model or overview of a recommended intervention from the psychologist would align with a behaviorist approach to consultation. As well, positive feedback from the consultant observations or on progress in student learning may reinforce the implementation by the teacher. Behaviorism and cognitivism approaches to consultation have commonalities but differ on the emphasis of learning as an active process (Adams, 2006). A cognitive or cognitive constructivism model and its connection to consultation is described next.

Cognitive/Cognitive Constructivism. The person or student is considered an active participant of knowledge construction in cognitive theory and as a result, effective learning strategies are a priority (Bartlett & Elliott, 2009; Ertmer & Newby, 2013). Cognitive theory focuses on the learning processes of the individual (Bartlett & Elliot, 2009; Ertmer & Newby, 2013; Razfar, 2013; Ysseldyke, Lekwa, Klingbeil & Cormier, 2012) and as Ertmer and Newby (2013) expand “of how information is received, organized, stored and retrieved by the mind” (p. 51).

The theory of cognitive development by Jean Piaget focuses on the biology of the individual but also incorporates the impact of interacting with the surrounding environment (Brainerd, 1996; Gainotti, 1997). Piaget's cognitive constructivist learning theory emphasizes the relationship between learning and the developmental stage of an individual (Brainerd, 1996; Guhn & Goelman, 2011). Piaget stressed knowledge acquisition and change of an individual as a systematic process (Flavell, 1996). He also accentuated the development of knowledge as constructed by the interaction between the individual and the environment (Brainerd, 1996; Gainotti, 1997).

A cognitive constructivist approach to consultation promotes developmentally appropriate experiences for an individual (Guhn & Goelman, 2011). In this approach, a teacher acquires new learnings through a transfer of information within the consultation process. The consultation would utilize a task analysis approach in order to streamline the implementation of interventions. This consultation goal is for the psychologist to structure the interventions for the teacher to understand. The consultation process involves connecting to the teacher's previous understandings or providing examples to impact learning (Lawton et al., 1980). Consultation would include a process of making connections to previous situations for the teacher to implement interventions and to grow professionally. Neither the behaviorist nor the cognitivist theories emphasize the context such as the classroom, curriculum or individual teacher variables (Bartlett & Elliott, 2009; Ertmer & Newby, 2013).

Social Constructivism. Later, due to insufficiencies of the previous theories, attention shifted to social constructivism and to emphasis on the impact of the environment to an individual (see Table 4) (Bartlett & Elliot, 2009; Ertmer & Newby, 2013). The ontological stance of social constructivism is that knowledge is generated through an individual's interaction with their world and with others (Jha, 2012). Social constructivism is then an interpretative position emphasizing activities that construct meaning for individuals (Lee, 2012). Knowledge is linked to relations with others and social constructivists seek to understand these experiences and contexts (Jha, 2012). Social constructivism stresses the social context as the conduit to new and more productive learning (Estep, 2002; Jha, 2012; Truscott et al., 2012).

Social Constructivism Theorist	Main Idea
Lev Vygotsky	Learning occurs through social interaction of a knowledgeable other and in the zone of proximal development.
Jerome Bruner	Knowledge is constructed and must be represented according to the real life structures of the environment (Takaya, 2008).
Urie Bronfenbrenner	Environmental systems affect learning and development and the individual classroom or micro level has the greatest influence.

Table 4. Summary of Social Constructivism Theories. Adapted from Onchwari, Onchwari, & Keengwe, 2008.

Beginning in the 1950s, there was an increased interest by psychologists working in schools to assess the impact the environment has on cognitive development (Ysseldyke et al., 2012). Multiple theorists have been involved in the social constructivism movement such as Dewey, Lewin, Vygotsky, Bruner, and Bronfenbrenner in emphasizing the

“complexity of the behaviour-person-environment interaction” (Scherffius-Jakes & Brookins, 2004, p. 6). Social constructivists have many shared beliefs and stress environmental relations as important to understanding the learning of an individual (Barab & Roth, 2006; Lewthwaite, 2011; Wong, 2001). An ecological perspective, expanding on the importance of the environment to individual development, originated with John Dewey (Hirtle, 1996) and was popularized by Kurt Lewin (Williams & Greenleaf, 2012). Dewey’s pragmatism is considered a precursor for social constructivism (Reich, 2007). Dewey theorized that experiences from the environment and with others, is vital to the learning process (Reich, 2007).

Social constructivism and an ecological perspective was further accentuated in school psychology as a result of the work of Lewin (Gutkin 2009). Lewin emphasized understanding the total situation, which is accomplished by combining attributes of the individual and their environment (Lewthwaite, 2011; Wong, 2001). He also proposed that human development is a complex product of the person and the environment (Lewthwaite, 2011; Scherffius-Jakes & Brookins, 2004) and the construction and expansion of knowledge occurs through sharing of ideas and experiences (Jha, 2012). Environmental factors were also central to each of the main social constructivist theorists.

Vygotsky thought learning and development are impacted by the context in which an individual exists (Estep, 2002; Rosenfield et al., 2008). Vygotsky focused on the space between what an individual knows and what the individual can know (Truscott et al., 2012). He proposed that development occurs within three zones: (a) zone of actual development; (b) zone of potential development; and, (c) zone of proximal development.

These zones help to understand the process of learning by examining the capacity an individual has and then assisting the individual to reach his or her learning potential (Estep, 2002). The zone of proximal development is a key contribution by Vygotsky to the theories of development (Estep, 2002).

The Zone of Proximal Development is an area in which higher learning occurs as a result of the individual's interaction with cultural tools within his or her environment (Estep, 2002; Knotek et al., 2012). Vygotsky identified language as the main cultural tool advancing the social learning process (Johnson, 2012; Knotek et al., 2012; Razfar, 2013; Rosenfield, 2008). Vygotsky theorized collaborative dialogues, in which an individual is exposed to new ideas, influence thinking (Johnson, 2012; Tissington, 2008). Vygotsky did not believe the development of new ideas occurs in a social group of peers but in problem solving interactions with a more knowledgeable other (Estep, 2002).

Vygotsky's theory stressed the importance of considering contextual and social factors to better understand the development of an individual (DeVries, 2000; Lopez & Nastasi, 2008). The communication of new ideas can therefore move an individual to higher levels of understanding and through the zone of proximal development (Guhn & Goelman, 2011; Knotek et al., 2012; Razfar, 2013). Vygotsky's theory, emphasizing the effects of environment on learning, also influenced the well-known social constructivism theorist, Jerome Bruner (Takaya, 2008). Bruner's socio-cultural view, like Vygotsky's theory, suggested there are opportunities to learn through group processes and from those with advanced skill-sets (Grimes, 2015; Walker, 2014).

Bruner also prioritized development through the interaction with others, but expanded on Vygotsky's theory to emphasize the impact of culture (Lawton et al., 1980). In his theory, Bruner stressed the processes of acquiring information, and views knowledge as internalizing information from the environment (Lawton et al., 1980). The information generated from the culture or environment such as knowledge, beliefs, and values, impacts learning and can be accessed through a collaborative communication process (Takaya, 2008). Bruner emphasized this collaborative communication process and argued that, "learning increases when it happens with others" (Grimes, 2015, p. 66). Bruner extended social constructivism theory by emphasizing that information must be structured and presented as real-life examples for an individual to learn (Takaya, 2008).

Bruner argued that acquired knowledge is more meaningful if the context in which it occurs is emphasized (Ertmer & Newby, 2013), and stressed "it is critical that learning occur in realistic settings and that the learning tasks be relevant to the students' [teachers'] lived experiences" (Ertmer & Newby, 2013, p. 56). He also suggested learning is a combination of an individual's approach in connection to another individual's opinions (Grimes, 2015). In this process, new information is processed or tested by an individual and then if accepted, change occurs (Lawton et al., 1980). Bruner emphasized the understanding of one's own learning and the strategies needed to acquire content, known as metacognition (Takaya, 2008). Through metacognition, Bruner stressed discovery learning, in which concepts are developed and redeveloped to facilitate knowledge acquisition (Lawton et al., 1980). Through a discovery learning process, an

individual is encouraged to construct his or her own knowledge and to articulate his or her own understanding (Ertmer & Newby, 2013).

Now turning back to consultation, the collaborative working relationship between the psychologist and teacher reflects the focus on social context for learning (Rosenfield et al., 2008; Tissington, 2008). Vygotsky's social constructivist theory of learning aligns with the development of teachers' skills in meeting the needs of diverse students through consultation (Knotek et al., 2012). The Vygotskian concept of the zone of proximal development can be applied to the teachers' growth through the consultation process (Rosenfield et al., 2008). The goal of consultation for the psychologist is to promote the development of teacher skills through dialogue (Knotek et al., 2012). In his theory, Vygotsky encourages psychologists "to begin the analysis of mental functioning in the individual by going outside the individual" (Wertsch & Tulviste, 1992, p. 548). The development of both the consultant and consultee is expanded by working supportively and directly with teachers (Knotek et al., 2012).

Within the zone of proximal development, a psychologist collaboratively problem solves with the teacher to support the learning of new information and practices (Truscott et al., 2012). The process of facilitating the social construction of knowledge for the classroom teacher and the psychologist involves: (a) reframe the child and instruction match; (b) explore problems; and, (c) expand ways to intervene using data (Rosenfield et al., 2008). Social constructivism assists in obtaining the ultimate goal of the consultation process, to work collaboratively with the teacher to help students by identifying interventions for implementation (Fagan & Wise, 2007). The Vygotsky and Bruner

theories provide an opportunity to introduce interventions to the teacher through a collaborative process (Gutkin, 2009). Although there was no elaboration on how the collaborative interaction should occur (Estep, 2002), Bruner emphasized the sharing of ideas through a multidisciplinary approach (Grimes, 2015).

The environment in which teachers function is complex (Gutkin & Reynolds, 2009), therefore, an ecological consultation model should extend beyond identifying interventions for teacher, such as report writing and team meetings, but implementation in consideration of the hows and whys influencing development (Lewthwaite, 2011). The greatest potential for effective consultation support is for psychologists to have an increased understanding of the individual classroom context (Sheridan & Gutkin, 2000). An ecological psychological consultation process should have a situation-specific emphasis, for as Ertmer and Newby argue, “it is essential that content knowledge be embedded in the situation in which it is used” (p. 56). In prioritizing context, an ecological consultation approach would allow opportunities to present multiple perspectives and time for negotiating interventions. The next section will summarize social constructivism as the methodological basis for an ecological consultation approach.

Ecological Approach to Consultation

Based on social constructivism theory, an ecological model of consultation in psychology is an approach that establishes an understanding of the interconnections between an individual and his or her environment (McMahon et al., 2014) and applies a developmental perspective to problems (Burns, 2011). An understanding of the

theoretical frameworks of social constructivism is important when employing an effective ecological approach to consultation (Lopez & Nastasi, 2008). Social constructivism theory highlights the identification of factors innate to the individual student, as well as environmental factors impacting learning (Rosenfield et al., 2008).

The concept of an ecological approach to consultation, for the psychologist working in schools, considers numerous external factors affecting students' educational outcomes (Ertmer & Newby, 2013; Ysseldyke et al., 2012). In an ecological approach, a psychologist examines the individual student in connection to the environment from various angles (Conoley & Conoley, 1992) to form a complete picture (Fine, 1985; Neal & Neal, 2013; Rosa & Tudge, 2013). The psychologist assesses a number of factors needed to meet the needs of the students and to build the capacity of systems to support the individual learning needs of students (Ysseldyke et al., 2009; Ysseldyke et al., 2012). The ecological factors affecting an individual's learning include but are not limited to: (a) physical aspects of the environment; (b) school climate; (c) interpersonal relationships; (d) the instructional format; (e) the curriculum; and, (f) reinforcement plan (Ysseldyke et al., 2012). The primary goal for the psychologist working in an ecological consultation model is to collaborate on the problems in the person-environment interactions, to address any issues and ultimately, optimize a match in the future (Gutkin, 2009; Gutkin, 2012).

The ecological perspective in psychology in schools stems from Urie Bronfenbrenner's Ecological Theory (Nastasi, 2006) that proposes attention to multiple levels in the person-environment interactions (Jeary & Schwean, 2012; Gutkin, 2009).

Bronfenbrenner's theory is the dominant concept of an ecological model and has concrete applications for practice (Gutkin, 2012; Neal & Neal, 2013; Trickett & Rowe, 2012) as insights at multiple levels emerge when focusing on the person-environment interactions (Jeary & Schwean, 2012; Gutkin, 2009). At the core of Bronfenbrenner's theory is a systems model consisting of four environmental levels of impact on the development of an individual: (1) micro; (2) meso; (3) exo; and, (4) macro (Onwuegbuzie, Collins, & Frels, 2013). Each environmental level, within an ecological system, impacts the development of an individual differently (Onwuegbuzie, Collins & Frels, 2013) and the influencing factors of each level can then be identified (Hong & Eamon, 2012).

The microsystem is the inner level of the nested structure within Bronfenbrenner's ecological model. The microsystem comprises factors from an individual's experiences along with an individual's perception of these environmental features (Bronfenbrenner, 1979). The microsystem as defined by Bronfenbrenner (1979) is "a pattern of activities, roles, and interpersonal relations experiences by the developing person in a given setting with particular physical and material characteristics" (p. 22). This level also involves the perceived expectations of the individual's role by society (Bronfenbrenner, 1979). Micro-level factors are closest to the individual teacher, such as the classroom, the curriculum, and his or her beliefs and teaching experiences.

The next level of the mesosystem is a combination of microsystems (Bronfenbrenner, 1979). The mesosystem includes influential factors from other settings and is defined by Bronfenbrenner (1979) as "the interrelations among two or more settings in which the

developing person actively participates” (p. 25). For an individual, the mesosystem factors may include relations between the school, neighborhood, and home.

The next of the four levels is the exosystem which refers to “one or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person” (Bronfenbrenner, 1979, p. 25). The exosystem level factors are actions within the community in which an individual resides.

The final layer of the ecological model is the macrosystem. This level “refers to the consistencies, in the form and content of lower-order systems (micro-, meso-, and exo-) that exist, or could exist, at the level of the subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies” (Bronfenbrenner, 1979, p. 26). Provincial or national actions are factors at the macro system level.

Bronfenbrenner’s theory of development provides a framework for an individual comprising a system of factors acting in multiple layers from the surrounding environment (Johnson, 2012). This systems model implicates environmental factors as influences on the development of the teacher within various settings (Lewthwaite, 2011). Bronfenbrenner eventually clarified that the environmental factors influencing development are in conjunction with an individual’s personal characteristics (Rosa & Tudge, 2013). These individual characteristics are referred to as proximal processes and include the four elements of: (1) process; (2) person; (3) context; and, (4) time (Rosa & Tudge, 2013). The development of an individual involves processes from experience, personal attributes, context of development, and time of development (Lewthwaite,

2011). The bio-ecological model gives more weight to the influences that personal characteristics play on the teacher's development (Rosa & Tudge, 2013).

The theory then focuses on two key elements: the match or mismatch of an individual's personal characteristics and the impact of the environmental factors (Gutkin, 2009). By addressing a combination of both personal characteristics and environmental factors, the ecological model helps to identify points of intervention (Neal & Neal, 2013). Bronfenbrenner's theory provides a framework to assist with identifying interventions and how these interventions are best be used (Lewthwaite, 2011). Psychologists must use an ecological perspective for optimal consultative support and to embed effective interventions into the systems (Meyers et al., 2012). Ecological consultation can address practices and interactions at the micro, meso, exo and/or macro environments to support the development of interventions (Dworkin & Dworkin, 1975; Frey, Sabatino & Alvarez, 2013; Gutkin, 2009; Scherffius-Jakes & Brookins, 2004). This methodology section explored utilizing Bronfenbrenner's theory as a framework to support changes in teaching practices and to support the use of interventions in the classroom through ecological consultation (Stoeber & Rivard, 2011).

The outcome of collaborative ecological consultation, for a psychologist working in schools, is to provide the means to determine the appropriate interventions (Fagan & Wise, 2007; Farrell, 2010). For this dissertation project, Bronfenbrenner's ecological model provides a framework for organizing influencing factors at the micro level to extend the current psychological consultation processes (Lewthwaite, 2011; Lopez & Nastasi, 2008). The ecological model highlights classroom and teacher variables

affecting implementation within the classroom for teachers (Forman & Zins, 2008; Gutkin, 2009) within a larger theoretical structure. Bronfenbrenner conceptualizes ecological theory in a concrete visual which may help to develop an understanding of the individual teacher perspectives (Gutkin, 2009; Williams & Greenleaf, 2012) (see Figure 7). In the next section a discussion of a collaborative ecological approach to implementation, which prioritizes the teacher specific needs, including personal attributes and factors in the environment (Gutkin & Curtis, 2009; Lewthwaite, 2011).

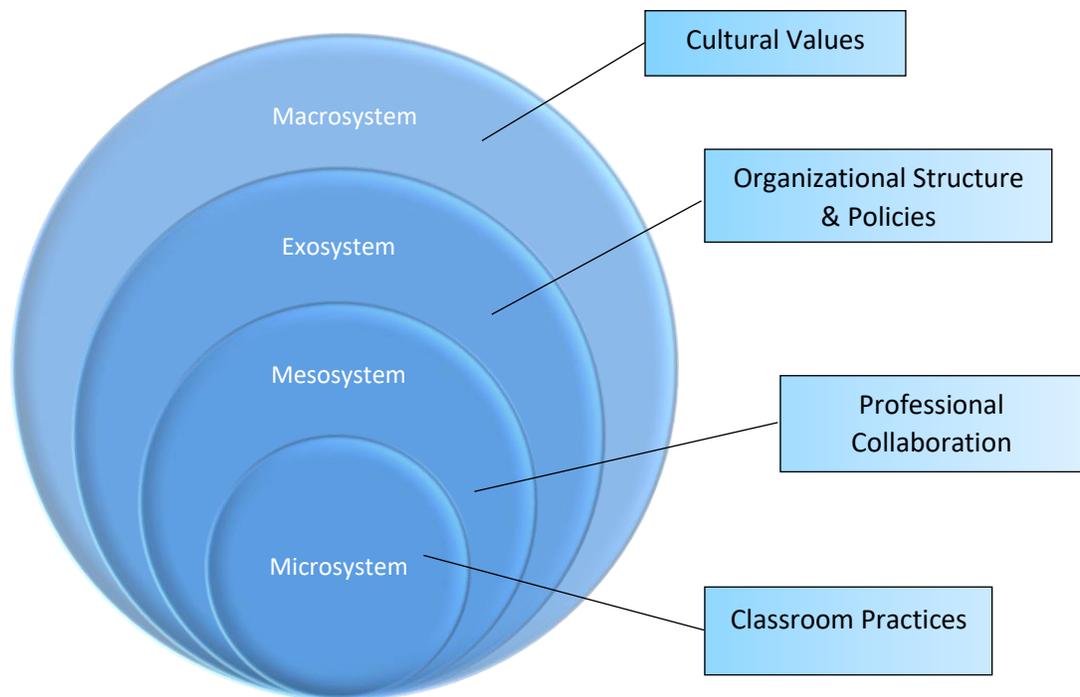


Figure 7. Teacher Specific Factors Affecting Implementation. Adapted from Odom et al., n.d.

Collaborative Ecological Consultation. An ecological approach to implementation requires the understanding of the environmental context of the classroom (Gutkin &

Curtis, 2009; Sheridan & Gutkin, 2000; Trickett & Rowe, 2012) in order to identify and prioritize the teacher specific needs (Lewthwaite, 2011). As argued by McDougall et al. (2005) and Nastasi (2000), to achieve implementations of interventions, teacher involvement is critical. Effective application and suitability of the interventions must build on the practices that already exist in the classroom and for the teacher (Conoley & Conoley, 1992; Kelliher et al., 2008). Utilizing an ecological framework would focus on the interplay of the micro-level factors for the teacher (Lewthwaite, 2011). This process would then lead to embedding interventions into the learning environment including planning and adapting curriculum and instruction (Meyers et. al., 2012; Welch, 1994).

The planning process assists in determining what and how to teach to meet the diverse learning needs of students (Jeary & Schwean, 2012; Ysseldyke et. al., 2012). An ecological consultation process would optimize the unique learning student needs with adaptations in the environment (Annan & Priestly, 2011; Burns, 2011; Gutkin, 2009; Gutkin & Curtis, 2009; Gutkin 2012; Jeary & Schwean, 2012; Meyers et. al., 2012; Ysseldyke et. al., 2012). The implementation process involves adapting the teacher plans to fit the context and the students (Nastasi et al., 2000). Prioritizing the environmental factors can maximize the impact of consultation (Gutkin, 2009); therefore, participants should focus on the use of interventions that are consistent with the teacher beliefs and are appropriate for the classroom context (Nastasi et. al., 2000; Truscott, Richardson, Cohen, Frank & Palmeri, 2003). The provision of supports should facilitate implementation for teachers (Noell et al., 2014). This dissertation examines an ecological collaboration process in which the psychologist and teacher work together to

adapt the teacher unit plans to embed evidence-based interventions to meet diverse student needs (Kelliher et al., 2008). A collaborative process, involving psychologists working alongside teachers, can foster interventions and empower the teacher (Nastasi et al., 2000). Jointly determined recommendations that involve both the psychologist and the classroom teacher may ensure adaptation to the micro or classroom ecosystem (Nastasi et al., 2000). Psychologists need to link these ideas to instructional planning to support both the teacher and the student (Jeary & Schwean, 2012), as with collaboration.

Conclusion

Although all learning theories have practical applications (Ertmer & Newby, 2013) Watkins and Hill (2010) argue, an application of the constructivist model of development to psychological consultation is timely. The structure of the current intervention implementation stage has not shifted to an ecological approach (Scherffius-Jakes & Brookins, 2004) nor is it collaborative, and as Manz (2007) advocates, future researchers could benefit from innovative techniques in consultation. A social constructivist model provides researchers with a relevant theory and methodology for future research projects of school psychologist consultation. The methodology of action research has a collaborative focus and aligns with the social constructivism theory as well. The next section introduces the dissertation research methodology of action research. As with action research, this dissertation study aims to improve practises, specifically at the implementation stage of consultation for psychologists working in schools.

Chapter Three: Methodology

The research problem for this doctoral dissertation originally emerged from a classroom teacher's concerns regarding current psychological consultation, particularly the limited intervention support. This classroom teacher felt that a focus on meeting and report writing was insufficient support for implementation. She worried that "consultation for me was sitting down and thinking *how am I gonna solve this?*" Subsequently, this teacher requested additional time with the psychologist, to review the needs of the student, to contextualize the potential interventions, and to embed the preferred strategies within the curriculum. After this collaboration, the classroom teacher described this psychological consultation process as "*incredibly helpful!*"

As previously stated, there has been a partial shift in the psychologist role from assessor to consultant. The intent of psychological consultation is to assist in the provision of effective interventions for learners with diverse needs in the classroom (Powers et al., 2008; Ysseldyke et al., 2009). Yet, a comprehensive survey by Bramlett, Murphy, Johnson, Wallingsford and Hall (2002) found that the majority of psychologists abandoned the consultation process following the team meeting and assessment report debrief, or prior to the critical - implementation stage. To this end, there is plenty of research, including the present pilot study data, documenting that teachers remain unsupported during implementation.

Accordingly, there is extensive research findings calling for an ecological approach to psychological consultation to improve implementation (Curtis et al., 2004; Fine, 1985; Farrell, 2006; Gutkin, 2009; Gutkin, 2012; Jeary & Schwean, 2012; Meyers et al. 2012;

Neal & Neal, 2013; Rosa & Tudge, 2013; Sheridan & Gutkin, 2000). An ecological approach implies that consultation continues into intervention, but in a way that explicitly takes into consideration the individual teacher perspectives and the specific classroom variables. Ideally, psychologists can collaborate until they are assured of a successful student response to the interventions.

With limited research demonstrating the practice of a collaborative ecological approach to consultation in schools, this dissertation consisted of psychologists working in partnership with classroom teachers. For this ecological consultation process, first the teachers and psychologists reviewed possible evidence-based interventions. Then, the teachers deliberated upon contextual variables from their classrooms and discussed why potential interventions were or were not suitable. Finally, the interventions were embedded within a curricular unit of study designed to best meet student-learning outcomes.

Research Questions

To be specific, the larger purpose here is to explore collaboration as an ecological approach to implementation within psychological consultation in schools. There are three research questions for this study:

1. How do the teachers and psychologists experience and interpret collaboration in the intervention phase of psychological consultation?
2. Within extended consultation, which classroom/teacher or micro-level factors were discussed? And how did such discussions lead to the embedding of particular interventions into a curricular unit of study?

3. How did students respond to the interventions with collaboration in the implementation phase?

This research is both practical and theoretical; action research is both practical and theoretical. What follows, then, is an overview of action research methodology and the theoretical framework, which then connects to my philosophical stance as a researcher. This section concludes with details of the action research model and method for this dissertation.

Action Research

First and foremost, action research questions are designed to understand how people make sense of their context (Walter, 2010). This methodology aligns with exploring socially constructed knowledge on the psychological consultation practises in schools. More than that, Reason and Bradbury (2008) define action research as a:

participatory process concerned with developing practical knowledge in the pursuit of worthwhile human purposes. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities (p. 4).

Therefore, action research projects seek to “improve the quality of human life, acquiring knowledge to become better practitioners and developing strategies to address problems” (Beaulieu, 2013, p. 33). We begin with the theoretical foundations of action research.

Action Research Theoretical Foundation

Action research likely originated with Kurt Lewin (1890-1947) who focused on solving social problems (Noffke & Somekh, 2009; Reason & Bradbury, 2008; Walter,

2010). Lewin introduced the methodology as an approach to studying workplace conflicts and resolutions (Beaulieu, 2013). Indeed, Lewin (n.d) suggested, “if you want to truly understand something, try to change it” but he also believed that to make improvements to a situation, one must first understand the context (Herr & Anderson, 2015).

Action research may be located at the post-positivist and interpretivist end of the research continuum (McAteer, 2013), which holds that knowledge is constructed and influenced by social interactions (Koshy et al., 2011). The interpretivist paradigm “is concerned with the ways we, as social beings, interrelate and interact in society” (Walter, 2011 p. 21). In post-positivist interpretivist research, perspectives depicting broad views about the setting and various participant opinions are collected (Beaulieu, 2013). Action researchers have embraced diverse theoretical foundations, as such there are different ways to approach this methodology.

Reason and Bradbury (2008), for example, suggest that action research “has drawn on pragmatic philosophy, critical thinking, the practice of democracy, liberationist thought, humanistic and transpersonal psychology, constructionist [constructivist] theory, systems thinking and more recently complexity theory” (p. 3). Since constructivist and ecological theories underpin the current project, that is the consultation process itself; therefore, these theories will also frame the data analysis and interpretation for this dissertation.

Social Constructivism. This action research study has a collaborative focus, as may be expected by the use of social constructivism theory. This theory maintains that knowledge generation occurs via interactions with and in the world, most especially with others (Jha, 2012). As Gergen and Gergen (2008) note, “constructionism [constructivism] recognizes the community as opposed to the individual as the fundamental source of intelligibility” (p.166). Social constructivist theorists emphasize the context as the conduit to new and more productive understandings (Estep, 2002; Truscott et al., 2012). Therefore, a social constructivist researcher considers social interaction as fundamental for knowledge generation (Baumfield et al., 2013).

Such a social constructivist researcher is “fundamentally collaborative” (Gergen & Gergen, 2008 p. 166). Snoeren, Niessen, and Abma, (2011) and Cook (2010) suggest that a collaborative process is crucial and the most effective way to do an action research project. Indeed, Gergen and Gergen (2008) claim that action researchers do not endorse a separation “between the professional community and those they study” (p. 166). To state it another way, knowledge is linked to the relations with others; social constructivists seek to uncover the participants’ understandings and realities in and among these relations (Howell Major & Savin-Baden, 2011). This theoretical underpinning is an important guide when examining social processes and interpreting what individuals know and believe (Adams, 2006) as well as in applying an ecological approach.

Ecological Theory. As alluded to, action research fits well within an ecological approach (McNiff, 2013). Ecological systems theorists maintain that learning is a consequence of the interactions between an individual in various contexts (Johnson, 2012; Rosa & Tudge, 2013). Lewthwaite (2011), among others, suggests that human development occurs not in isolation but through important person-environment interactions. Action research involves posing and solving problems but also acknowledges social complexity in so doing (McAteer, 2013). In this way, action research is holistic problem solving and implies working and investigating within or across these various contexts (Herr & Anderson, 2005). A focus on ecological theory is important because a “breakdown in one part of the system will have implications for the entire system” (McNiff, 2013, p. 14). As well, the research problem and potential solution can involve improvement to practice at multiple levels (Herr & Anderson, 2005).

Throughout action research projects, there is a creation of new understandings through social interaction and reflection there upon which are crucial as the research moves forward (Baumfield et al., 2013). As a methodology with a mandate to improve situations, Reason and Bradbury (2008) describe action research as people working together to address problems in their community or organization to create a positive change, and I argue an ecological approach facilitates this. In the subsequent section, I outline the connections between the four main perspectives of action research methodology and my researcher beliefs.

Researcher's Practical Philosophical Stance

The main features of action research are consistent with my philosophical research stance of a participatory worldview and a practical perspective. The first main feature and primary purpose of action research as described by Reason and Bradbury (2008) is “to produce practical knowledge that is useful to people in the everyday conduct of their lives” (p. 4). Action research can spring from a commonplace issue, which may simply be something that is not working well (Gergen & Gergen, 2008; Kemal Tekin & Kotaman, 2013). As McNiff (2002) further explained, action research involves not only identifying a problem but also a potential solution, implementing that solution, and reflecting on its impact. In these ways action research takes a “practice improvement stance” (McAteer, 2013, p. 16).

McGlenn Manfra (2009) argues there are at least two main stances for understanding ‘improvements’: critical action research and practical action research. Critical action researchers claim there is an emancipatory interest to investigate the political, social and power issues within organizations and society (Herr & Anderson, 2005; McGlenn Manfra, 2009); so change is understood more broadly. Practical action researchers may achieve improved practice but not always cultural change (McGlenn Manfra, 2009); therefore, development is understood in ways that are more focussed. Greenbank (2007) and McGlenn Manfra (2009) claim a practical approach emphasises an understanding the context and the importance of working and reflecting along with participants. Improving practice is viewed as relevant and authentic for teachers (McGlenn Manfra, 2009).

For these reasons, practical actions undergird this project. The action research tenets that correspond with my academic philosophy are: (1) practical participation within a local context; and, (2) practical reflections and improvements within this local context. Both of these to be further described in the following section.

Practical Participation and Local Context. As Heron and Reason (2008) underscore, action research is “not research on people or about people, but research with people” (p. 366). In participative ontological projects, researchers work necessarily close with those involved. Kemal Tekin and Kotman (2013) portray, the researcher “as a learner...has to be flexible, open-minded, self-reflexive and self-critical” (p. 84) and in these ways encourage an active group of collaborative professionals (Sagor, 1992, 1997). Interpretive researchers collect perspectives from the stakeholders to expose broader views about the setting or situation and to capture various participant beliefs (Beaulieu, 2013). Qualitative research methods may be described as a “systematic approach[s] to understanding qualities, or the essential nature, of a phenomenon within a particular context” (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005).

Perhaps to overstate the point, action research involves significant collaboration with all those who choose to participate (Burrows, Thomas, Woods, Suess, & Dole, 2012). There is a reason for this, as Brydon-Miller, Greenwood and Maguire (2003) expressed, “research that is conducted without a collaborative relationship with the relevant stakeholders is likely to be incompetent” (p. 25). Oja and Smulyan (1989) stated that successful action research involves frequent and informed communication, in short, practical participation within a local context.

Practical Reflections and Improvements within the Local Context. Further to participation, action researchers understand the generation of knowledge to be socially constructed (Koshy et al., 2011). Action research entails people working together to implement something to improve practice, and as such, provides a mutual learning opportunity. Ideally, [research] participants have common learning interests and so share ideas and work together; they sense a need to collaboratively problem solve and are active in the process. It is the belief that knowledge is created through experiences and that these understandings may then change through reflection which ultimately leads to the generation of new knowledge. As new understandings are created through this social interaction (Baumfield et al., 2013), the participants' voices and the researcher's interpretations are essential to the ontological and epistemological beliefs of action research.

The action research in this study prioritized collaborative problem solving and is grounded in a participatory worldview. Park (2006) asserts that the central role of the community participants is the key difference between action research and any other research. Action research is to collaborate with community participants to implement and to reflect, for as Herr and Anderson (2015) argue, there must be local interest in investigating the problem. Such a view of knowledge generation is consistent with action researchers (Baumfield et al., 2013). I modelled shared practices; I emphasized this joint focus from the onset. The participants shared their concerns and their desire for change within their school context. I did not transmit my own feelings or ideas in these conversations for my intention was to be openly facilitative and not directive, which I

monitored via my research journal. Greenbank (2007) acknowledges that the structure of collaboration may vary. Clift, Veal, Johnston and Holland (1990) characterize effective collaboration “by its group orientation, focus on practical problems of individual teachers or schools, emphasis on professional development, and construction of an environment that provides time and support for teachers and university staff to work together” (p. 53). I will provide details outlining this practical approach in the research design and process section.

The values and beliefs rooted in action research relate to the fundamental reason for the study (McNiff, 2013) and link to the worldview of the researcher (as it does) to the collaborative work in schools. To be clear, action research aligns with the usual practice of teachers (McAteer, 2013) and in a sense, teachers are action researchers through the process of professional reflection and improvement. Action research is widely used in educational research (Walter, 2010) as it connects easily to the practice of teachers, as stated by McAteer (2013). Indeed, action research in education has its own historical development and is reviewed next.

Action research, as a methodology in education, is generally regarded as to have been developed by Stephen Corey from the work of Kurt Lewin in the earlier parts of the twentieth century (McAteer, 2013). Corey maintained practitioner involvement as a requirement for educational change to take place (Efract Efron & Ravid, 2013). Indeed, the idea of inquiry, developed by John Dewey, begins with a problem, involves reflection and action to the resolution of the query (Bruce & Pine, 2010). As action research focuses on problem solving, it is widely used in educational research (Walter, 2010), and

as such, aligns with the refining practices of teachers (McAteer, 2013) in that it challenges the status quo to find “new ways of doing a job in which they had previously been considered proficient” (McAteer, 2013, p. 152).

Particularly, action research emphasizes reflection and analysis to improve practices in education (McGlenn Manfra, 2009). Furthermore, as an improvement-oriented methodology (McAteer, 2013), is a “useful structure to guide foundational conversations between professionals” (Salm, 2013, p. 100). This practical focus, of course, relates to the project at hand. To reiterate, action research begins with a problem, involves reflection and then some strategy or tactic to resolve the problem (Bruce & Pine, 2010; McAteer, 2013; McNiff, 2013; Herr & Anderson, 2015). At times, these activities can occur more than once, where each cyclical process informs the next iteration (Beaulieu, 2013). Action research therefore becomes “a process of generating knowledge in action for action” (McNiff, 2013, p. 87).

Research Design and Process

There are various visual representations of an action-research cycle, although most of representations are based on the models by Kemmis and McTaggart (1981) or Elliot (1981, 1991; as quoted in McAteer, 2013). Most frequently, these models involve a flow of action in sequential steps (Sagor, 1997). Of course, there are many ways an action researcher can model and structure a project (McAteer, 2013); I have chosen the Kemmis and McTaggart scheme to guide this research.

The Kemmis and McTaggart action research illustrates the participatory and reflective cycles as a spiral model (2008) (as presented in Figure 8). Other models

represent action research similarly, such as, Elliot's flowchart design or O'Leary's model using multiple cycles. As the action research process is not rigid, often quite fluid (Koshy et al., 2011), The Kemmis and McTaggart Model represents a simpler and therefore, more flexible approach, in comparison to other illustrations.

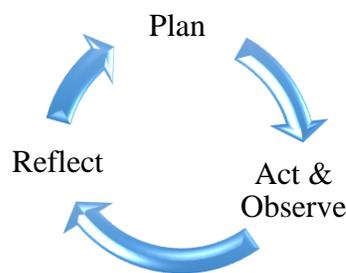


Figure 8. Action Research Cycle. Adapted from Kemmis and McTaggart, 2008, p. 278.

Action Research Example

A notable research example, drawn from education, with a practical emphasis is the Kemmis and McTaggart *Getting Girls in the Game: Action Research in the Gymnasium* by Daniel Robinson (2013). Robinson used a practical action research orientation to improve teaching and learning. To locate participants and a context, Robinson identified a need and presented preliminary information regarding a potential action research project. He located three teachers who recognized a similar need, namely, to include and encourage more female students in physical education. A potential path was presented; participants agreed and put that plan into action. Finally, the participants reflected on the project. Next is a review of this dissertation research process, which is consistent with Robinson's (2013) approach.

Research Process

I began this research, as did Robinson (2013), with locating interested participants and contexts. Following this, the research cycled through three main phases of planning, acting and observing and finally, reflecting.

I received ethics approval for the research on February 29, 2016. I originally contacted three Saskatchewan school division superintendents to discuss a possible research partnership. Two superintendents were unable to support a research partnership at that time. The first school division employed psychometrists rather than psychologists and the dissertation committee determined that this was not ideal. The second school division was developing a new process to form research partnerships with universities and was not taking on additional research at this time. Fortunately, the third superintendent, who was responsible for psychology (see Appendix 1 Research Summary), expressed the possibility of collaboration with school division staff and agreed to meet on March 1, 2016.

I first met with the superintendent of the third school division. At this meeting, I provided an oral review of the proposed research and copies of a psychologist participant search form (Appendix II Research Participant Search Form). We determined it made sense to begin the process of participant recruitment with the division office staff, or at the psychologist level. As well, the psychologist group of this school division was limited (under 10 employees), so it was logical to target interested psychologists first and then potential teacher participants.

On March 10, 2016, I met with the interested psychologists at the division office. I provided an overview of the pilot study data, summarized in Chapter 1 of this paper, which demonstrated a potential area of improved practice. Following this initial meeting, interested psychologists indicated a desire to participate by informing the superintendent. The superintendent then emailed to me that four psychologists shared similar concerns about consultation within their local context, and interest in the research. The superintendent provided their names and contact numbers and the next task was to assemble these four interested psychologist participants.

The four psychologists and I met to discuss the project. During this exploration, two of the psychologists decided not to participate. One declined citing her background in clinical psychology; I did not ask her to expand on this. The second psychologist expressed that she would not have the time to participate. I met a second time with the two remaining potential psychologist participants individually on March 17, 2016. I led this discussion with each psychologist asking questions, as needed. Action research principles and guidelines were reviewed. A key outcome at this time was to ensure informed consent for participating psychologists. As well, I encouraged a collaborative dialogue to clarify their rights, responsibilities and risks. As Bournot-Trites and Belanger (2005) state, such openness promotes a more fully informed process. These two psychologists, called Psychologist A and Psychologist B for this research, then agreed to participate and signed consent forms.

Next, the superintendent, psychologists and I co-determined a process to locate interested teacher partners. It was prudent that potential teacher participants had recent

experience with psychological consultation, including intervention implementation. They decided to begin the teacher recruitment at two schools and with three specific teachers. The psychologists had already provided a notice to these teachers that a potential research opportunity would be presented at their schools. I ensured my actions within the individual schools aligned with the school division expectations, consistent with good research practice. Therefore, I provided a written summary, accompanied by a discussion with the principals, at these schools (see Appendix C, Classroom Teacher Recruitment Information Letter). I then shared this written information with the three teachers individually and answered all questions.

All three teachers expressed interest, two teachers from one school and one from another (hereafter referred to as Teachers 1, 2 and 3). Later in March 2016, I met with each teacher individually to ensure their participation was completely voluntary. Bournot-Trites and Belanger (2005) argue it may be difficult for an action researcher to obtain free and informed consent from participants, and so to mitigate any pressure, researchers should make it clear that there would be no organizational disadvantage in not doing so. Therefore, as part of this discussion, an informed consent process, I verified that the superintendent indicated there would be no negative impacts from the organization for not participating. All three teachers agreed to participate and emailed me.

At this time, I also shared information on a grant that I had secured for this project. Limited funding through the McDowell Foundation was available to provide assistance with the predicted challenges/costs of this project, such as teacher release time for

participants to carry out interviews, curricular planning, journaling and data reviewing related to this project. The availability of this substitute coverage support was included in information provided to the teacher participants. After the participants were recruited and the school contexts were determined, the action research steps of planning, acting and observing, and reflecting began.

Planning (With Participants). We began the action research with planning. As stated, there were two psychologists and three teacher participants (see Table 5) which formed three dyads. Two of the teachers were from School A, in which Psychologist 1 worked. One teacher worked at School B, with Psychologist 2. The classroom teachers' taught grades 4/5, grade 7 and grade 8. It was logical that Psychologist A would collaborate with Teacher 1 and Teacher 2, and Psychologist 2, with Teacher 3 to align with current work locations.

Participant	Current Position	School Information
Teacher 1	Grade 4/5 Classroom teacher	School A
Teacher 2	Grade 8 Classroom teacher	School A
Psychologist 1	Registered Psychologist	School A
Teacher 3	Grade 7 Classroom teacher	School B
Psychologist 2	Registered Psychologist	School B

Table 5. Research study participants.

The planning time provided an opportunity for each teacher/psychologist dyad and I to discuss the goal of the project, the psychological consultation difficulties, and any proposed solutions to address the concerns. I briefly summarized the pilot study problem and solution with each psychologist/teacher group, while emphasizing that doing so should not limit our research possibilities. Indeed, as a collaborative process, other ideas

were encouraged. At this point, I was unsure if each psychologist/teacher cohort would decide on a similar process or have other suggestions. I recorded in my research journal that I was feeling uneasy about possible divergent processes within each grouping, but again I wanted to maintain an openness, and truly allow participants to lead the way. Even so, each of the participant dyads decided to follow the same process as the pilot study; they wished to embed interventions into a curricular unit as a collaborative ecological approach.

At the time, I was a bit apprehensive, given the excitement and interest in the research, the participants did not present alternative solutions. Yet, in my journal I had recorded feeling confident that the pilot study and now dissertation process resonated with the participants and that time or inexperience were not explicit barriers within this research-planning phase. Indeed Sagor (1992) expressed, “it is common for action researchers to have already begun to develop some ideas for attacking the problem” (p. 16) and in that, this research plan step evolved quite similarly to that of Robinson’s (2013) as discussed earlier. The participants did reflect later in the research on potential adaptations for future research, and I will expand on these ideas in the discussion section of this paper.

Next, I presented to the participants how data was collected for the pilot study in order to ensure the quality of the findings. McAteer (2013) defines data collection as “all those items of information gathered in the course of a research project” (p. 63). Participants collaboratively confirmed a data collection plan; using recorded interviews, recorded curricular unit plan review, observations, journals, and artifacts. These data

sources were the same as those in the pilot study, except for recording the curricular unit plan review. I was hopeful these initial meetings encouraged participant motivation and interest (Sagar, 1992) as I had two previous psychologists opt out, and as a researcher, I continued to feel uneasy about the future of the project. We next selected dates to begin the action and observation, that is the data gathering was determined. The participants and I booked initial interview times, tentative half-day curricular review times to embed interventions, and dates for observing the effectiveness of the interventions.

Acting and Observing. To initiate the acting and observing portion, the teachers and psychologists each booked individual interview times (see the semi structured interview questions Appendix D). I met with each participant individually to collect relevant data on the context prior to beginning the research, such as: (a) the role of the psychologist; (b) the consultation model(s) or process utilized; and, (c) the current provisions for intervention implementation support. I interviewed Psychologist 1 at the school division office and then Teacher 1 and Teacher 2 at School A, at different times, on April 7, 2016. I completed the initial individual interviews at different times with Psychologist 2 and Teacher 3 on April 22, 2016. All interviews took place in private rooms at the school division office and at the two schools. The interviews were between 30 to 60 minutes, were digitally recorded, and then submitted to transcripdivas.ca services.

Next, the participants engaged in the agreed upon actions and each of the three teacher/psychologist dyads and I met to embed interventions within a curricular unit. These act stage collaborations occurred on April 28 for School A. I met with Teacher 1 and Psychologist 1 in the afternoon and then Teacher 2 and Psychologist 1 after school.

For School B, Teacher 3, Psychologist 2 and I met for a half-day planning session on the afternoon of April 29. These collaborative working sessions occurred at the homes of Teacher 1 and Teacher 3, and in a private room at the school for Teacher 2. I facilitated the review of the unit and engaged as a co-participant - not as an expert. To be clear, I did not lead this process. I actively listened with infrequent contributions, being mindful not to direct participant actions or thoughts.

Within each team, the psychologists reviewed the students' assessment report to begin each planning session. They highlighted learning concerns, reasons for assessment, and recommendations. The teachers then summarized a selected unit plan, including the: (a) curricular outcomes; (b) materials; (c) lesson details; and, (d) evaluation. At this time, teachers and psychologists discussed the identified students, their current learning needs and potential interventions. Next, we consulted the Ministry of Saskatchewan Education curricula with respect to subject, grade, and unit in order that teachers and psychologists understand the specific learning expectations for each selected student. Having that common goal, teachers then presented resources to actualize the particular curricular unit in light of the chosen student. On the ground planning really began with the teachers. The teachers shared curricular unit resources such as games, books, student worksheets, handouts, and activity sheets.

These planning sessions were more complex than anticipated. We started with looking at the reported recommendations, and in particular how to incorporate them into the unit plan. Most interestingly, though, there were novel interventions and materials chosen – that is interventions not from the recommendations – but from the collaborative

discussions. Interventions emerged through this planning, which will be further explained in the results section. Although each unit review process began somewhat similar, each planning session was also slightly different. Therefore, each will be individually outlined beginning with Teacher 1 and Psychologist 1.

Actions: Teacher 1/Psychologist 1. The focus here was reading, specifically for the student to demonstrate comprehension of grade-level fiction. In her journal, the classroom teacher highlighted the value of the collaboration in that “it can be tough to know which ones [recommendations] to focus on without the chance to dialogue’. For this reason, the team prioritized two interventions from the psychological report: the first was direct small group instruction focused on letter recognition and sound association and the second utilized voice to text technology to support independent reading of grade level text.

The psychologist recommended the teacher explicitly teach strategies to help the student to apply letter knowledge and to break the words up when decoding. She recommended supports to help the student move beyond merely identifying the first letter when attempting to decode a new word. The idea here is to teach the student strategies: to break the words into syllables, or to look for smaller words within the word as well as help him learn to use the sounds of the letters. The teacher brought programs and materials to the planning session, including phonics cards, bingo words/sounds game and a reading decodable book. These materials were familiar to the teacher and the psychologist confirmed their merit.

The next priority was to provide books on tape or a text to speech program. The psychologist recommendation was for the student to read along for comprehension without having to decode the information. The student accessed an on-line story through the provincial library system on a computer within the classroom. After this, the teacher informally assessed the student via conversation. Because the student was a disengaged learner, he was able to select the story from teacher-vetted resources based on his own interests.

In summary, Teacher 1/Psychologist 1 prioritized the learning outcomes for the student and then planned interventions and materials. It is of note that the selected recommendations would be implemented in a small group instruction time as well as during the student independent learning time. As well, the teacher reviewed and selected resources that were similar to the psychologist recommendations, but those she had previously utilized and with which she was familiar and comfortable. Overall, the collaborative planning session was an affirmation of implementation priorities.

Actions: Teacher 2/Psychologist 1. For this dyad, the curricular focus selected by the teacher was composing a persuasive essay and implementing a computer fluency program, 'Read Naturally Live' (<https://www.readnaturally.com/>). The psychological report listed recommendations such as to introduce new concepts gradually, to explicitly teach a paper editing strategy, to consider the fluency program and use graphic organizers for paragraph composition. In the collaborative planning, three key interventions were established. The first was to chunk the essay writing steps to make the plan less overwhelming for the student. The second was for the teacher to model the essay writing

process succinctly at each step for this student, and others. A visual organizer was also a suggested intervention to support the student organization of essay ideas.

Again, once interventions were collaboratively determined and were to be implemented within the large group, as well as during individual independent learning times. Also consistent with the first planning session, the teacher selected the specific resources. He decided how to chunk the writing steps, developed and presented a step by step essay model to the class, and selected a visual organizer. Teacher 2 did also incorporate the individual fluency computer program into the reading program. In essence, the teacher decided the specific resources based on the particular interventions.

Actions: Teacher 3/Psychologist 2. This dyad focused on interventions for the Science curriculum. The outcome selected was for students to understand movements and forces within Earth's crust, to identify a process used to extract Earth's geological resources and to investigate the surface geology of Saskatchewan, including soil. Consistent with the previous two planning sessions, key interventions centered on creating opportunities for individual independent learning and supports for class assignments. The independent interventions were to connect new learnings to previous experiences through a science experiment and presentation specifically designed for the target student. The student's family members and peers supported these individualized activities. The teacher would also incorporate peer supported learning, either group or partner work, to assist with adapted classroom assignments.

There were two prioritized recommendations from the psychological report. The first was to use the adaptive dimension, or to adjust the learning environment, instruction,

assessment and resources, including peer supports as needed. Second was to focus on life skills programming with concept progression from concrete to abstract, utilizing hands on experiential learning. The teacher brought science resources to the planning session that she had already adapted. The collaborative planning evolved mainly around designing and incorporating individual projects for the student into the course. The process helped to identify two independent assignments for the student, building a plasticine volcano and making a presentation on farm dangers. In this session, the planning prioritized the big ideas for unit and again, the teacher selected the specific resources that she was most comfortable utilizing.

A connection between the students' strengths and weaknesses identified within the psychological report determined where the curriculum focus would be. This process solidified the student learning priorities within the teacher chosen curricular unit. The deliberations around classroom context and teacher preferences helped solidify the selection of specific resources. Table 6 that follows summarizes each of the above collaborative planning sessions, including unit of study, curricular outcome, materials, and primary interventions.

Participant	Unit of Study	Curricular Outcome	Materials	Key Interventions
Teacher 1 and Psychologist 1 Partner	Reading	Comprehend and Respond (CR) Outcome: CR4.4 Read for various purposes and demonstrate comprehension of grade-appropriate fiction	Individual reading program On-line library with computer and headset	-intensive reading skills instruction -oral stories to listen and to respond to with high interest and at grade level
Teacher 2 and Psychologist 1 Partner	Writing	Compose and Create (CC) Outcome: CC8.8 Write to describe ... to explain and inform ...and to persuade ...include several paragraphs or sections organized in logical sequences	Persuasive essay visual outline Persuasive essay sample	-chunking of steps -model essay writing example -visual organizer to scribe ideas
Teacher 3 and Psychologist 2 Partner	Science	Earth and Space Science: Earth's Crust and Resources (EC) EC7.1 Analyze societal and environmental impacts ...and... understanding of movements and forces within Earth's crust. EC7.2 Identify locations and processes used to extract Earth's geological resources and examine the impacts ...	Individual science project materials Make video of family farm animals care and safety	-collaborative peer groups -individual peer support -connect new material to current experiences and knowledge

		EC7.3 Investigate the characteristics and formation of the surface geology of Saskatchewan, including soil, ...		
--	--	--	--	--

Table 6. Summary of Collaborative Planning Sessions. Adapted from curricular outcomes, Saskatchewan Ministry of Education (n.d.).

Further details regarding the interventions, discussion of classroom context and curricular planning are expanded upon within the findings. Following the collaborative planning, the actions of observing were organized.

Observations with Discussions: Student Progress. Each psychologist and I observed the curricular lessons to maintain contact, for as Oja and Smulyan (1989) argued, successful action research involves frequent communication and collaborative dialogue between researcher and participants. The psychologists and I collected data on students' responses to the interventions. The frequency, duration, and timing of observations were collaboratively determined with each teacher.

I observed each classroom twice after which the classroom teacher and I met informally. I visited two classrooms within School A on May 12 and then again on June 9. I also observed the classroom in School B on May 26 and again on June 7. The classroom teacher, psychologists, and I documented observed student behaviour, as well as the amount and quality of work completed in comparison to a random peer. The classroom teacher also compiled evaluation data on the student for research and reporting purposes. The observations data is detailed within the findings chapter. After these visits, the formal reflection began.

Reflecting. By in large, reflecting consisted of collaborative planning dialogue, semi-structured interviews with each individual participant, journal entries, and artifacts. The interviews framed the reflection and were another opportunity to collaborate on the research process and future implications (see Appendix E Final Interview Questions). These interviews concluded the data collection and were held with Teacher 1 on June 23; Teacher 2 on June 24; on June 20 with Psychologist 1; and, on June 29 with Psychologist 2. The interview with Teacher 3 occurred on September 9.

Each participant, along with myself, maintained a research journal to document reflections throughout the process. The participants referenced the journals, at times during the final interviews to substantiate their reflections on the research. These journal entries contained their thoughts, along with comments others had made, such as parents or other teachers in the school, related to the student progress. Two of the three teachers also collected artifacts to share during the interview. They shared student work samples as evidence of student responses to the interventions. The data for the research concluded with the reflect stage.

Data Collection for Evidence of Credibility and Trustworthiness

Brantlinger et al. (2005) define qualitative data collection as, “a systematic approach to understanding qualities, or the essential nature, of a phenomenon within a particular context” (p. 195). Brantlinger et al. (2005) urge researchers to clarify the data collection measures to be used and their rationale to certify high quality (see Table 7).

Data Collection Method	Goal of Method	Source of Data
Taped Individual Interviews (initial)	Clarify current practices of consultation and intervention implementation	Psychologists Teachers
	Opportunity for reflection of current practices of consultation and intervention implementation	Psychologists Teachers
Taped Planning Session (deliberate and embed interventions)	To explore participant experiences of collaborative ecological consultation in the unit plan review and to gain knowledge of classroom context or micro-level ecological factors	Researcher Psychologists Teachers
	To deliberate on interventions to embed within a curricular unit of study	Researcher Psychologists Teachers
Journals	Aid in recording and interpreting unit plan review process	Psychologists Teachers
	Provide accounts of ideas and concerns with collaborative ecological consultation	Psychologists Teachers
	Record thoughts on research project and process	Researcher
Observations (anecdotal)	To gain information on student response to the embedded interventions within the curricular unit of study	Researcher Psychologists Teachers
Taped Individual Interviews (final)	Opportunity for reflection of collaborative ecological consultation and intervention implementation stage	Psychologists Teachers
	Opportunity to present evidence of student outcomes and response to the interventions	Psychologists Teachers
Artifacts (student work samples and teacher reports)	Document collection to support student progress in the unit plan	Teachers

Table 7. Data Collection Tools and Strategies. Adapted from Avgitidou, 2009.

The data collected relates to the research questions (see Table 8) and as McAteer (2013) defines data as “all those items of information gathered in the course of a research project” (p. 63). The data collection for this project was based on the sound practice of how to collect quality indicators of knowledge generation (Newton & Burgess, 2008). To summarize, the data collection methods and indicators of quality for this project include: (1) interviews (pre and post); (2) observations; and, (3) analysis of documents and will be reviewed next.

Research Questions	Data Source #1	Data Source #2	Data Source #3	Data Source #4	Data Source #5
Question 1: Experiences from Collaborative Ecological Consultation	Initial Interviews	Planning Session	Journal Notes	Final Interviews	Observations
Question 2: Micro-Factors and Embedded Interventions	Participant Experience and Education	Initial Interviews	Planning Session	Journal Notes	Final Interviews
Question 3: Student Response to Interventions	Final Interviews	Teacher Evaluations	Artifacts (work samples)	Journal Notes	Observations

Table 8. Data Collection Plan. Adapted from Sagor, 1992.

There are three other categories of data sources as outlined by Sagor (1992) that were utilized in this research as quality checks: (1) existing sources such as descriptive data;

(2) tools for capturing everyday life; and, (3) tools for questioning. Each of these categories will be examined briefly next.

Description Data. There was descriptive data obtained from the participants. Descriptive data included educational background and years of experience, which is located within the introduction of the findings section. This existing data adds to the analysis of the findings in considering some of the classroom and teacher variables impacting implementation and will be expanded upon within the final chapter of this dissertation.

Interviews. Interviews is the second category of data. A semi-structured interview process allowed for both researcher and participants' flexibility to extend conversations in various directions. Interview questions were clear and open so as not to lead the interviewee as emphasized by Brantlinger et al. (2005) (see Interview Questions in Appendix C and D). I taped each interview and then transcriptdivas.ca sent me a typed copy of the interviews. I reread each transcript while re-listening to the interview to add omitted words and to fix minor text errors. This check was to confirm the accuracy of the transcriptions.

Journaling Tools and Observations. To further understand the participants' thoughts and feelings through the research process, tools for capturing everyday life such as journaling and observations were used. Journaling provided an opportunity for personal reflection and as Herr and Anderson argue (2005), "keeping a research journal is a vital piece of any action research methodology" (p. 77). Each research participant maintained a simple journal in which personal thoughts and ideas were chronicled. The

teacher journals were reflections after the research was completed, rather than entries through the process, as was mine.

Further to this, in-class observations completed by the psychologists and I included: (a) the appropriate selection of settings; (b) sufficient time in the site; and, (c) systemic collection of field notes, also to ensure the quality of data (Brantlinger et al., 2005). Between the psychologists and me, at least two classroom observations were completed. The observation was for one lesson from the collaboratively planning unit plan. The focus was on how the student responded to the specific interventions. Anecdotal notes followed by a discussion with the teacher occurred at each time as well. These visits were arranged in two ways, convenience and teacher requested observations of particular lessons.

The next section details the data credibility techniques, or strategies to address issues of trustworthiness. Qualitative researchers employ quality indicators to ensure high standards (Brantlinger et al., 2005) and Table 9 provides an overview of four techniques utilized. Following this, an explanation of how each contributed to seeking evidence and understandings from the research data.

Techniques	Description
Member Checks	Participants reviewed the taped transcriptions as well as the charts with the data interpretation to support the researcher conclusions
Data Triangulation	Multiple data sources were used including: interview transcriptions, planning transcriptions, observation notes, journal thoughts and student outcome data.
Thick Descriptions	The findings data provide sufficient descriptions of notes and quotes to support interpretations and conclusions.
Audit Trail	Dates and times of interviews, observations, journals etc. were maintained.

Table 9. Data Collection Techniques for Trustworthiness. Adapted from Brantlinger et al., 2005.

Member Checks. Amongst others, Brantlinger et al. (2005) argue that making sense and confirming the conclusions of the data should involve member checks. Brantlinger et al. (2005) describe two levels of checks, one to confirm the transcription accuracy, as well as a second level, to support the interpretation. I prepared separate documents with each participant's responses, along with my interpretations. Each participant examined his or her individual data for three purposes: accuracy of transcriptions, agreement with interpretation and authorization for use. Hence, this double-checking process was one approach to ensure trustworthy data.

Data Triangulation. As Sagor (1992) explains, data collection should ideally have at least three independent windows for each question to be substantive. The independent data sources, previously outlined in Table 8, helped to ensure quality by increasing confidence in the collected data. A data plan ensured artifacts, reflections, transcriptions and observations were drawn from multiple sources and helped to "monitor what you and

others are [were] doing” (McNiff, 2013, p. 104). This pre-planning of project data certifies the research quality was maintained.

Thick Descriptions. The use of varied data sources for triangulation, along with reporting detailed or thick descriptions of quotes, observations, and reflections provide further evidence for interpretations (Brantlinger et al., 2005). I reported many quotes from the individual participants as evidence of thick descriptions when presenting my conclusions. This detailed evidence is in the Finding section.

Audit Trail. I also maintained an audit trail throughout this dissertation. I documented dates and times when I was meeting, interviewing, observing, and reflecting. These dates and times are located throughout this paper. An audit trail substantiates that sufficient time was spent in the field (Brantlinger et al., 2005)

Throughout the process of conducting research, a qualitative action researcher must exhibit skills comparable to moral virtues (Brinkman, 2007) for as Kemal Tekin and Kotaman (2013) describe, “the researcher as a learner who has to be flexible, open-minded, self-reflexive and self-critical” (p. 84). As researcher, I needed to attend to and be sensitive to the feelings and thoughts of participants (Brinkman, 2007). Researchers suggest, one key virtue of a qualitative researcher is the ability to have a genuine relationship with the participants (Pine, 2009). To ensure my effectiveness as an action researcher, a reflection on my role was at the forefront throughout the dissertation process, which will be further elucidated in the next section.

Researcher Reflectivity

As a collaboratively focused action researcher, I reflected on my role throughout the process. My journal reflections comprised of three main researcher conundrums. First, I wanted to be mindful of my own viewpoints as the researcher, encouraging participants to be confident and comfortable with their own opinions and ideas throughout the research process. Second, as authentic participation is key in action research, I had to manage my feelings of disorder or messiness throughout the process. Finally, as the research goal was improvement of practise, I had to, ultimately, walk the fine line of not leading but facilitating the process and participant engagement.

Always being conscience of my role as an action researcher and my objectivity was a priority for this project. I did not want to put my agenda on this research. I had to attend to my ability of balancing my own beliefs with those of the other participants (Snoeren et al., 2011). As an action researcher, I maintained an open mind when collecting qualitative data concerning others' beliefs and values (Snoeren et al., 2011). Each participant contributes according to their ability at that time, therefore, I supported individuals to be themselves and show their nature (Brinkman, 2007). For these reasons, I used self-reflection as recommended by Holloway and Biley (2011) to sort through these varying perspectives.

I also reflected on understanding and attending to my reactions on the data (Finlay, 2002). Acknowledging my emotional responses was vital throughout the messiness of this action research (Cook, 2009). Throughout the semi-structured initial and final interview process, I encouraged participants by acknowledging their reflections on the

research process. Avgitidou (2009) stresses that facilitating the participants' reflections is essential and Cook (2009) maintains there needs to be an atmosphere in which participants can openly contest knowledge as well as, interpret and communicate an honest account of the research process.

The role of the researcher may change from the beginning to the end in an action research project; it is adapted and shaped during the collaborative process (Avgitidou, 2009). Cook (2009) argues "that mess is an integral and purposeful part of the process of research, not merely a description of where approaches merge, and has an important and dynamic part to play in getting below rhetoric and achieving interpretative rigor" (p. 289). At the beginning of this project, my role as a researcher involved asking questions and listening to the answers. These activities helped me learn: (a) how the participants felt; (b) what the concerns were for the participants; and, (c) how the participants perceived their role. Later, my researcher position shifted from acquiring participants' situational knowledge to clarifying information and asking for feedback on practice improvements.

As noted in other action research studies, a researcher position often evolves into a role of raising issues and promoting reflection. Avgitidou (2009) describes the researcher role in an action research project to encourage participants' involvement in the problem-solving and to empower participants' reflection. In the final interviews, I encouraged participants to reflect on possible next steps, and potential ways to build an ecological approach within the consultative role for the psychologist. These recommendations are described further in the discussion section.

As an action researcher I could not overlook any prior relationships to the participants (Zeni, 1998) together with recognizing and addressing any dual positions (Blair, 2010). In this reflection, there was a continuum of positionality that was necessary for me to consider as an insider/outsider (see Figure 9) (Herr & Anderson, 2005). Thus, the nuances of positionality and hierarchy were clearly understood for this action research project (Herr & Anderson, 2005).

<i>Positionality of Researcher</i>	<i>Validity Criteria</i>	<i>Contributes to:</i>	<i>Traditions</i>
Reciprocal collaboration (insider-outsider teams)	Anderson & Herr (1999), Bartunek & Louis (1996)	Knowledge base, Improved/critiqued practice, Professional/organizational transformation	Collaborative forms of participatory action research that achieve equitable power relations

Figure 9. Researcher Positionality. Adapted from Herr & Anderson, 2005, p. 3.

The researcher can vary in position from an insider to an outsider. The researcher positionality can also vary at different points of the project (Herr & Anderson, 2005). The researcher positionality does not fit nicely into the continuum categories nor is simple to define. Therefore, I had to determine how I was positioned in relation to the setting and the participants. This is particularly important when a researcher is an outsider of a setting but has similar knowledge and experience (Herr & Anderson, 2005), as was the case here. Researcher positionality but also hierarchy of power need to be acknowledged (Herr & Anderson, 2005).

In this project, I was an outsider to the specific setting but equally important, I have extensive background knowledge of the field of study – as I am a psychologist working in schools. In other words, this knowledge imparts power (Avgitidou, 2009) as I had the

language of the participants and experience of the topic. I have thirty years of experience working in education, originally as a teacher and then later, as noted, a psychologist. I do not work in this particular school division, yet I am a member of various psychologist groups within Saskatchewan, consequently I am also somewhat of an insider. Although minimal, I had previous connections with the psychologists in this dissertation study through committee work and conference attendance.

The classroom teachers in this research and I had only the education umbrella in common. It was also particularly important for me to recognize that as a university student this, in itself, can cast beliefs of hierarchy and power within the research relationships. As well, there is a power asymmetry in qualitative research (Thiollent, 2011) as I asked the questions, set the agenda, and was the main interpreter of the data (Brinkman, 2007).

McAteer (2013) makes the point that there will inevitably be issues of power between researcher and participants and so these hierarchy situations must be taken into account. Thus, Herr and Anderson (2005) argue outsiders working in an action research project need to frame themselves as collaborative rather than outside experts. In this qualitative project, I had to monitor the power relation between myself and the participants (Avgitidou, 2009; Brinkman, 2007). To mitigate issues of power relations, I prioritized collaboration and I was continuously mindful of being open and supportive to all of the participant ideas. Snoeren et al. (2011) remind researchers that creating a safe and open environment can enhance the opportunities for learning. As an action researcher, I was cognizant of modelling collaboration and encouraged the participants to think and to

speak for themselves. I was not a neutral action researcher (Holloway & Biley 2011) but I aspired to “perceive, judge and act well in this complex field” (Brinkman, 2007, p.142).

Finally, a lack of time and energy may be a challenge for collaboratively focused action researchers (Wang & Zhang, 2014) and participants must be made aware of these factors (Salm, 2013). Successful collaboration creates a mutual trust and understanding of the expectations (Wang & Zhang, 2014). Action research requires effective participation in the project and a collaborative open process was utilized to engage participants to develop a commitment (Pellerin, 2011). Further to this, the provision of time from the organization to assist with the participant commitment can be essential to an action research project (Wang & Zhang, 2014). As noted, this project as supported by the school division and by a McDowell Foundation grant, to provide participant release time.

This research project prioritized collaboration and made the goals of the project almost ‘natural’ (Thiollent, 2011). The “capable qualitative researcher is one who navigates wisely in this complex field of power and ethics” (Avgitidou, 2009, p. 132), therefore, I maintained a balance of being an outsider of the organization and an insider to the field of education and psychology throughout the research project. I followed guidelines to meet high standards in the methods of data collection for as Newton and Burgess (2008) argue, this is required to justify knowledge generation.

The purpose of the action research project was clearly identified to ensure the generation of knowledge (McAteer, 2013) and the quality indicators were aligned with

the methodology (Brantlinger et al., 2005). The validity of data from this research project can be analyzed against the criteria chart (see Table 10) (Herr & Anderson, 2005).

Action Research Mode	Primary Validity	Secondary Validity
Practical	Outcome	Democratic
	Process	Catalytic

Table 10. Action Research Modes and Validity Criteria. Adapted from Newton & Burgess, 2008, p. 26.

The primary validity criteria for this practical action research project was its focus on the outcome and the process. The knowledge claims here were that the outcomes matched the research purpose and that the process addressed the problems. To reiterate, a practical focus is a mode of action research and this applicability and relevance resonated strongly with the participants. The aim of the data collection and subsequent analysis was to describe and reflect on the process of the study and its potential as a mechanism for improved practice.

Data Analysis

McAteer (2013) identifies three data analysis options discourse analysis, conversation analysis, and, thematic analysis. In McAteer's (2013) view thematic analysis as a more accessible and relevant for action researchers, and as such was preferred for this project. Sagor (1992) explains that thematic analysis requires sorting through and then analyzing the evidence. There was data related to each of the participant experiences associated with the research questions, such as the current psychological consultation process, the embedded planning process, and the student progress. All data in this research project has been analyzed to determine what themes and evidence has been collected. Visual

matrixes helped to summarize the information for the participants and myself. I developed two types of data matrixes: descriptive and thematic.

Descriptive Coding. In the first analysis of the data I compiled all of the evidence according to **attributes**. I began the data analysis by sorting through all of the sources of data; I coded almost every participant statement, reflection, or artifact in a data matrix chart. Richards (2005) refers to this process as **descriptive coding** and as Saldana (2009) argues, descriptive coding is appropriate for qualitative studies. In this descriptive coding process, I marked general ideas within the interview and unit planning transcription margins as well as, in the participant journals. I then cut and pasted the information with similar codes into the word document matrix. To do so, Sagor (1992) suggests using a data sorting matrix (such as shown in Table 11). The matrixes also helped me to discern data having the most supporting data, as well as provided some initial understanding of the results. I also noted participant remarks that were unexpected such as comments on tiered interventions, specific learning disabilities, or psychologist pre-service training. This provided a well organized visual of initial data items.

Codes	Data Source	Data Source	Data Source
Description Code #1			
Description Code #2			
Description Code #3			

Table 11. Attribute Data Matrix. Adapted from Sagor, 1992, p. 50.

Thematic Analysis. For the second step in my data analysis, I organised these codes by **main themes** or as described by Richards (2005), I conducted **topic coding**. Saldana (2009) suggests that thematic analysis is the outcome of coding qualitative data. These processes clarified what the data is really about and deepened the analysis, as well, I was mindful of the research questions as I reviewed the data for themes. Some themes had much data, namely the following: participants felt the experience was positive, the continued barriers to psychological consultation process, the micro-level factors of student personality and classroom composition, the process was affirming and builds relationships, and ultimately, the collaboration was positive for all of the students in the study.

This compilation of repeated items provided evidence regarding research saturation (Brantlinger et al., 2005). During this these coding processes, there was ample repeated data which indicated there was no need to involve more participants and that saturation was obtained. I then re-organized all of the data again, cutting and pasting information by themes and sub-themes into electronic data matrix. I also highlighted, in red, any data I felt provided a rich summary of the sub category, and maintained the bolded original descriptive codes, see excerpt in Table 12.

Research Question 1 The classroom and student key when collaborative planning –Ecological factors.		
Theme	Quote	Participant
Student Buy In	<p>And then there were times too where he wanted to do what everybody was doing and that’s important too that he gets to do with whatever with the class as long as he’s able.</p> <p><i>It’s just like they have to take into account the child’s style because the child won’t buy in either. They’re never one size fits all but yeah that’s where the discussions I think are good for that.</i></p> <p>Yeah as they’re older it can be harder and particularly I think students that are being assessed sometimes already have some negative self-talk or they’re more self-conscious so they’ve already withdrawn a bit from school so it’s finding that way, “Okay how can we build that confidence and engage them so that this will work?” I found in Grade 1 that worked really well. Partly I think because they’re eager and they’re keen and the kids just buy in.</p>	Teacher 1 Interview 1
	<p>Even the kids themselves don’t necessarily buy into that because they want to be like everybody around them. When they’re younger it works better, but as they start looking around, right, and they get into those where it’s more important that the peers accept them than that they do the right thing, then --</p>	Psychologist 2 Interview 2

Table 12. Themes Matrix Excerpt.

Following this general data review stage, I made a separate data matrix for each participant, with only their comments under each of the themes (see Table 13). By reviewing data from interviews, journals or artifacts, and seeing how they related to the emergent themes, confirmed the analysis. In addition, there were student work samples provided by the teachers. Although I did not quantitatively measure of student progress,

the teachers reported within their interviews and journals measurements of student success.

Research Question 1 The classroom and student key when collaborative planning – Ecological factors.		
Theme	Quote	Speaker
Grade/class fit important	<p>like I think- and especially at the Grade 8 level I think it's really important not to single out kids</p> <p>With the nature of my classroom, I tried to pick the best fit for everyone.</p> <p>Because the peer editing is difficult because of where he's situated within the classroom dynamic, because I have a very split classroom, it's divided by race and ability.</p> <p>So, creating those individual programs or specialized programs for one, two or three children really creates a barrier they put up between themselves and everybody else. So, I'm a firm believer in everybody does the same stuff to some degree.</p>	Teacher 2

Table 13. Teacher 2 Data Matrix Excerpt.

The data analysis culminated with a conference presentation by three of the participants and myself. This smaller group of participants, two psychologists and one teacher, along with myself, presented the research and a summary of the findings at the Learning from Practice Conference. The participants and I had to review and organize their individual research data to form a presentation. The conference power point reviewed for the attendees the major data themes along with specific comments from the presenting participants. This process to prepare for the presentation re-confirmed the accuracy of the findings and was an excellent opportunity to reflect on the study.

Conclusion

There were considerations of the various strengths and challenges within an action research for this dissertation. The emphasis on and use of action research is intended to build on the strengths of the problem solving process and mitigate potential challenges. For the final phase of this research, I reported on the insights. As Sagor (1992) argues, a practical action research paper will explain the findings, potentially resonate with others to generalize and ultimately advance the practice.

A collaborative approach, that valued the thoughts and feelings of the researcher and of the participants, was an important component of this research. Action research was a powerful approach to solving problems for calls to an ecological approach to psychological consultation (Beaulieu, 2013), and in generating socially constructed knowledge in this area (McNiff, 2013). In the next chapter, the findings from this qualitative action research project, including analyses of the interview data, observations data, artifacts and journal notes are presented.

Chapter Four: Findings

To summarize, this action research explored a collaborative ecological intervention approach within psychological consultation. This chapter begins with a brief description of the participants and settings. Next, is an analysis of the participants' perspectives on previous psychological consultation experiences. In this exploration, theme one emerged in that barriers existed for participants when recommending and/or implementing interventions. This data revealed why classroom teachers and psychologists were so interested in this project. The second theme centres on participants' reported positive experiences. All of the participants detailed the effects ecological collaboration had on their professional growth, as an individual and as a school team member. Third, data is presented drawn from the actual actions, collaboratively embedding interventions into a curricular unit of study. The deliberations revealed classroom and teacher ecological factors pertaining to implementation. For the fourth theme, findings on the students' responses to embedded interventions are described. In short, the curricular units were taught and generally speaking, all students had encouraging outcomes. To conclude, all participants explain that without ecological collaboration the interventions would have continued as either not implemented or not as effective, or theme five.

Participants and the Setting

First, a summary of the participants; they included three classroom teachers and two psychologists working in two schools (see Table 15).

Participant Pseudonym	Current Position	Years of Experience	School Information
Teacher 1	Grade 4/5 Classroom teacher	12 years	School A
Teacher 2	Grade 8 Classroom teacher	2 years	School A
Teacher 3	Grade 7 Classroom teacher	4 years	School B
Psychologist 1	Registered Psychologist	31	School A
Psychologist 2	Registered Psychologist	19	School B

Table 15. Participant Descriptions.

Classroom Teachers. Teacher 1 was an elementary teacher in School A. She had 12 years of elementary and middle years teaching experience. She taught a grade 4 and 5 split class during the research. Teacher 2 was also an elementary teacher in School A. He had 2 years of teaching experience and taught grade 8. At School B, Teacher 3 taught Grade 7. She had 4 years of previous teaching experience in the middle years.

Psychologists. There were two psychologist participants; the first (Psychologist 1) worked for 31 years in education. She has a teaching certificate and held various teaching positions for 23 years then obtained registration as a psychologist. For the past 8 years, she has worked in this role. Psychologist 2 also has a teaching certificate and taught prior to practicing as a psychologist. She was in the classroom for 13 years, and has been a psychologist for the past 6 years. Both psychologists had significant experience as a consultant and as a classroom teacher.

School Contexts. Schools A and B are located within a rural Saskatchewan School Division. School A is Pre-Kindergarten to Grade 12, and is situated in a town with an approximate population of 617. This education setting has a student population of 385, with 28 teachers, 30 support staff and a licensed day care. As a designated community school, there is a school coordinator (much like a social worker) to assist with various

student needs, such as provisions for breakfast and lunch. School B includes students from Kindergarten to Grade 8 (there is also a separate high school within this town), school B is located in a town of approximately 1765 people with a student body of 395. There are 27 teachers and 31 support staff.

As stated in the previous chapter, I connected with each classroom teacher and psychologist partner, to determine concerns (if any) with intervention implementation and to ascertain possible solutions. I then interviewed each participant separately for detailed perspectives. The next section summarizes theme one from the research meetings and interviews, starting with the current situation.

Theme One: Consultation Without Collaboration “Dump and Run” or “Consult and Hope”

The classroom teachers and psychologists described an incomplete and problematic psychological consultation model at the start of this research. During these initial semi-structured interviews, it became clear that implementation obstacles sparked their interest in this research. Participants outlined existing consultation processes (see Table 16), which typically involved collecting information, some problem solving and then planning next steps for the school team. Within this dissertation, these four stages are labelled as Referral, Assessment/Report and Meeting, Intervention Implementation and finally Follow-Up.

Psychologist 1 summarized referral as “teacher identifies a problem, contacts the parents and tries to put in certain strategies; if that is not working...then they start the referral [for psychological consultation] process.” The teachers request a school team

meeting to discuss a particular student and his or her academic progress. This “problem solving meeting” (so described by Psychologist 2) usually includes the classroom and student support services teacher, administration, and the psychologist. This stage is an opportunity to review teacher concerns as well as student outcome data; often the consultation progresses to stage two, Assessment.

<h1>Consultation Stages</h1>			
<u>Referral</u>	<u>Assessment/Report and Meeting</u>	<u>Intervention Implementation</u>	<u>Follow-up</u>
<ul style="list-style-type: none"> • Psychologist a school team member • Concerns regarding student raised by teacher or assessment data • Teacher meets with school team • Discussion of classroom interventions 	<ul style="list-style-type: none"> • Cumulative Record review • Observation in school • Discussion with family • Formal assessment (research based interventions) • School team meeting • File report 	<ul style="list-style-type: none"> • By teacher 	<ul style="list-style-type: none"> • Informal discussions • Inconsistent observations and/or team meetings

Table 16. Current Psychological Consultation Stages.

During Assessment/Report and Meeting, the psychologist completes a variety of information gathering activities such as: (1) reviews the student cumulative record; (2) observes the student in the classroom and in other settings such as on the playground; and, (3) conducts a family interview or meeting. Psychologist 2 described her job as a “problem solver” to help uncover the student barriers to learning through information

gathering and completing formal and/or informal assessments. Through information gathering, the psychologist determines if an individual assessment is warranted.

If required, the psychologist spends significant time testing the individual student and preparing a written report. The psychologist debriefs the amalgamated assessment results and resulting recommended interventions at a team meeting. This is followed by Intervention Implementation; however, as teachers expressed, the assessment often concludes the psychologist's involvement. Generally, the teacher is left alone to select and implement the interventions from the report. The participants labelled this as "*dump and run*" consultation; such was similarly voiced in the pilot study. Evidently, there are challenges of relying solely on the debrief meeting and report intervention list to support implementation.

Current Consultation Model: Teachers "Dump and Run". Beyond the team meeting and report, Teacher 1 claimed she was on her own to implement the interventions,

they [psychologists] do the big reveal of what went on and it just feels like you're given these interventions and ideas and then it stops there....it just feels like often that's what these things [team meetings and report] are. You're given it [report with interventions] in a meeting and then it's like, '*Here it is. This is your baby. Goodbye*' [emphasis added]. With the psychologists, most of my experience with them has been the meetings when we're going over the assessment results and then usually that's all I see them.

Indeed, Teacher 1 considered current consultation as a "dump and run" model. In her view, intervention was much more than an inventory of suggestions; implementation is much more involved than merely "okay now I've got this list. Let's just do this!"

Teacher 2 expressed interest in the project for he too suggested the debrief meeting and report to be of little help with intervention implementation,

I'm not 100% sure I took a whole lot out of the meeting outside of 'okay, this is the diagnosis, this is what's going on, *I need to come up with ways* [emphasis added] like workarounds for that and these are some of the general ideas I need to do'.

The third teacher described current consultation as the “[psychologist] comes in and she does her assessments and her tests, and then we all get to sit down together with the parent and the student, and then come up with either plans or strategies or different ways that we could make it work”. At the conclusion of psychological consultation or in these situations, after the debrief meeting, Teacher 3 said, “*we [teachers] take them [interventions] back to the classroom and do whatever we can* [emphasis added]”.

In other words, Teacher 3 concurred with the other educators: there is no existing provision within the psychological consultation model to collaborate and to support intervention implementation beyond the team meeting and report. Taken together, the teachers strongly recognize the limitations of consultation, and indeed, frequently referred to it as the “dump and run model (Teacher 1)”. The teachers are on own; implementation support is largely a list of recommendations. This situation seems consistent with current literature identifying consultation within schools as “consult and hope” (Wilkinson, 2006), along with the following psychologist participants descriptions.

Current Consultation Model: Psychologists ‘Consult and Hope’. As previously described, I interviewed the teachers and psychologists to clarify their issues, i.e. the research problem. Psychologist 1 characterized the present consultation model as

'consult and hope'. "So, *I generally put down what I think* [emphasis added] is evidence based recommendations for the weaknesses that I see. *Then I hope* [emphasis added] that that's something that the teacher will be able to look at and work with.... but then *I'm not sure* [emphasis added] how much the information is used afterwards." Psychologist 2 stated the consultation model involved "just doing the outer layer rather than the inner layer." When I asked for further information regarding what these other layers were, Psychologist 2 said, "the outer layer is *giving* the information"---i.e., 'giving' the list of interventions to the teacher but not having time beyond the team meeting for further implementation supports.

Psychologist 1 concurred with Psychologist 2; she also described the team meeting as, "*That is it* [emphasis added]" for implementation supports. She detailed, "when you have the [debrief] meeting, you share it [report] with the parent,...you give a list of recommendations, some you know are just suggestions that may not work for that child, some are 'you kind of really have to do this if you want to see a change in the child'." To reiterate, the teachers and psychologists described a 'consult and hope' model at best, while teachers called it a "dump and run" model at worst, in which the teacher is left to implement the interventions on his or her own, with informal or inconsistent supports from the psychologist.

Debrief Meeting. A meeting with the family and school team occurs as a conclusion to the Assessment/Report and Meeting stage of consultation. Oddly enough, debrief

meetings may be the least helpful to teachers. Psychologist 2 described not having much time to focus on interventions during the consultation team meeting, as the parents also attend,

I think it's not having enough time to actually discuss with them [teacher] at a different time when the parents aren't there in more academic or educational setting. Because if the parents sat through that [classroom interventions] they would be like, 'Oh my gosh' - right? You can't get into the academic[s], 'Okay you can do it this way' because the poor parent will be sitting there going, 'Well why am I here' – right?

The debrief meeting necessarily prioritizes parents, but at the same time, it is one of the few supports for teachers. All the teachers described these intervention team meetings as being - of course - parent focused. Teacher 3, "when it came to the debriefing, that was when there was a number of adults in the room.... we didn't so much go through what the teacher should be doing from then on." Similarly, Teacher 1 stated debriefs are "always done with families present". She expounds upon this:

during the consultation meeting there's a lot of breaking down of it, helping the family make meaning of it, processing. It can be a lot of information so it's of course, focused on the child's parents or guardian because that's who's important. *I find that meeting isn't always what I need to know as a teacher because it's an 'everybody meeting' and the parents should be the focus* [emphasis added]. They're finding out about their son or daughter so often the interventions are hardly covered. They're [interventions] on the back page of the report but they're not really discussed...I think for families yes, they kind of want to know the interventions but that's not the biggest piece and there's so much that goes into what was assessed. By the time you get to the last page, you can see some of the families – it's hard to process. They're finding out barriers their child's going to face. Sometimes they knew this. For some parents it's brand new information but the meetings probably already taken an hour to get to the interventions. It's information overload. I think different families have different levels of interest but they're [interventions] hardly discussed"

In summary, Teacher 3 concludes, “so we don’t so much go through what the teacher should be doing.”

Of course, best practice for debrief meetings is to include parents/guardians and the student(s), but by the same token this limits time available to discuss interventions with teachers. Indeed, such meetings are not typically on intervention planning; rather they are centered around parents/students to see the nature of learning profile; in short, to understand the assessment results. Teacher 3 described it thusly,

I guess you can call it a conference, where the parent, and I believe in one case the student came as well... And they listened to the information and she [psychologist] explained it [results] both to myself, the parent and the student, so we were all kind of on the same page.

Indeed, this team may have been on the same page with respect to a description of the student’s strengths and weaknesses; however, there was no time to focus upon the classroom, nor how, in practical terms, the teacher may build upon this student’s skills and abilities. In a similar vein, Teacher 2 found “it’s [the debrief meeting is] a lot”. Also, Teacher 1 identified that meetings are sometimes

quite delayed because we’re in a building where it can be difficult to get families in for a variety of reasons...even if you know a student’s been assessed, sometimes it can take a long time before we can meet.

Further still, sometimes teachers are not even present at the debrief meeting. According to Psychologist 1, a middle person, often the Student Support Teacher (SST), attends the meeting, rather than the classroom teacher, “it’s really the SST who often takes the message from me back to the classroom teacher. We [psychologists] prefer to have the classroom teacher [in attendance], but it does not always work that way.” Psychologist 2 agreed, “ideally, it works pretty well if the classroom teacher comes to

a... meeting...but due to staffing and coverage it's sometimes hard to do it that way.”

Psychologist 1 elaborated,

I find that if you're always working through the SST then you get sometimes disjointed, like I don't know how much time they actually have to do that [debriefing with teacher], to share that information, I don't know how that's done, so if I can get the classroom teacher there [debrief meeting] it's always best.

In summary, debrief meetings usually do not focus on intervention, are sometimes postponed in relation to when the assessment actually occurred, and teachers are not always invited or present. Taken together, these data strongly indicate that collaboration with the teacher at implementation is not a priority in consultation, yet is warranted.

Psychological Report and Intervention List. As just described, teachers expressed that team meetings were generally unhelpful regarding intervention implementation. Equally concerning, teachers did not perceive the usual intervention list itself — ostensibly the outcome of assessment—as beneficial. In fact, all of the teachers felt the assessment reports were daunting, “I mean there's a lot of information in those sheets. Sometimes it is overwhelming” (Teacher 3). Teacher 1 agreed and even used the same language ‘overwhelming’,

So when I first got the report, I...kind of always *feel really overwhelm[ed]* [emphasis added]...because...you're going over it, it's a lot of data, a lot of information, trying to process okay what this means. And again just the recommendation pages are always so long and *it always just feels so overwhelming* [emphasis added] and I kind of always just think okay, how can I do this? What can I do to target you know what this student needs? It kind of feels impossible...so they're fairly lengthy lists, there's often things on there you know that I haven't heard of that... now I'm going to have to research this.

Teacher 2 said,

like I know my first year if I was asked to look at that [assessment report] and figure it out, I would have had a nervous breakdown probably...[it] is a whole bunch of acronyms and sheets of papers with results on that I don't know at all...we have this paperwork... [the report] *doesn't do me any good* [emphasis added].

Even Psychologist 1 admitted that teachers “feel they were just given the report and have to figure it [intervention implementation] out for themselves, because I think the report can be complicated and they [teachers] may not understand what they [reports] say.”

Because teachers identified both the debrief meeting *and* the report as impractical to intervention, Teacher 1’s comments should not be a surprise: “I think one of the biggest barriers is the interventions are hardly covered and then it’s like they’re [reports] just put away.”

Generally, the psychological report is filed within the student cumulative record following the debrief meeting. As noted above, Teacher 1 remarked that reports are put away, and “*stay* put away...the papers filed and forgotten.” Psychologist 1 concurred, “the report gets in the cumulative file, filed away and [*even*] lost, then at some point somebody is going to say ‘this kid is still struggling’ and all of a sudden there’s going to be another referral [for assessment].” Once these reports are in the student cumulative file, the current teacher may not find them helpful for all of these articulated reasons—not surprisingly—neither do subsequent teachers,

every year I often have students that had these assessments done, particularly if they’ve been done in the past. You never get anybody talking to you about them, they’re just something that’s just filed in the cumulative file. They may get read, they may not get read, depending on what you have time for at the start of the year (Teacher 1).

Perhaps, Teacher 1 summed it up best (albeit not a good outcome) when she said, “there is often very little to no collaborative support given with it [the report], just, ‘*here it is, you’re the teacher, now, fix the student*’ [emphasis added]!”

Follow-Up: Inconsistent and Informal Check-ins. Participants discussed debrief meetings and their limitations, as well as those of the report and the (often-appended) intervention list. The participants did say there were opportunities to ‘touch base’ after the team meeting and report debrief. Overall, such implementation supports are simply incidental. Psychologist 1 outlined the implementation supports as, “a conversation in the library”, or “incidental checking” or “we’d talk about it *quickly* [emphasis added].” Likewise, Psychologist 2 characterized the supports as hurried, “just a *quick* [emphasis added] conversation in the classroom before recess starts and after or right at the start of recess or after, sometimes after school.” These quick informal ‘check-ins’ occurred “in the staffroom having lunch” or “just in the hallway” (Teacher 1). Certainly, there was no formal process or allocated time to support implementation beyond the report and debrief meeting.

Both psychologists acknowledge these incidental follow-ups do not aid in their understanding of implementation within the context of the classroom. It is important to realize without contextual clarity implementation support is merely “surface level” interaction (Psychologist 2). To demonstrate, Psychologist 2 expanded on this point, “sometimes you’ll say, ‘yeah I understand’, but then it’s at the superficial level because you don’t know all the pieces. Well what exactly was the objective of the lesson or whatever?” Psychologist 1 further explained, “it [informal conversation] was kind of like

incidental and removed,” for example, “sometimes I’ll say, you know, there was this idea, this idea,” or the teacher may say “I’ve tried that, that, that, that and that, and it’s only been a month! Like how could you try all that in that little time?”

To sum up, implementation supports beyond the meeting and report have not been prioritized. There is no allocation of time, only fleeting moments to connect.

Psychologist 1 recapped that the current supports for implementation have “just so many challenges.”

Conclusion. This research grew from participants’ combined experiences of psychological consultation with the desire to improve practice. The current incidental supports, along with the debrief meeting and report provided teachers “a general understanding”, “a starting point” and “a couple of ideas...or bits and pieces.” At the same time, teachers continued to feel unsupported implementing interventions. A research plan to fill the gap of collaborative supports at the implementation stage is what participants desired. To summarize, Psychologist 2 connected the research plan to what proved to be her biggest barrier to psychological consultation in schools,

I think that the concern I have is that we often come up with some really great ideas and we don’t have the time to go back and provide service to support the students. That would be the biggest concern... I think that would be a really big thing [implementation supports] but unfortunately you don’t always get to go back ...it’s just how it is.”

The current ‘**dump and run**’ or ‘**consult and hope**’ model of consultation concerned the participants, “even though we make a lot of recommendations, I honestly don’t know how many of those are really being looked at” (Psychologist 1). She believed it would be important to be able to go back and to provide supports to teachers and to students.

Psychologist 1 described the potential practice improvements from this study “making sure that those things [interventions supports] happen and making sure that there are continual meetings to follow up and to support – Did it work? Great. If not, why not? Where was the breakdown, what do we need to do differently?”

As mentioned above, teachers and psychologists identified common areas of weaknesses in current consultation supports. The data collected from the initial interviews in March confirmed the need for this research, firstly, and secondly, a plan to move forward. Then, in April, the classroom teacher/psychologist partners worked through an ecological approach to the intervention implementation stage of consultation - the research actions - such deliberations were audiotaped. Journaling and observation data was compiled during the curricular unit teaching between May and June and final interviews were conducted between June and September. Student work samples, psychological report interventions sections and curricular unit plans were also analyzed as artifacts.

Four further themes delineated from the research data are presented next. These respond to the three research questions:

1. How do the teachers and psychologist participants experience and interpret collaboration in the intervention phase of psychological consultation?
2. Within extended consultation, which classroom/teacher or micro-level factors were discussed? And how did such discussions lead to the embedding of particular interventions into a curricular unit of study?

3. How did students respond to the interventions with collaboration in the implementation phase?

Theme Two: Completely Collaborative Consultation

Collaboration within ecological consultation was the ‘action’ of this dissertation. Each teacher/psychologist pair and I spent a half-day to review the teachers’ pre-planned curricular unit and to deliberate on potential interventions to embed within it. Without exception, participants were overwhelmingly optimistic, in contrast to the previously described challenges of implementation. Teachers and psychologists commented, “the process was awesome,” and “very positive.” Participants also described the collaboration as very effective “it helped a lot...big time!” Teacher 2 encapsulated his experience as, “*it was like ‘I did my job’* [emphasis added].” Collaboration, beyond the usual team meeting and report, was crucial to the positive participant experiences. Teacher 1 described it as “a good way to learn more about the process [implementation] and find out how *to really make use of those reports* [emphasis added] to benefit students instead of...just being a paper that sits in a file.”

Teacher participants emphasized **collaborative planning was an essential component** to consultation. Teacher 3 said, “it was really valuable to plan.” Teacher 1 said, “to do that special planning is huge... that was I think the best part - that was great. It’s something I’ve never been given before...it’s important to have those discussions.” Indeed, collaborative planning was so salient that the detailed data warranted three sub-themes: authentic collaboration and relationship building; embedded professional development; and empowering experience.

Sub-Theme 1: Authentic Collaboration and Relationship Building. Psychologist

1 described how collaboration directly relates to the teacher's classroom and students,

to actually sit down with the teacher and look at curriculum and how the recommendations could be embedded...I think it helps bring sort of an authentic feel to what we do, like it's not just an assessment and a report, *it's actually a tool that can be used to help teachers plan* [emphasis added].

Not only is collaboration immediately relevant for teachers, it helped to build a better understanding of the role of the psychologist working in schools. Teacher 2 described that previously, the psychologist was "another strange person who's always here [in the hallway] that I don't know." He suggested, "if what happened [embedded planning] was their job, then they [the psychologist] wouldn't just be that person that comes into your building and does things."

In this way, time for collaboration fosters professional partnerships, and as Psychologist 2 indicated such collaboration created impetus for increased informal exchanges, and not just strangers passing in the hallways,

just having those relationships to build trust is important. So the more opportunities we have to sit down and talk with each and get to know each other is going to, in the end, generate more questions and have people be more observant about the changes that are happening in the child. So once you have the relationship you will get a little bit more of that incidental follow up, like teachers will stop you in the hall and say, 'Hey, wow, I saw a great difference in this kid since I tried this', and I'll go, 'Right on!' So, the collaborative planning potentially could develop stronger relationships.

Psychologist 2 maintained that this research also enhanced these informal conversations, and that follow-up was no longer incidental and peripheral. Rather, discussions were no longer on the surface and were more frequent, more purposeful, and "more effective",

well then like when she [teacher] said, 'Oh I tried this and that worked', well then I understood what she was talking about because we had sat down and did the unit planning right? ... Right and it's not like - Oh I think I understand what's going on right? - Because you've experienced the same discussion so then you can elaborate on it...and just even being in the school, she would say, 'Hey I tried this and it worked really well' so then we did more [targeted] collaboration just in the hallway. That was nifty.

Psychologist 1 described similar effects of increased and enhanced follow-up while within the classroom as well,

someone who is willing to give the time to listen and help implement, changes for that child - I think it just shows that we are willing to support. Through that collaborative process, *my relationship with [Teacher 2] grew because we sat and did that talking, right*. Then, when I went in his classroom he knew why I was there, to watch that kid, and now we are having conversations... it's like he [Teacher 2] is more engaged, he's good and he was like - thank-you for your support. So I think when you have that collaborative planning it builds that relationship for open conversation.

Furthermore, Psychologist 1 thought that "showing I was invested enough in that child, to take the time to sit and to collaboratively plan with them [teachers], made them feel like it [implementation] was really important."

To summarize, relationship building transpired for "the more time you spend with somebody and the more you work together, the more you get to know them" (Teacher 3). According to participants, authentic ecological consultation then involves learning from one another, trusting each other, and tends to work best when focused upon a an immediate and meaningful concern. Further, Teacher 3 suggests that investing in collaboration is investing in learning; it is "you can learn so much from other people just from running ideas by them too. So it [embedded planning] is so valuable!"

Sub-Theme 2: Embedded Professional Development. Participants expressed that the kinds of collaboration, mentioned above, generated new ideas and ultimately was professional development. Such continuing education occurred for both teachers and psychologists, “I think being able to talk and just being able to do it [collaborate] without pressure *allowed for more growth, on her part and my part* [emphasis added] (Psychologist 2).” Teacher 3 explained that the embedded planning “makes you more knowledgeable”, and that “it was a huge learning opportunity” (Teacher 2). As Teacher 1 described, “you need to have that discussion with the person [psychologist] that knows more than you about what a student’s abilities and disabilities are.” Teacher 3 affirmed, “it [collaborative consultation] was really good to connect and to feed off of one another.”

Although authentic collaboration (as defined by participants) tended to revolve around immediate and practical concerns, participants felt professional development extended beyond these immediate circumstances. Such embedded professional development created opportunities to learn to meet diverse needs beyond a targeted student, and beyond one particular unit of study. Teacher 1 confirmed expanding interventions with other students, and even into other content areas: “*it builds your toolkit* [emphasis added],”

to really have that talking piece - like this project allowed - to go through it [the unit] and make a plan and – because even doing the one plan helped me structure other things. You know like talking through the reading - it kind of helped me see the essence of okay which of these [interventions] were important, which of them are going to be most impactful, then I can apply that to science, I can apply it to social studies... *It’s almost like you know a rock in the water that ripples out* [emphasis added] because you know okay, a lot of those strategies are very similar across subject areas.

‘Okay that [intervention] worked here, now I can try it, I’ve got the confidence to try it somewhere else.’ (Teacher1)

Teacher 2 also commented generalizing ideas and strategies to other students and to other contexts and subjects, “I feel as though these adaptations that are being - that were made - would be effective for a number of different people and for a number of different reasons.” Another participant, Psychologist 1 said, “the idea of embedding the interventions in the plan...I think if you do that once with guidance to see how they can relate, then, you can do it with the next unit plan” or an ease of application of interventions to another situation. Teacher 3 summarized collaboration as also important for her own growth, “*I just think of it as a professional development experience, and it’s just, you know, taking my teaching one step further [emphasis added]...you know what though, even though they [interventions] were specific to that unit, a lot of those ideas I could adapt to other subjects too.*”

Psychologist 1 claimed that now professionally, she had a better understanding of the student’s response to the recommended interventions, “the collaborative planning gave me confidence in that what I was recommending did work. So when I saw the final product [artifact of student work] it showed me that, yes, this does work, this is a good strategy.” Both psychologists described this as professional development in that they now had the benefit of increased understanding, of knowing what interventions were embedded and whether the student response was positive. These experiences may assist the psychologists in future consultations and in what is recommended again,

so I was just really excited that somebody actually tried that and it actually really worked well, because I myself personally hadn’t used that one [fluency program] so I really didn’t know how well it would work. So

that's good, I'm excited, because I will continue recommending that, I know that it actually works...what the teacher noticed is that the kids became confident readers, they became motivated to read, because they were feeling success from that particular program, and *I was just like woo-hoo, I've got something right* [emphasis added] (Psychologist 1).

Further to this, there may also be interventions that Psychologist 1 does not recommend in the future,

the one recommendation to have him [Student 2] learn to type, he was very frustrated with it; he does not like to type. So now I want to go back and say, okay, if this isn't working for him what can we do?...And then yeah we can think about making the recommendation for him in the future that he just skip the copying stage - that's just too hard for him.... so that's probably not a good recommendation to use next time.

The participants confirmed that the collaboration to embed interventions was particularly significant, embedded professional development. Intervention implementation is a complex process. It required collaboration to prioritize interventions to bridge the student learning gaps. The adaptations aided the education of the identified student, but the teachers also expanded implemented for other students, such as within an alike reading group and even at times, for the entire class.

The classroom teachers and the psychologists described acquiring new knowledge through the collaboration process. Psychologist 2 summarized that "this [planning] will help me know how to do things different next time with teachers". Along with knowledge, next profiled is the participants reported feelings of empowerment and affirmation from collaboration.

Sub-Theme 3: Empowering Experience. Teacher 1 noted in her journal, “[consultation] felt much more supportive – like someone else had a shared interest in the student and we were carrying the responsibility together....like an affirmation.” Through collaboration, participants felt connected and in turn, felt that they could better meet diverse student needs. Teacher 2 suggested the process was especially empowering,

I do have more confidence in myself knowing that I am capable of executing a plan that is able to aid a student with extra needs... being collaborative not only aids in the workplace environment, it helps you get through what [...has] proven to me as one of the tougher jobs that I've ever done in my life.

Interestingly, Teacher 2 was initially skeptical about the interventions that he personally selected, but collaboration encouraged him: truly, he knew what was best for his classroom,

I thought it was really strange that the ideas I brought in [collaboration] were actually really good. I was very surprised that I was able to [have input] – like, ‘this is what I want to do,’ ‘this is kind of where I see it going’... I didn’t know if I was on the right page and it [collaboration] was just really affirming. I don’t know, maybe it's me as a new teacher...but it made me feel as though I wasn’t on my own, which was huge.... So, the affirmation part was - *it was a win for me and a huge confidence boost* [emphasis added].

Teacher 2 surmised that collaboration would also be helpful to the psychologists. He stated the process can, “affirm the role of psych [psychologist]...the affirmation that their job's important.” He explained further, being a psychologist,

could be a very difficult job ...telling people what's best practice and have them throw it out the window and not do it. But just the affirmation that there are people doing things that you're suggesting and they're working! It's just got to be a good feeling.

Psychologist 1 agreed that collaborative unit planning was critical; “it gave him [the teacher] permission, I guess, to try those recommendations. Instead of worrying about just getting through the curriculum ...I think the collaborative planning gives the teacher support to try something new.”

Tellingly, Teacher 2 indicated, “I feel like understanding this process [collaborative implementation] ...could alleviate the stress on teachers and if stress is alleviated on teachers, they do a better job. *It's a nice little domino effect.*” He concluded that perhaps “the process isn’t as broken as we think. Well, it’s not broken. Clearly whatever happened is just maybe an extra conversation that worked.” Collaboration was a positive experience for all participants. Next, I present a summary of the data from the next research question, the key classroom and teacher factors that affected the selection of interventions.

Theme Three: Consultation Completely Contextualized

As already pointed out, researchers report that teachers are key to bring about changes in the environment for students (Estep, 2002; Gravois, 2012; Gutkin, 2009; Rosenfield et al., 2008). Indeed, participant responses suggested that ecological consultation – an approach that takes seriously the context in which consultation occurs – was a required addition to consultation. For these reasons, the teachers were encouraged to discuss ecological variables influencing implementation within in the context of the classroom. From interviews, journals, and collaborative planning data, three critical contextual factors emerged as sub-themes: 1) personal teaching experiences and style; 2) preference for inclusive approaches; and 3) classroom dynamics and student characteristics. What

follows is an expansion of these three ecological dimensions, these “pieces in a puzzle” (Teacher 3), and their importance to implementation.

Sub-Theme 1: Teaching Experiences and Style. Psychologist 1 was well aware of the need to seriously engage with teachers as unique professionals, “the tricky part is making recommendations that go with the personality of the teacher *and* [emphasis added] their teaching style...whatever I’m recommending has to fit that mould [teacher variables] or it’s not going to happen, no matter how much we want it to happen, it’s not going to happen.” Teacher 1 supported this assertion, “interventions have to take into account a teacher’s style or they [teachers] won’t do them - teachers will just ignore them.” In fact, Teacher 1 defines intervention as something that has to “fit with your teaching style.” She emphasized the importance of an ecological approach to intervention: “everybody has a different teaching style... what you do as a teacher definitely impacts which interventions you gravitate towards... *it’s important to have those discussions* [emphasis added].”

Teacher experiences and styles can be shaped through in-service insights, as Psychologist 2 suggests, “the number of teaching years...or where someone is in their teaching career”...can be a factor [affecting implementation].” Teacher 2 agreed; “you get used to it [implementation] the more you do it,...and you often go back to things you’ve tried before; you might just start with what you’ve tried and see if that works?” Further to this, participants also described pre-service education as limited implementation support. “I have one class, I believe, we took in university, and it was very fact based, not a lot of the practical interventions.” Teacher 2 claims, “they don’t

tell you how to do any of these things in university! In education, I find – it is like here’s a book, make it work! And, there is no second book!!” Another key aspect of the classroom context, highlighted in this research, was an inclusive approach, which is the next sub-theme.

Sub-Theme 2: Inclusive Practice. All the teachers advocated that inclusion and inclusive practices, were a priority. Teacher 1 firmly emphasized that she did not believe in individual/segregated interventions, “and sometimes I do conclude that just ‘no I’m not going there, I won’t do that in my room’, for – you know sometimes I just generally believe it’s not right for that student or right for my students as a whole.” Teacher 2 stressed,

so, creating those individual programs or specialized programs for one, two or three children really creates a barrier put up between themselves and everybody else. So, I’m a firm believer in everybody does the same stuff *to some degree* [emphasis added].

She preferred inclusive practice and explained that, “I tried to pick the best fit for everyone” or as Psychologist 1 suggested, “it [intervention] needs to be something...that you can do within the whole group, like it doesn’t have to be the whole group gets it, but it has to be something you can do within the whole group.” Teacher 1 added,

the more general ones [interventions] I find easier to implement... I tend to gravitate towards interventions that are universal design, I tend to be a very universal design [implementer], so I tend to look for things like, ‘Okay how can this be adapted to fit everybody’... even sometimes things that I know are meant to be specific. I always ask myself, ‘Okay, how can I implement this with everybody?’ I really do believe that if it benefits one, it will benefit all... I also gravitate towards the interventions that are more about adapting your teaching technique and how you present information and the supports.

As teacher 1 firmly emphasized that she did not believe in individual/segregated interventions, Psychologist 1 confirmed inclusion as important to teachers. She expressed this key ecological factor as, “I think it was important to him [teacher] that he do something inclusive that all the kids would try.”

The school psychologists used a RTI (Response to Intervention) or a multi-tiered style when listing interventions within their reports. There was significant deliberation within the collaboration, on the intent and the meaning of RTI. Intervention presented as a series of tiers seemed inconsistent with teachers’ inclusive beliefs and practices within their classrooms. Teacher 1 described the current RTI tiered intervention list within the psychological report,

we receive that [report] and our intervention process lately has been set out as a red, yellow, green. I guess they [psychologists] start with green first. [The green level is] universal design - things for everybody. The yellow level then that you could do with some targeted those middle needs and then the red, what can you do for the real weaknesses – and this is probably going to be done individually.

Psychologist 2 elaborated on the RTI tiered intervention list to further explain the intent,

Levels one, two and three...well at the green level [one] strategies are the same that we use for all students in the classroom – yet, because each person is unique so we always adjust things, so green level can be done for anybody. Yellow level means you’re doing either small group or individual, red level it would just be for the student in particular. So, level two would be more small group or student focus and red levels is specifically for the student.

In summary, inclusive interventions were key variables for teacher implementation; such strategies would typically be located within the classroom-based level (often depicted within a green zone) of a RTI list. Participants expressed some concerns with utilizing tiered RTIs in this dissertation research. Criticisms revolved

around intent and implementation of the next two tiers: the targeted and intensive - yellow and red level - interventions. Psychologist 2 reasoned that the classroom-based interventions are easier for teachers to understand, and that educators do not always have the experience of implementing more intensive interventions,

everybody understands green level strategies right? It's when you get to the yellow level or tier two and tier three strategies that I don't think people understand the complexity or the flexibility of changing the information that you're delivering to meet their [student] needs...again the insight of understanding that green level is easy, yellow and red level is out of people's experience or understanding what is actually being applied.

During the collaborative planning process, Teacher 3 questioned the necessity of implementing targeted and intensive leveled interventions, "so, are you wanting me to do more things specifically for Student B? Or should I - because I feel like I do a lot of adapting for the entire class, right, and try to make it work for everybody and have a variety of different types of assignments?"

The participants queried the tiered intervention practice, as there seemed to be a discrepancy between psychologists and teachers regarding individualized instruction. For example, the psychologist believed that the teachers were keen on the tiered list and that it helped them to prioritize interventions,

I think the teachers like the fact that it's separated [tiered interventions] because they know that... red level really means that it needs to be done fast and needs to be a priority and yellow level is more specific to the student and green level can help them help the students as well as other students (Psychologist 2).

However, from the teacher's perspective, the importance of the tiered interventions conflicted with those of the psychologist, perhaps due to the realities within the context of the classroom,

you just look at that list [intervention] and you go – you don't even – because the red level interventions aren't necessarily the more effective than the green level. And I know working with another student one of the most effective interventions was actually the simplest to apply, it was seating him with a buddy that he could get reminders of instructions from. Incredibly powerful, probably would have gotten lost in a green, yellow, red list (Teacher 1).

More specifically, the teachers clearly articulated difficulties implementing individual interventions. Teacher 3 reinforced the notion that utilizing red level interventions can be challenging, "so sometimes working with one student individually, working on a separate project, there might be other kids doing adapted work as well. It just does become a lot so – and that's kind of always the challenge I guess." Teacher 1 concurred, "I find it's never as simple as they [psychologists] can make it seem, especially with those intensive red level interventions." Teacher 2 described a balancing act to implement individual interventions,

And some days it honestly feels as though in order to meet some needs you're not meeting the others and where that line meets you just never know. That's my big battle, like when you look at it individually, if you want I can come up with an awesome lesson plan it's for every single person – but there's no way I can come up with enough support and staffing to make sure there's eyes on all the time and make sure somebody doesn't get hit with something.

All three participating teachers agreed that the lack of staffing within the classroom makes it almost unmanageable to carry out red level (individualized) interventions, Teacher 1 expressed,

there are some [red level interventions] that I do look at but they're not feasible because of the lack of bodies, you know, they need an assistant to do something with them to get the most out of it and unfortunately... he [student] would need that one on one and I don't know that anybody has time for that...there's just nobody to sit with that child and do that one on one.

Teacher 2 continued, "like, hands-on or one-on-one attention [interventions], well, everybody knows one-on-one attention works; we can't afford 300 teachers at one school." Finally, Teacher 3 reflected in a journal entry that, "the problem areas of the project were - I'll be honest - simply that of having enough time during our classroom routines for special projects and presentations [red level interventions], and being able to stretch myself to assist 31 kids and manage special projects." Not only were teachers concerned about the targeted or individual interventions so too was Psychologist 2,

it's just understanding that the complexity of meeting everyone's needs and being able to apply it and make it useful to the student because you got 20-30 kids in the classroom it's a big management piece.

When reviewing the yellow or red level interventions in the psychological report, Teacher 1 deduced, "I've never heard of this program, I don't know how to do that, *where's the people to implement some of these things* [emphasis added]?" Psychologist 1 also mentioned challenges with tiered interventions and suggested a RTI process should not stop with the child or the classroom but a tiered model requires an integrated process and supports, "*it has to be the child, the classroom and it has to be tied into the whole school, and even bigger would be the whole division* [emphasis added]." Perhaps for all the reasons above, participants highlighted a preference for universally designed methods to implementation. They acknowledged the need for curricular interventions, but preferred an inclusive model. Teachers also argued that their students would also prefer

an inclusive approach, based on their knowledge of the individual students and the classroom dynamics.

Sub-Theme 3: Classroom Dynamics and Student Characteristics. Every teacher felt that even the students themselves do not necessarily ‘buy into’ individual/segregated interventions because they want to be like those around them. “It’s just like they [psychologists] have to take into account the child’s style because the child won’t buy in either...but the buy in from the kids is so huge (Teacher 1).” Indeed, the teachers and psychologists noted that the students in this dissertation wanted, “to do what everybody was doing.” Teacher 1 concurred, “that’s important too that he [student] gets to do with whatever with the class, as long as he’s able.” Furthermore, Psychologist 1 commented, “sometimes they [teachers] go with what motivates the student, like what the student is motivated with.” Also, as one might expect, participants indicated that interventions need to be appropriate for the grade of the student and classroom dynamics. Teacher 2 explained, “with the nature of my classroom, I tried to pick the best fit for everyone.” It was stressed by Teacher 1 that, intervention “needs to fit within what’s being done [classroom context], what works for the kid.”

Teacher 1 expressed that inclusive interventions were important as her student was older, in Grade 4, “yeah as they’re older it can be harder, particularly I think students that are being assessed sometimes already have some negative self-talk or they’re more self-conscious so they’ve already withdrawn a bit from school, so it’s finding that way.” Teacher 2 agreed that age and grade are important ecological factors to consider for implementation. At the Grade 8 level, Teacher 2 indicated it was especially important,

“not to single out kids.” He described the classroom context as difficult and dynamic. He felt his class was already divided and did not want to add individual/segregated interventions into this situation. “I have a very split classroom, it's divided...by ability. With the nature of my classroom, I tried to pick the best fit for everyone.” Teacher 3 confirmed interventions can be different as students grow, “because often times when they [students] grow, they change so – year after year, things are just different.” Teacher 3 expanded on social validity as, “he [student] just wanted to do what the class was doing.” She believed, “he would want to do what everybody else was doing because sometimes you just don’t want to feel different.” Teacher 1 concludes, “*[interventions] are never a one size fits all but yeah, that’s where the discussions [collaboration] I think are good for that [emphasis added].*”

As discussed, the recommended interventions list within the psychological report was not helpful for these classroom teachers. As well, the tiered approach is not clear to the classroom teachers nor the psychologists within this research. In the collaboration process, the previously highlighted classroom and teacher variables were part of the deliberations when selecting interventions to embed into the curricular plans. Next, the deliberations and ultimate selection of interventions had a positive impact on the student academic progress.

Theme Four: Consultation, Collaboration and Completely Positive Student Outcomes

The research data analysis indicated that all the students successfully met the outcomes of the curricular unit. This is an impressive outcome indeed. The positive

student results were validated by various data sources: student artifacts, classroom observations, teacher evaluation, and anecdotal comments from other teachers in the school or from parents at home. This data connects to the third research question describing how the students responded to the embedded interventions. This section begins with the broad positive responses from the participants.

“I thought it was a really good collaboration, *it was successful* [emphasis added],” Teacher 1 reflected on the research. All participants expressed that each of the interventions worked well for the students. Teacher 2 expanded that, “I really enjoyed the process and I really benefited from it. I like to think the student benefited from it...because you were affirmed, that that [intervention] was what to do, so you kind of felt like ‘let’s do it’ and *it worked out* [emphasis added].” Teacher 3 noted similar benefits, “of course he [student] did well because they [interventions] were just planned so well and suited for him.” Teacher 1 also described positive student response to the embedded interventions, “*so I think we did get more success* [emphasis added] and definitely the plan we had come up with together in the reading...I think we saw more gains, more engagement because I was mindful of the needs and the recommendations.” In conclusion, Psychologist 1 described, “I liked being involved in the project because I got to do the collaborative planning, which I usually don’t do, and I think that we should do more of [that], because I think with both of them [students] we saw *positive results* [emphasis added]. The kids were happier, they were engaged, they completed their work...I’ve seen a lot of improvement in the particular student and he’s shown growth in many areas.”

Each of the three students identified for this research project had specific positive outcomes from the interventions embedded within the curricular plan. The data, to determine positive student responses, was different for each individual student as listed in Table 17. Participant responses are reported for each student, to provide further clarity on the measures of success.

Professional Pseudonym	Student Pseudonym	Grade	Subject	Embedded Interventions	School
Teacher 1	Student J	4	Reading	-intensive reading skills instruction (letters and sounds) -oral stories to listen and to respond to with high interest and at grade level	School A
Teacher 2	Student C	8	Writing	-chunking of steps -model essay writing example -visual organizer to scribe ideas	School A
Teacher 3	Student L	7	Science	-collaborative peer groups -individual peer support -connect new material to current experiences and knowledge of farming	School B

Table 17. Individual Student Subject and Interventions Summary.

Student J (Teacher 1). Evidence of success for Student J was compiled from Teacher 1 interview data, researcher and teacher journal notes, parent comments and school staff comments. Teacher 1 started with “I just saw more engagement from him...a big part of his goal was just to be engaged and become involved and then work from

there...but he's really, like, actually willing to engage." Teacher 1 described Student J as committed to the learning plans, intensive reading skills instruction and oral grade level story with high interest. In her journal, this teacher recorded that her student was participating in the intensive, small group reading skills instruction.

He has engaged in both games that I have introduced to him... He is also engaging in the hands-on spelling strategies. Student J surprised me by coming to the table and engaging right away at the next meeting... He responded very well to choral reading...He did well at decoding using the picture and text for cues.

Teacher 1 also discussed the audio book intervention as a very successful intervention for the student, "he did really well with the audio book that we had suggested – I had picked." She also elaborated in her research journal, "over the past few weeks, I've been implementing the plan we came up with. Student J is very keen on the audiobook I have downloaded for him. He looks forward to listening to it every day and it has solved the problem of him doing nothing during his independent reading and writing blocks." She expressed Student J was, "really engaged in getting headphones and sitting at my computer [audio book reading time]." Teacher 1 also described that his commitment to the audio book also aided in his overall interest in reading "he's actually even willingly reading, inviting somebody to read with him...he started to, 'Can I ask a peer or an EA to read with me', which is good too. But the audio book really worked, if we could get him to continue, you know."

There were other staff, and even family members, expressing student success as well. Teacher 1 cited, "...other colleagues have commented that he's in the classroom...he smiles in the morning, like he comes in smiling, you can tell he's relaxed, he's happy to

be in school.” And from the family perspective, “they’re really pleased with how he’s doing. Yeah they’re quite happy that he’s in the room.”

Student C (Teacher 2). Student 2, like Student J, met the curricular outcomes for the unit. Evidence of success for Student C was compiled from Teacher 2 interview data, psychologist interview data, student feedback, and artifact work samples. Psychologist 1 indicated that,

I think he [teacher] found it successful. I haven’t really followed up with him to ask him if he did, but he seems quite proud of the end product...And then again with the collaborative process we did, to work on the essay writing, I think [teacher] was pleased with the success he saw from that student.

The teacher confirmed that Student C had success from the curricular plan with the embedded interventions. Teacher 2 provided evidence from the student work, the student comments and his demeanor in the classroom.

In terms of his [Student C] individual success with this assignment, I would say he did very well...he produced a quality piece [of work]... and he was proud of the learning he was able to do... But I mean he was referred because he wasn’t ready [to meet curricular outcomes], so the fact that he produced a quality piece shows that it must have made a difference, right...that is for so much more of an accomplishment than what it could have been [without collaboration]. Or much more work than I would typically see [from Student C].

Student C also revealed to the teacher that “this organizer really made his essay easy.” Teacher 2 agreed and responded that “it [intervention] worked really well for him and that in class, “well, just that he’s happier.”

Student L (Teacher 3). Evidence of success for Student L was compiled from Teacher 3 interview data, psychologist interview data, Teacher 3 journal notes, psychologist journal notes, researcher journal notes, and anecdotal feedback from parents. Teacher 3 journal notes provide a succinct summary of the student response to the embedded interventions,

The student responded well to the adaptations - that allowed him to speak to what he knows and what he cares about....Also, another highlight of the programming we developed for him was that he was able to create various hands-on projects that aligned with the current curriculum. So when we were able to connect it to something that he already knew a lot about, he was that much more confident. Then, we saw so much of a growth in terms of his oral communication. The [psychologist] ...said, "I don't think I've ever heard him talk that much." And it was because of that connection to what he knew already... So he was really, really involved with his farm and the acreage ... And then the way that I saw how much it meant to him to have those specific projects [farm animals video assignment; farm soil samples activity] made it so worthwhile. It was just right up his alley. And then when you're enjoying something, you learn.

Psychologist 2 also summarized her understanding of the student success as,

There was that connection there that was more meaningful to him. That helped him grow and to communicate more which is I guess kind of what we're trying to work towards. I have worked with this student for over four years and I have never seen him verbalize that much information for that long. I have never seen this student in the 4-6 years --I can't remember how long I worked with him --talk this long and talk but actually can explain and know what he was talking about and apply it to his everyday living. For him to be up there [presenting to class] and confident and for a peer to help him and they did the demonstration. He looked like a leader. He was able to feel confident about himself and he had learned something. I was pretty impressed actually. His face was absolutely glowing during the presentation - since he loved it so much, and it tied into science curriculum... But what I saw was his demeanor and the happiness and being able to share. That was not typical for him to talk that long. That's even amazing because it's usually one word answers but he had practiced it and he delivered it. He didn't have to read it word for word. He knew it and that was pretty key.

I also commented in my researcher journal that while in the classroom for the second visit, “it also appeared during the observation that student was comfortable and proud of what he did. He gave appropriate eye contact and smiled.” Teacher 3 confirmed, “I did get a lot of positive feedback from her [mom]. As well, Psychologist 2 noted in her journal that, “Told her [mom] how delighted I was to see the experiment [intervention] and how well it went... well mom is quite delighted because I talked to her.”

Psychologist 1 summarized the collaboration as an opportunity to build authentic relationships, grow professionally, and enhance the student outcomes,

just having those relationships to build trust is important, so the more opportunities we have to sit down and talk with each other and get to know each other is going to, in the end, I think, make more results and generate more questions and have people more observant about the changes that are happening in the child.

Overall, the participants described the collaboration to support the intervention implementation stage of psychological consultation as helpful, for both themselves and for the students. All participants also concurred that without the collaboration to embed interventions within the curricular unit, the plan would not have been as effective.

Theme Five: Not Without Collaboration

Through the planned interventions, students attained positive learning experiences, they performed better, and all the teacher and psychologist participants emphasized that the encouraging outcomes were a direct result of the collaboration to support implementation. As Teacher 1 and Psychologist 1 explained, the plan we developed together “definitely [influenced] the student reading...so I think we did get more success...and we *come up with probably a completely different plan than I might have on*

my own” [emphasis added]. Further to this, “*without the planning* [emphasis added] I don’t think you would have got the same quality of work [from the student]” or that the teacher “may have gone off in a completely different way” (Psychologist 1).

To be clear, interventions that emanated from teacher-psychologist co-planning seemed to be interventions that really would not have happened otherwise; and had not happened up to this point. It would appear that psychologists assumed that teachers understood their recommendations; it would also appear that teachers assumed that psychologists understood the exigencies of their classroom to implement such recommendations; but significantly, until these professionals were in the same room and on the same page, interventions were unsuccessful. This was news for the teachers and psychologists; this was truly an ‘ah-ha moment’; each participant said so. Psychologist 2 agreed that it was “an eye-opening experience....and it’s just making the time to make it effective,” as such collaborative interventions were successful.

The teachers and psychologists described salient details for the successful collaboration; to begin with, they identified curricular priorities for students, which, of course, then, influenced the intervention choices and strategies. It seems that these professional dialogues and affirmations were pivotal to the students’ success as it supported two key viewpoints in coming together: the curriculum and the interventions.

Curricular Priorities. First, the planning process began with the teacher describing where the student learning was breaking down in the curriculum. Each teacher described a need to bridge the student learning between current functioning and potential achievement. Psychologist 1 described, “the teacher help[ed] us identify where the child

isn't accessing curriculum" or, "where do you see the biggest problem with this child?"

This starting point helped to focus the conversation on the student needs and then "to figure out how the report [recommendations] would fit into the curriculum (Psychologist 1).

Much of the planning revolved around ensuring the interventions aligned with best practices from current literature, along with the school division processes. Teacher 1 revealed the complexity of prioritizing students' curricular needs through many open and honest questions,

because I still see...gaps [in student learning]. There's times where I'm completely stuck and some big questions I'd like to discuss [with psychologist]:

How does it [individual support] work in this system?

I just don't know if it's ever possible to catch students up in that way. How do we do that? How do we get these kids the extra time they need to master these? Where are we pulling from? The give and the take...

and then there's times of course where it's [student learning difficulties] [are] just a big barrier - we're not getting anywhere, particularly I'm find with reading. What's realistic? How much can they do? Where do we go from here? How hard to we push phonics or at this point are we looking at functional skills and how they function with being very literate in life? *Those are the [questions] - I think I could learn a lot from the ed psych.* [emphasis added].

Interventions Selection. After the clarifying the curricular questions, the intervention priorities in the collaborative planning revolved around three main ideas: (1) re-teaching skills; (2) adapted learning supports, and (3) individualizing instruction.

Re-Teaching Skills. Teacher 1 had described Student A as disconnected to his learning and therefore, had missed learning opportunities for the past few years. The

embedded planning then prioritized student engagement to motivate the student through re-teaching to learn to read. For Teacher 1, the collaboration guided the teacher through selecting the interventions to meet the student needs,

having [Psychologist 1] there, who is the expert [assessing student needs], to guide me to - what's going to be most impactful - and we chose to focus on the reading. It [collaboration] helped me see ... to go simpler [and] helped to make sure I was on the right path. And *we ended up coming up with something that ended up being very successful* [emphasis added]...I think we got way more success with that game [letter recognition bingo]. Before, I probably would just gone right to reading [without re-teaching]...that game piece was really key.

Psychologist 1 described how fittingly the deliberation of interventions between her and Teacher 1 altered the curricular unit,

I think she [Teacher 1] would have continued to try just going forward with whatever she's used before and maybe not understood that disconnect, like where he was breaking down in the reading. *The collaborative planning helped her choose something that would work for her and the student* [emphasis added] to motivate him to at least pay attention...because I mean, he's had how many years instruction and he hasn't bought into any of it.

Collaboration for this pair had focused on teaching skills the child had not mastered, but needed to read independently at grade level. Next, the conversations focused on the adaptive dimension and on making the appropriate adjustments to support the student's achievement.

Adapted Learning Supports. Changes to the resources and instruction were the adjustments made in response to the student's strengths and needs. Psychologist 1 credited collaboration in adapting supports to supplement the student learning, "but I think that without the planning I don't think you would have got the same quality of information from him [student]." Furthermore, and interesting to note, Psychologist 1

was uncertain the teacher would have even attempted to teach these skills without the co-planning,

so especially the Grade 8 student who did the essay writing, he [Teacher 2] may not have even tackled essay writing, in a sense, or he may have done it completely differently, where this kind of allowed him, in a sense, to use a visual organizer, to have the child go through all those steps and to teach that explicit essay writing.

Psychologist 1 believed the collaboration “gave him [Teacher 2] permission, I guess, to try those recommendations...gives the teacher support to try something new,” and that it “allowed him to try that with his whole class, not just the one student.” Yet, in the next example, it was determined that adapting the instruction and resources is not enough to meet the student needs.

Individualizing Instruction. This child needed individual projects that tied together his experiences with curricular outcomes. These ideas revolved around the student’s involvement with family farm such as collecting soil samples and making a video on animal care to bridge his lived experiences with further learning. The psychologist described that even though the red level or individual interventions were in the report, the teacher was still uncertain about implementation,

that was a shocker to me this year - to find out when I met with the teacher, that *her understanding of how to make outcomes match a student’s profile was not clear* [emphasis added] - so she [teacher] thought she was doing the best thing but didn’t realize she had the liberty to change things and to match things.

The teacher could and needed to clarify direct experiences here and that dialogue [collaborative planning] allowed her to say, Oh I can do this and still meet the curriculum’s needs? – as well as her needs as a teacher.

Psychologist 2 maintained that the interventions in previous curricular units “wasn’t quite what the student needed,”

the way she had done it [implementation] prior to the unit planning - some of the terminology or concepts were still beyond his [student’s] ability...he would’ve been learning but not being able to apply it to a different layer in himself and be able to apply it to his real world as an adult.

[After the planning], it was like, *‘Oh my gosh, he never would’ve had that experience [emphasis added] and he never would’ve transferred any of that stuff into daily living and he probably wouldn’t have talked for 2 ½ minutes in front of the class with a sheet that he didn’t have to use the whole entire time because he had practiced it and learned it and he could say it...so it was totally cool.’*

In the deliberation on the red level or individual interventions, Teacher 3 also described having a clearer understanding of how meet the student needs and to embed individualized learning into the curricular plan,

so, even to have this meeting [collaborative planning]... it's like okay it's more about life skills [red level interventions] than it is about learning and grasping every single thing because that's not going to happen, right? And up until that point because I had been teaching him already for 8 months or so or 7 months maybe by that time, I did become pretty good at adapting for him and knowing what he could and maybe something he would struggle with... you just kind of get wrapped up in everything that you have to do. *So I was always adapting and accessing but not to the point that I would have been without that extra help [emphasis added].*

Teacher 3 also confirmed that the student did well with the embedded interventions,

but we definitely saw growth during those projects for him that we wouldn’t have seen in any other type of lesson [emphasis added]...just that he was able to speak to – he was so vocal. His oral growth showed so much progress I guess just because of that [collaboration].

Teacher 3 elaborated, the discussions

gave me more of a purpose and a goal I guess, which in turn, tweaked the ideas for embedded interventions that I may not have done

otherwise... probably not to that level [individual or red level interventions] - definitely not...this definitely was to a larger degree....I was always adapting but not to that point without that extra help [collaborative planning].

Psychologist 2 described the significance of collaboration, it “was like a big ‘ah ha’ moment because [lessons that were so linked to the student] *would never have happened if we wouldn’t have had that discussion* [emphasis added] in the unit planning.”

Overall, teachers and psychologists concurred that collaboration was a very effective addition to the implementation stage of consultation. The process assisted in adapting priorities and aligning interventions for the student within the curricular unit. The psychologists suggested that taking time to carefully deliberate upon interventions necessitated thoughtful discernment about which learning goals to focus on presently that would have the most impact later in these students’ educational careers. Not surprisingly, the teachers concurred. Teacher 3 elaborated, the discussions “gave me more of a purpose and a goal I guess, which in turn, tweaked the ideas for embedded interventions that I may not have done otherwise.” Teacher 1 reflected that intervention deliberation with the psychologist “helped me clarify errors in my thinking and led me in new directions” – it was professionally affirming.

Conclusion

Five key themes emerged from the data analysis in this findings section. The data aligns with previous research indicating that barriers to implementation continue to exist for teachers and psychologists. Further to this, collaborative ecological consultation, focused on the teacher and classroom variables, is essential for improving the

intervention process. Psychologist 2 reflected on the collaboration research project as, *“it wasn’t until we sat down and did the unit planning that I realized that probably most teachers do not know how to take the recommendations and incorporate or embed”* [emphasis added]. What’s more, she also described an ecological approach to consultation as *“it makes it a way to navigate, what can you change and how would you deliver it differently to meet the [student] need.”*

Not only did collaboration support the selection of interventions from the report and the embedding into a curricular unit, it also expanded the intervention options. Teacher 2 described the deliberations actually brought in a key intervention that was not listed in the student report, *“it was an idea that wasn’t in here [psychological report] but seemed to be one of the key pieces that really made a difference and it’s a good – it’s a good practice, a good strategy.”* Consequently, this process provided professional development opportunities for both the teacher and the psychologist. The deliberation of ecological variables at the micro level had an impact on the review of the curricular unit plan and on the selection of interventions. The opportunity to embed interventions through collaboration also had a positive impact on the student learning.

These findings support the current literature and calls for an ecological approach to implementation. This research study provided a concrete example of a collaborative ecological approach to consultation. It also demonstrated that the opportunity to collaborate had a positive impact on the teacher, the psychologist and most importantly, the student. Research describes the psychological consultation process as professional problem-solving (Watkins & Hill, 2010) and utilizing an ecological approach allows for

deliberation on the ever important, teacher acceptability of the interventions (Gutkin & Curtis, 2009; Kelliher et al., 2008). In the next section, discussion, I will connect the research findings to the literature to expand on the strengths of collaboration for the participants.

Chapter Five: Discussion

The purpose of this action research study was to explore a collaborative ecological approach to psychological consultation in schools. The need arose from pilot study data of a classroom teacher's concerns with intervention implementation. Teachers within this dissertation expressed similar dilemmas in that the psychological report and debrief meeting were insufficient supports for implementation. The psychologists and teachers shared their current experiences regarding consultation and were interested in a collaborative approach. Three separate teacher-psychologist partners worked together to deliberate on interventions and embed them within a curricular unit of study. This research concluded with the reflect stage and an analysis of the findings.

Action research was an appropriate methodology for this study as it involved action to improve practice. The data collected from interviews, observations, journals, and artifacts during the research cycle provided relevant findings on ecological collaboration within the implementation stage of psychological consultation in schools. The analysis of the data connected to the research problem, research questions, and potential solutions. The data from this study suggests there are positive impacts from a collaborative ecological approach in the implementation stage of psychological consultation. Specifically, all of the study participants experienced professional development, and the students met curricular outcomes.

This discussion begins with an overview of existing barriers to psychological consultation described by all participants, which gave rise to this research project. I will then highlight gaps in the current intervention implementation stage that informed the

need for a collaborative ecological approach. Finally, I will provide considerations for maintaining this status quo. The discussion will look at the reasons this shift has not yet occurred such as: role distinction in psychology and the lack of time and support. As well, I will present a closer look at the RTI approach utilized in the school division and its effects on implementation and inclusive education.

After this, discussions concentrate on another potential impact from this research for the future role of the psychologist in schools. What happens if psychological consultation is completely contextualized? This section includes the possibilities of using Bronfenbrenner's model as a simple frame to highlight the teacher and classroom variables influencing implementation. It includes an analysis of participants opinions of embedded professional development through ecological consultation. As well, the impact of increased positive student outcomes through the collaborative planning to increase integrity and fidelity of implementation.

This chapter then concludes with implications for practice, future research projects and limitations. Advocacy at many levels to activate a movement to collaborative ecological approach is essential for psychological consultation in Saskatchewan schools. Psychologists themselves, as advocates, are critical for as Sladczek and Heath (1998) express, "future investigators need to clearly define and operationalize what is meant by consultation" and that the opportunity for psychologists "to choose its direction and this opportunity should not be ignored" (p. 12).

Incomplete Psychological Consultation

An expert, rather than a collaborative consultation model, seems to persist within schools. Documented within this dissertation and in the literature, psychologists in schools devoted the majority of their time to the first two stages of consultation, primarily focused on assessment. I would describe the implementation stage as non-existent within schools – certainly not a priority in the psychologists’ activities. In fact, the participants did not even have the awareness that implementation supports, beyond a list of interventions and debrief meeting, is a part of the consultation process. Without collaboration, the psychological consultation process is incomplete.

Participant quotes assist in demonstrating that without a collaborative approach, a lack of understanding or an incomplete consultation process is evident. In this study, the psychologists thought that the teachers should initiate a request for further support. Psychologist 1 stated that if implementation “isn’t working then they [teachers] should be consulting with us, like somebody should re-contact us and ask us, right?...kind of the teacher’s responsibility!” Psychologist 2 agreed that teachers should initiate intervention supports, in that she “always just kind of thought it’d be the teachers coming back and saying, ‘Okay this worked or this didn’t work?’” So, psychologists “wait to be kind of asked to that next stuff [implementation supports] (Psychologist 1).

Psychologist 1 described that even though she believes teachers should initiate, that most do not, “I wouldn’t discourage any classroom teacher from contacting me directly, but *they don’t seem to and I’m not sure why.*” This research demonstrated that teachers did not “even know that that was something [access further supports] I could do”

(Teacher 3). The participants really had no experiences with working together on implementation, and Psychologist 2 concluded that to “go back and do solid intervention - to see if it’s making a difference...I think it would be a really big thing but unfortunately you don’t always get to go back...it’s just how it is.” At the end of this research project Teacher 2 suggested that now, “knowing what the [psychologists] roles are, I would be more okay asking for help.” Psychologist 1 agreed with the role confusion, in that, “I think it is a process [implementation supports] that we have to teach.” For psychologists to move beyond assessment and its related activities may involve many things, including the possibility of the discipline redefining itself. I begin this discussion with what literally defines an educational psychologist.

Distinct Psychologist Role. Psychologists in Saskatchewan, as elsewhere, have the legal authority to complete psychological assessments and to make diagnoses; therefore, it should not come as a surprise that assessment practices continue to be a dominant function of this role. As Farrell (2006) argued the expertise and training to administer IQ tests has created a distinction for the role of the psychologist. Psychologist 1 concurred with this finding; she described her role as focused on assessments, which “are a big part of what I do because we as psychologists, we are the ones that have that expertise, that have that training and that’s a job that really nobody else can do. That’s a big part of what I do.”

In some ways it can be debated that assessment with all its various steps, defines what it means to be a psychologist. Stated differently, without standardized assessment, psychologists seem to have no prescribed role, and perhaps even an amorphous identity

within education. Gilman and Gabriel (2004) postulated that a barrier to intervention is a lack of clarity in the role of the psychologist and advocated for a collaborative process to introduce evidence-based interventions to the teacher. Although it is simply stated – just work with the teacher, Truscott et al. (2003) explained, collaborative consultation that prioritizes intervention acceptability can be complex (Truscott et al., 2003). Next, the difficulties with expanding role expectations for an already over-taxed field will be examined.

Time Constraints. Currently, how busy are school division personnel? Both psychologists and teachers have very demanding jobs. Psychologists in this dissertation disclosed that they have a “large caseload”. Teacher 2 concurs and reasons that, “close to 40% of my class has some kind of connection to psychologists.” Teacher 3 summarizes the role of the psychologist as “a big job.” Psychologist 1 described, “taking that time [intervention support] would definitely impact how many assessments get done”, for as Psychologist 2 tallied, she had completed “86 assessments in that school year.” Psychologists in this study tallied their assessments per year...it is unclear if this is a professional performance measure but undeniably, what gets measured is what gets done. This is unfortunate, for assessments in themselves do not always influence students learning in the classroom. This prioritizing of assessments, for what seems an under-resourced profession, leaves no time to expand their role. Both psychologists describe they do not have the time to work further with the teacher, due to the case load and the number of students that get referred. Psychologist 2 commented, “[to be able to support implementation] ...would be a really big thing but unfortunately you don’t always get to

go back...it's just how it is." Teacher 1 concurred, "psychologists don't always have time to talk to teachers, to find the reality."

Time is obviously a barrier for the psychologist, but this limitation is the same for teachers. Teachers in this study stressed that implementation supports need to be "realistic ... and efficient...you just need to know, 'okay what's the least I need to know to be effective in my classroom and how do I do it? Efficiency.'" These comments are consistent with literature in that the teachers prefer an efficient implementation process. Research suggests that psychologists need an approach to support implementation for teachers that is efficient and manageable (Frey et al., 2013; Truscott, Richardson, Cohen, Frank, & Palmeri, 2003). Scholars advise psychologist to strive to support the teacher in the shortest period of time (Bramlett et al., 2010) and not increase the load for teachers (Conoley, Conoley, & Reese, 2009). In spite of this, researchers also emphasize that it is important for the psychologists to collaborate with teachers for aligning interventions to the classroom (Forman & Zins, 2008). How do psychologists spend time with teachers, when it is so limited?

Perhaps, this is a strong statement, but certainly at the very least collaboration, as so described in this dissertation, is time-consuming. The planning took a half-day for a teacher and psychologist to deliberate and embed interventions within the unit plan. Collaboration does not, of course, abdicate assessment responsibilities, in many ways it extends them to thinking through, in concrete ways, what assessment means in the classroom, what assessment means to the teacher, what assessment means within an education unit, what assessment means with a lesson plan. It is time-consuming. So a

model in which psychologists focus on assessment and report writing with less priority on the critical later consultation stages of implementation and follow-up continues (Corkum et al., 2007; Kennedy et al., 2008) or the ‘consult and hope’ model endures (Wilkinson, 2006, pg. 434). Why are other recent initiatives to advance the role of psychology not impacting implementation? Next, I look at the attempt to advance psychological consultation utilizing a RTI model.

Response To Intervention (RTI). The psychologists in this study listed interventions within reports to align with the recent priorities in schools emphasizing a RTI model (Powers, Hagans & Busse, 2008). RTI is an initiative designed to shift educational implementation practices from a wait to fail model to an early intervention model (Gersten, Jayanthi & Dimino, 2017). For psychologists in schools, this shift aligns with inclusive education in that the teacher is the primary implementer. To say this simply - students are taught by the classroom teacher (Marrs & Little, 2014). Inclusion has moved psychological consultation away from the “assessment-for-classification” (Sullivan & Long, 2010, p. 1060) or “refer-test-place” role previously occupied (Powers, Hagans, Busse, 2008). Psychologists within this division have changed the format of the psychological report intervention list to levelled interventions, see Figure 10. Does the adoption of a RTI format really advance consultation?

Green Level Intervention	Tier One (Universal)
---------------------------------	-----------------------------

Some general classroom strategies for consideration are:

Yellow Level Intervention	Tier Two
----------------------------------	-----------------

Consider the following to support the Specific Learning Disabilities:

- Reading:
- Math:
- Writing:

Red Level Intervention	Tier Three
-------------------------------	-------------------

Currently student's academic instruction should be tailored to her or his current level of academic achievement to ensure learning continues:

Figure 10. Sample RTI Intervention List. Adapted from psychologist report template.

There were concerns with a RTI organization to the list of interventions from participants in this dissertation. This discordance seems to one of the many previous incremental steps towards inclusion for education practices. As detailed in the findings, teachers expressed a preference for a Universal Design for Learning (UDL) approach and preferred the Tier 1 level of interventions. Doolittle Wilson (2017) defines Universal Design for Learning (UDL) as “the creation and implementation of teaching methods and materials that reduce barriers in the learning environment and that allow learning goals to be achievable by all students” (n.p.). UDL as an inclusive practice adapts the curriculum for all students. Doolittle Wilson (2017) explains that interventions implemented within the classroom, even if originally designed for one individual, also assists many other students because of the variations of learning skills or backgrounds. Even though two of the teachers did implement individual-level interventions, they all described making

adjustments to all students to meet the needs a few individual students, was much more desirable and doable.

As declared above, the teachers preferred a universal design approach to implementation rather than an emphasis on separate activities for individual students. Whereas the psychologists believed interventions should be selected from all three levels, in fact, they actually emphasized the implementation from Tier 3. There was an inconsistent interpretation of the intent and the implementation process of these interventions between teacher and psychologist participants. Participant voices describe this dissonance best; Teacher 1 suggested, “we [teachers] are only to support the yellow level students [Tier 2].” She described her understanding that the Tier 3 interventions should be implemented outside of the classroom and by another professional, “often it would be the student support services teacher figuring out what he or she can do.” She argued that the Tier 3 interventions are beyond the classroom teacher’s role.

It seems the version of RTI implemented here continues to emphasize an exclusionary approach to education. Assigning individual interventions within an inclusive classroom is a mismatch for the participants. Teacher 1 believes that a paraprofessional is required to support the Tier 3 level, “there are some [interventions] I do look at, they’re not feasible because of the lack of bodies, you know, they [students] need an assistant to do something with them to get the most out of it.” The psychologists agreed with a paraprofessional model in that, “I think it comes down to - who is going to do it [implement the interventions]?” Further, Psychologist 2 discussed “when you have more

intensive needs [student] and the person [teacher] is not always clear on what that means or what that looks like...they're not going to be able to meet their [student] needs.”

The advancement of psychological consultation needs to align with inclusive practices. Marrs and Little (2014) argue that a shift from exclusionary practices can be difficult as it contradicts previous approaches to support student learning. Prior to the inclusive education movement, the implementation of interventions for students with diverse needs was the responsibility of the special education staff, professional and paraprofessional (Marrs & Little, 2014). An inclusive model of psychological service delivery is to help to support children with a wider range of diverse needs in the mainstream setting (Farrell, 2006). However, as this dissertation exposed, the Tier 3 interventions recommended by the psychologist were intended to be implemented by the teacher, within the classroom. However, the collaborative consultation exposed that there has not been transparency of the teachers' role and in this understanding, and therefore, a previous special education model of supports persists.

Actually, the individual psychological assessment itself is really an exclusionary practice. Perhaps student placement is no longer determined through an assessment but it seems, that in this study psychologists use RTI to indicate individual or separate interventions. I had commented on concerns with individual interventions while working through the collaboration “well we're talking about a lot of programs that are very separate from – curriculum.” I believe it can be very difficult for teachers to integrate a separate ‘program’ that is not clearly connected to what other students are doing – and have an inclusive approach to education. So, for me, moving to a tiered intervention list

in the psychological report is a very simplistic RTI representation implemented in the schools. There seemed to be a lack of clarity on the intent of a RTI list. Researchers argue psychologists working in schools are striving to become more consistent with inclusive practices (Farrell, 2006) and one-step is adopting a role of consultation (Dennis, 2004). They have also attempted to shift practice to a RTI model, yet, in reality, is this just an alteration to an already unhelpful assessment report?

The RTI was ambiguous to the participants and without a consistent framework of understanding, there was confusion over the individual responsibilities. The Marrs and Little (2014) study determined that RTI requires clear system wide guidelines and that without this leadership, implementation will lack support from school staff members. I think this dissertation has demonstrated that the RTI model is currently ambiguous within the school division. Yet, this lack of clarity is not unexpected, for researchers suggest RTI is still in the early stages of implementation (Marrs & Little, 2014), further to this, utilizing this approach to the intervention list within the report is also new. Consequently, the implementation of a RTI model utilized within the schools of this dissertation project is still evolving. The school, school division and province may need to assist in a shift to RTI as this continues to leave teachers unsupported in the implementation stage.

We know the teacher is key to bringing about the changes to the classroom for the student (Estep, 2002; Gravois, 2012; Gutkin, 2009; Rosenfield et al., 2008). A RTI approach to psychological consultation is currently very simplistic rather than transformational – it continues to be a work in progress in schools. Maybe RTI is a

valuable inclusive model, but supporting teachers with understanding and, of course, implementation is also needed. What if psychologists were afforded the time to shift to a collaborative ecological model in schools? This concept and its potential benefits are discussed next.

Consultation Completely Collaborative

As previously emphasized, the goal for psychological consultation in schools is to collaborate with teachers in the provision of effective instructional interventions for diverse learners (Fagan & Wise, 2007; Farrell, 2010). As Conoley and Conoley (1992) recapped, implementation and maintenance of an intervention is the most critical component of school consultation, yet, as demonstrated, psychologists are constrained by a “test’em and tell’em” approach (Bernes & Witko, 2009, p.9). They persist in emphasizing the first two stages of consultation and ‘hope’ the intervention list is beneficial for the teacher and the student. The psychologists do convey recommendations in the meeting and report, but are uncertain if they are appropriate for the context, for either the teacher to implement or for the student within that particular classroom. Psychologists in schools have responded in surveys that the highest ranking function within their role is imparting research based recommendations (Fagan & Wise, 2007; Farrell, 2010; Jordan et al., 2009; Rosenfield, 2006), yet Noell et al. (2005) argue, “simply meeting and talking about interventions was not enough to support implementation” (p. 101).

Collaborative Ecological Consultation Advantages. Ecological consultation should prioritize teacher specific needs, including personal attributes and factors related to the environment (Gutkin & Curtis, 2009; Lewthwaite, 2011) as effective intervention implementation must build upon practices already existing in the classroom (Conoley & Conoley, 1992; Kelliher et al., 2008; McDougall, Nastasi, & Chafouleas, 2005; Nastasi et al., 2000). As discussed previously, ecological theory prioritizes the interconnections between an individual and their environment (McMahon et al., 2014). An ecological shift to consultation requires the psychologists to assess an individual learning problem as a situation of instructional mismatch (Fine, 1985; Knotek, Rosenfield, Gravois, & Babinski, 2012; Meyers et al., 2012; Ysseldyke et al., 2012) and that the interventions must work for the teachers (Gutkin, 2012). Therefore, do-ability for the teacher must be taken seriously because the interventions will not happen if they are not do-able. The ecological approach emphasized in this dissertation had psychologist's work *with* teachers to understand the environment in which the interventions are to be implemented (Gutkin, 2009; Sheridan & Gutkin, 2000; Wizda, 2004), see Table 18.

Consultation Stages			
<u>Referral</u>	<u>Assessment, Report and Meeting</u>	<u>Intervention Implementation</u>	<u>Follow-up</u>
<ul style="list-style-type: none"> • Psychologist a school team member • Concerns regarding student raised by teacher or assessment data • Teacher meets with school team • Discussion of classroom interventions 	<ul style="list-style-type: none"> • Cumulative Record review • Observation in school • Discussion with family • Formal assessment (research based interventions) • School team meeting • File report 	<ul style="list-style-type: none"> • Collaboration between classroom teacher and psychologist to embed interventions within a curricular unit of study 	<ul style="list-style-type: none"> • Specific discussions • Observations and/or team meetings

Table 18: Collaborative Ecological Consultation Stages

Conoley and Conoley (1992) argued, the consultee's [teacher's] understanding and acceptance of the intervention is essential and collaborative ecological consultation is a concrete example that addressed the teachers' perspective on the do-ability of the interventions (Boxer, Musher-Eizenman, Dubow, Danner, & Heretick, 2006; Sheridan & Gutkin, 2000). Accordingly, in this study the teacher and psychologist partners deliberated on the micro factors impeding or enhancing implementation. The teacher identified which interventions fit best with their beliefs and classroom context following a brief review of the psychological report. The two professionals then worked collaboratively to embed the selected interventions within a curricular unit. The main benefits of shifting to a collaborative ecological approach to consultation are: working

through micro-level factors, embedded professional development, and implementation integrity and fidelity. Each of these main effects are discussed next.

Micro-Level Factors. The literature asserts the following teacher centered variables are considered key to an ecological approach: (a) the skills to implement the interventions correctly; (b) perceptions of their ability to implement the interventions; (c) their acceptance of the interventions; (d) the alignment of the interventions with their philosophy of teaching; (d) implementation of interventions viewed as a requirement of their role; and, (e) fitting into the ecology without causing significant disruptions (Musti-Rao, Hawkins, & Tan, 2011; Sheridan and Gutkin, 2000). Collaboration between teachers and psychologists is a requisite process to an ecological approach. The teachers in this study detailed many micro factors influencing intervention implementation within the collaboration time. The most frequent micro level factors deliberated upon were: (1) teacher experience and style; and, (2) classroom composition and dynamics.

Teaching Experience and Style Matters. Participants in this research suggested that experience and teaching style impact implementation. This micro factor as described by participants encompasses the teacher personality, comfort level with interventions, and years of experience along with current classroom procedures. I believe Teacher 1 summarized this best as, “I think for sure that it [intervention selection] is going to come down, somewhat, to the personality of the teacher.” And, accommodating a match between teacher and intervention is not as simple as presenting an intervention list; this stage of consultation is complex, it requires time and energy. Psychologist 1 suggested that this is the “the tricky part, and that one “can’t change a teacher’s personality”, so the

interventions have to adjust. Thus, a cookie cutter approach of compiling effective interventions is not enough; the teacher needs to be collaboratively involved.

Another micro level factor influencing implementation is the experiences teachers have had during their career. Collaboration ensures a certain level of comfort and that the materials are readily available for teachers. Participants described even the number of teaching years as a factor. To clarify further, Psychologist 2 defined experience as “where someone is in their teaching career...starting out...or seasoned” and discussed the following example,

lots of times you can make recommendations but it depends where someone is on their teaching career. If you're just starting out things can be, 'oh my gosh, there's an overwhelming amount of stuff to learn' and if you're a seasoned teacher then you should be able to say, 'okay, I want to try these' and if they're not working then sometimes we have to go back to the drawing board and say 'oh, let's try this'.

Consequently, Psychologist 2 argued that an ecological approach to the implementation process was a necessity. She delineated that the collaboration assists in managing the overwhelming amount of information for a teacher to learn, particularly for a teacher just starting their career. Psychologist 1 pointed out that over the years teachers develop techniques or different ways of organizing their classrooms. That is to say, Psychologist 1 felt it was important to realize interventions must fit with the teachers' classroom procedures or structure, along with, the availability of resources. Psychologist 1 described a time in which a teacher chose an intervention that had worked from the past, “she [previous teacher] liked it [intervention] and it worked for somebody else [student with diverse needs], and she had the resources.” Teacher 1 confirmed the availability of

resources as a factor when intervening, “yes, it [implementation] was very easy. Worked with materials I already had.”

Why take the time to collaborate through these ecological factors for implementation? As Teacher 1 emphasized, “everybody has a different teaching style....it’s important to have those discussions [collaboration]... interventions have to take into account a teacher’s style or they won’t do them. *Teachers will just ignore them* [emphasis added].” As reported, the current list of recommendations is “hit or miss” regarding the match to the teacher at the micro level. To summarize, an ecological approach to psychological consultation within this dissertation included an examination of ecological factors within the classroom environment that affects implementation (Welch, 1994). Collaborative ecological consultation acknowledges these teacher realities, and another key variable examined next, the classroom context.

Classroom Composition and Dynamics Count. The current classroom context was an important ecological variable reiterated by all participants. Both teachers and psychologists deliberated on the composition and dynamics as significant. Teacher 2 commented, “in my classroom, the way I could see it working” or as Teacher 1 explained, “not good for the rest of the students and not good for that student.” Psychologist 1 reflected on the deliberations with Teacher 1 regarding classroom composition,

I think it was very important to her that she could work with more than one student at a time because of the number of students she had to reach and the lack of external supports she had and the high number of behaviour kids; it was important that she could reach more than one student with that [intervention].

Likewise, Teacher 2 validated that the number of students within the classroom as a factor in the intervention selection, “[teacher] based [implementation] on size and the ability to manage bodies. And unfortunately, I don’t know if that’s something, like I don’t know if there’s any way around that [the barrier of class size].” In summary, Teacher 2 highlighted the collaborative deliberations, the time for a teacher to accept or dismiss interventions, increased a teacher’s sense of support.

it was nice [deliberating on micro level factors], when ideas were passed my way and I had the idea to explain possibly why those ideas would not work or the barriers around those ideas, it was I don’t know if it was nice just for me to like it was just a venting session or what. But it made me feel as though I wasn’t on my own, which was huge. Cause oftentimes you have people who give you ideas and go ‘it’ll work, there’s no way it can’t work, like look at the stats’!

Participants described the deliberation of ecological variables at the teacher and classroom level as key to intervention selection and implementation. Researchers promote an ecological consultation approach to the intervention implementation phase of psychological consultation to highlight the classroom level factors, such as the learning environment or the curriculum, (Jeary & Schwean, 2012; Meyers et al., 2012; Sheridan & Gutkin, 2000). I think because this is a new approach to consultation, a clear and organized method of demonstrating what is meant by a collaborative ecological approach; it can assist psychologists and teachers in understanding the impact of the environmental influences on implementation (Jeary & Schwean, 2012; Johnson, 2012; Meyers et al., 2012; Sheridan & Gutkin, 2000).

Bronfenbrenner’s user-friendly model assisted with organizing the dissertation collaboration and data analysis, with a focus on the micro-level factors. Using

Bronfenbrenner's model, the most widely accepted, (Gutkin, 2012) provided a framework to contribute to the understanding for participants of these multiple factors and influences in the classroom environment (Hong & Eamon, 2012; Lewthwaite, 2011; Onwuegbuzie et al., 2013; Sontag, 1996). Research has suggested that the use of Bronfenbrenner's ecological model in educational research projects has utility to increase knowledge and inform practice (Lewthwaite, 2011; Sontag, 1996). One way Bronfenbrenner's model assisted this research was in identifying and understanding the contextual influences within a simplistic frame. Researchers suggest psychologists should gather information on micro, meso, exo, and macro variables rather than spending most of their time on student centered variables (Gutkin, 2009). Lewthwaite (2011) demonstrated the model's utility is beneficial at the micro or face-to-face interaction level and encouraged its use in educational research, particularly when the micro-level factors are emphasized. This research also aided in prioritizing the teacher and classroom variable for this study. Lewthwaite (2011) stressed that the contextual factors at the microsystem or "those interactions nearest to the individual that have the greatest influence on the individual" (p. 80).

The participants in this study focused on the classroom and teacher variables in collaborative dialogue to select and embed interventions within a curricular unit of study. The model helped to demonstrate that the layers of a teacher's ecosystem alter what interventions might be implemented (Lewthwaite, 2011). These learnings through ecological consultation were also described as embedded professional development opportunity. As Teacher 1 suggested, "I thought this was a good way to learn more about

the process [intervention implementation],” and Teacher 3 concurred, “my understanding of the process I think is better and that’s going to benefit me.” This described professional development, is often an outcome of both action research and psychological consultation, and will be discussed in the following section.

Embedded Professional Development. The purpose of action research is “to learn through action that then leads on to personal or professional development (Koshy, Koshy & Waterman, 2011, p. 4). Along with action research, consultation is also a voluntary collaborative relationship between professionals to discuss interventions for a specific situation and to gain insights for transfer and generalization (Conoley & Conoley, 1992). Prevention is a goal of consultation (Gutkin & Curtis, 2009) as it is intended to foster effective proactive practices (Rosenfield & Humphrey, 2012). All of the participants within this dissertation reiterated that collaboration was a positive, embedded, professional development opportunity.

Professional development is a key benefit of a collaborative ecological approach to consultation (Gutkin, 2009; Piscoe & Malia, 2012; Rosenfield et al., 2008) as this process enhanced the teachers’ skills and built their capacity. This capacity building through consultation encouraged teachers to also create their own solutions to future problems in their classrooms (Dennis, 2004). As Wizda (2004) explains the “consultation benefit is the creation of a ‘ripple effect’ which builds the capacity of other professionals and increases the generalization of new skills to future problems” (p. 279). Teacher 1 described this exact effect “like a rock in the water that ripples out” as an increase in

confidence and that she was able to expand the application of the interventions to other subject areas.

An ecological approach to consultation in school psychology is based on the belief that the environment, along with a teacher's intrapersonal factors, plays a critical role in professional development (Williams & Greenleaf, 2012). The social constructivist theories contextualize why an ecological approach to consultation enhances professional development, particularly with a focus on the teacher's micro level (Piscoe & Maila, 2012). Teacher identified needs should drive consultation and resulting professional development; this 'bottom up' approach links directly to the teacher's daily experiences (Piscoe & Maila, 2012) ensuring relevance to the context (Ertmer & Newby, 2013). The environmental layers, at the individual level, impact the consultation process and "reveals where interventions for professional development might be implemented, enhanced or impeded" (Stoeber & Rivard, 2011; p. 61).

The goal for the psychologist is to work with the teacher and encourage new ways to solve the presenting problem and for the teacher to use this knowledge in the future (Gutkin & Curtis, 2009). Arguably, this necessitates a collaborative approach. Teacher 1 described this ability in the application of interventions from collaboration into other subject areas,

to really have that talking piece, like this project allowed, to go through it and make a plan – because even doing one plan helped me to structure other things, you know like talking through the reading...*it kind of helped me see the essence of okay which of these [interventions] were important, which of them are going to be most impactful [emphasis added]*, then I can apply that to science, I can apply that to social studies

Central to an ecological approach to consultation is increasing the teacher's ability to respond to classroom diversity (Dennis, 2004). Research suggests, psychologists will need to support instruction (Fagan & Wise, 2007; Farrell, 2010; Stoiber & Vanderwood, 2008; Ysseldyke et al., 2009; Ysseldyke et al., 2006) and to assist teachers in intervening with a broader range of students (Bernes & Witko, 2009). The ecological systems theory maintains that development is a consequence of the interactions between an individual and the context (Johnson, 2014; Rosa & Tudge, 2013) and that this professional development is a process of educational change (Piscoe & Maila, 2012).

Psychologist 1 concluded on the collaborative aspect of intervention support, "I think you have to do a people thing, and even if they [teachers] don't like the meeting at first, I think it is a process that we have to teach. They have to learn that it is valuable for them." Psychologist 2 described the collaboration as a key element, "I think it was really key when we went to that unit to make the difference." Furthermore, Psychologist 1 expanded that "the planning kind of gave the teacher permission to try something different, with support – right - so that they didn't feel like they were just given the report and had to figure it out for themselves." Finally, Teacher 1 summarized the collaboration as "making more use of it [report and interventions list] than I probably otherwise would have", and that,

it [collaborative implementation] encouraged reflection. You know I think we always reflect as a teacher, but it made me be a little more mindful about thinking at the end of the day, 'how did that work', you know, 'how's it going.' Some of the questions we often ask ourselves, but really brought it to the front instead of just rushing off to plan the next lesson. Take a minute, think... it just made me more – just really more mindful of 'there are these recommendations, we do know stuff about the student, let's keep on track' Just having that extra time I just found it really – it

sinks into your brain so that information kind of, is more internal about that student...

Teacher participants reported developing professionally through collaboration. This ecological approach is linked to successful professional development (Piscoe & Maila, 2012) but at the same time, opportunities for professional development through collaboration for the psychologists were realized as well. Psychologists need to be current on intervention research and its effectiveness. Interventions must be acceptable to the teacher but must also be found effective in research (Gutkin & Curtis, 2009). Psychologists have generally relied on professional journals, expert panel recommendations, program or intervention reviews, and literature reviews to support understanding of 'evidence-based' interventions or strategies (White & Kratochwill, 2005). It can be difficult for psychologists working in schools to sort through the various sources of information on empirically validated interventions (Bramlett, Cates, Savina, & Lavinger, 2010) and with the increasing literature base and limited time, may become unsustainable (White & Kratochwill, 2005).

Teacher 1 in this dissertation project describe the psychologists as having current knowledge of researched best practices that teachers do not have time to acquire,

psychologists do have a wealth of knowledge that most classroom teachers don't have, and *I think they can play a really important role in distilling current research and all that knowledge down for teacher* [emphasis added] because we have so much curricular...we don't always have the time to go read.

Psychologist 1 also describes her time spent to maintain knowledge of current research and effective interventions,

so if there's a particular weakness in a child [gleaned from the individual assessment] and I don't know what to recommend, then I will Google it and see what I can find, because I think it's important to give quality recommendations...see if what I'm thinking matches with the research that they've [experts in the field] done.

However, if psychologists are so focused on assessment activities, I question the amount of time is allotted for continuous professional development. Although psychologists will need to know the factors associated with the effectiveness of interventions recommended (Sheridan et al., 2009) they should also obtain feedback from teachers on the consultation (Luiselli, 2008) to enhance their own professional development. Psychologist 1 described collaboration as an opportunity to grow professionally and to enhance her knowledge of intervention effectiveness,

the collaborative planning gave me confidence in that what I was recommending did work [emphasis added]. So when I saw the final product it showed me that, yes, this does work, this is a good strategy...I was like 'woo-hoo', I've got something right...I'm excited [emphasis added] because I will continue recommending that [intervention], I know that it actually works.

The psychologist now had an expanded understanding of what the teacher was implementing which assisted in the incidental and informal follow-up conversations. As Psychologist 2 previously discussed, the informal conversations had always been at the surface, and that she didn't really have a solid understanding of what was happening within the classroom. After collaborating, Psychologist 2 indicated, "well then I understood what she [teacher] was talking about because we had sat down and did the unit planning." Psychologist 1 also experienced increased incidental follow-up opportunities. From her perspective, she determined, "the collaborative planning

potentially could develop stronger relationships...so once you have the relationship you will get a little bit more of that incidental follow-up.”

A collaborative process in which psychologists work alongside teachers can foster the implementation of interventions and empower growth (Nastasi et al., 2000). Building the capacity of teachers and psychologists to plan and to implement effective interventions through ecological consultation has the potential for considerable impact on academic achievement (Piscoe & Maila, 2012; Rosenfield & Humphrey, 2012; Wizda, 2004). It has also been demonstrated in this study that to establish alliances between the psychologist and the teacher in turn contributes to an understanding of the full depth and breadth of the psychologist role (Gilman & Gabriel, 2004). As mentioned previously, the role of the psychologist is to support teacher implementation of interventions. A few participants questioned if psychologists working in schools should have teacher training in order to do the job – they indicated prior teaching training and experience would be valuable for psychologists working in schools. Currently, psychologists working in Saskatchewan schools are not required to have a teaching background.

Psychologists in Saskatchewan are required to demonstrate evidence of formal training in the four foundational areas of knowledge: (1) biological bases of behaviour; (2) cognitive-affective bases of behaviour; (3) social bases of behaviour; and, (4) psychology of the individual (Psychologists Act 1997, amendment June 3, 2006). There are currently no specific training requirements relevant to working in schools, including no requirement to be a licensed teacher in Saskatchewan. The Psychologists Act (1997) in Saskatchewan only indicates a requirement for training and experience in the areas of

intended practice with no further specific guidelines for working in schools. The participants in this dissertation study expressed previous teaching training and experience as helpful to understanding the classroom context. Psychologist 1 described having teacher training and experience as, “gives me a bit more knowledge. Just a little more knowledge of what works and what does not work.” Teacher 1 concurred that a psychologist with a teaching background, “...has a good grasp of what it is like in the classroom.” All of the participants expressed a teaching background expands the psychologists’ ability to support an ecological approach to intervention implementation. Teacher 3 discussed that the psychologist with teaching experience, “knows what it’s like being in the classroom and maybe what’s feasible and what’s not.” Psychologist 2 claims, “I often will have more things to try for remediation than some of my colleagues because they do not have a teaching background.” Teacher 1 expanded that she really trusts the psychologist as, “she really gets the classroom.”

The psychologists describe having an understanding of the complex teacher role. Psychologist 1 describes, “I know how hard it is”, and “I understand how that feels”. Psychologist 2 concurs in that, “you have more empathy towards putting more workload on the teacher...I used to be a teacher...I have to find a different way of delivering the message so that they [interventions] can be incorporated into their world.” Psychologist 1 summarized with, “*if you’re not a teacher and you’re a psychologist it would be a lot harder, I think, for you to figure out how those recommendations might work in the classroom.*” The psychologists in this study did have teacher training. It is unclear at this time the impact of this educational background but what is clear is that the collaborative

process aided intervention implementation, “it [collaboration] makes it a way to navigate what can you change and how would you deliver it differently to meet this need” (Psychologist 2). Next, I will discuss students’ successful responses to the collaboratively planned intervention as examples of effective implementation.

Implementation Integrity and Fidelity. An ecological consultation strategy, at the intervention stage, should facilitate implementation by teachers (Noell et al., 2014). In a 2008 study, Kelliher et al. found there was a positive effect on intervention implementation when there was practitioner involvement in the design. As well, Nastasi et al. (2000) contends that when teachers are involved with intervention design, it enhances acceptability and implementation integrity. The implementation stage of consultation requires the psychologist to collaborate with the teacher to ensure their acceptance of the interventions which, in turn, impacts treatment integrity and fidelity (Ysseldyke et al., 2009; Mike, 2010). Integrity is the extent to which an intervention is implemented as designed (Frey, Sabatino, & Alvarez, 2013). Intervention integrity was often assumed and considered automatic once recommendations were reported and then discussed for implementation at the team meeting (Frey et al., 2013). But, researchers argue, consultation models in which psychologists merely communicate through meetings and reporting the recommended interventions for implementation, does not ensure integrity (Lane, Mahdair, & Borthwick-Duffy, 2003).

An increase in intervention implementation fidelity and integrity was documented within this dissertation study. As discussed in the findings section, the participants described an increased focus on implementation of the interventions. Further to this, the

participants reported that the collaboration opportunity had a positive impact on the student success in meeting curricular outcomes. Teacher 1 discussed that collaboration also provided an opportunity to spend time with the report and recommended interventions, “having the time to go through it [report] means I made much more use of it than I probably otherwise would have.” She also believes that collaboration provided opportunities for the student to meet curricular outcomes because of the ecological approach, “so I think we did get more success... definitely [because of] ...the plan we had come up with together.”

Although consultation to support intervention acceptability to integrity can be complex (Truscott et al., 2003), collaboration may be a viable addition to psychological consultation. The participants within this dissertation study described deliberating through interventions had a positive impact on implementation. Collaboration, as an essential process to an ecological approach to intervention implementation, may help to conceptualize a new approach to psychological consultation, which is an important starting point for research (Gravois, 2012).

Researchers’ report that a social constructivist approach to psychological consultation, generating teacher professional development, affects student achievement and educational change (Piscoe & Maila, 2012; Rosenfield & Humphrey, 2012; Wizda, 2004). Psychologist 1 stressed a particular need for an ecological approach, particularly for students with specific learning disabilities (SLD),

I think it [collaboration] would work a lot and I think for students with learning disorders, planning would be key, because they have a really good thinking ability, they just need a different rollout and that’s really

hard for people to understand...it is hard for people to get their head around.

The participants discussed that at times further formal supports for implementation do take place when intervening for students with behavioural difficulties. Psychologist 1 described regular meetings to review implementation supports for students with behavioural needs,

I will schedule like monthly meetings and make sure that we have that kind of follow up to make sure that, you know, whatever behaviour intervention is being tried is actually working or making a difference, or that they're [teachers] continuing to try it long enough to determine if it's making a difference.

Psychologist 2 also discussed supporting intervention implementation for students with behavioural difficulties "some bigger kids with more issues, you try that [follow-up]...see if there's a noticeable change or if anything is getting better for them."

Psychologist 1 described that when the student has behavioural needs, the school team prioritizes their supports. She discussed feeling, "compelled" to support intervention implementation because "it's a priority for them [teachers]." Teacher 2 agreed interventions for students with behavioural needs are prioritized for implementation within the classroom, "There are individuals whom I make certain I have things there for, because they are, kind of, the firecracker in the room." So, Psychologist 1 summarized that intervention supports are implemented for students with behavioural issues with, "a little bit more fidelity...because that child is out of control." But for students with SLD, she was unsure "how many of those [interventions] actually happen...I think there's less of a chance that those [interventions] get implemented than [students with] behaviour [difficulties]."

Overall, there has been limited research to increase treatment integrity (Frey et al., 2013). This dissertation project highlighted a potential impact on integrity and fidelity of intervention implementation, particularly for students with SLD. The process of collaboration was positive for all participants, including the students with SLD. Previous researchers have asked for studies to determine if psychologists can influence treatment acceptability and fidelity (Foreman & Zins, 2008), I believe this research shows promising potential. Next, I will examine ways to emphasize and to also realize future ecological consultation in schools.

Implications for Practice

The participants in this dissertation described psychological consultation as incomplete. Moreover, the process did not involve collaboration with teachers. Psychologists continued to prioritize assessment activities with no time or clear process for teachers to acquire further implementation supports beyond a meeting and list within a report. A recent survey of psychologists by Hicks, Shahidullah, Carlson and Paljwala (2014) determined external environmental factors had the most significant impact on psychologist supports to intervention implementation. The psychologists in the survey listed the following factors impeding further supports: lack of time, lack of necessary resources, lack of training, and incongruence with work place or supervisor's approach. As researchers have stated, advocacy is required for a role evolution for the psychologist working in schools. I suggest that endorsement would need to occur at multiple levels within Saskatchewan to be effective, such as at the provincial government level, post-secondary level, fraternal organizational level, and at the individual psychologist level.

The possible approaches to promote collaborative ecological psychological consultation at each of these levels are outlined next.

At the Ministry of Education level, the living document Guidelines for the Practice of Professional Psychology in Schools within Saskatchewan needs updating. It is time to clarify within this practice document an emphasis on a collaborative ecological approach to implementation for the psychologist –to shift from tester to collaborator. The example of how to do this could be including collaboration from this study. Of course, prioritizing time within the psychologist role to support teachers is another very concrete way to demonstrate support for an ecological approach. The Ministry ought to place a case load recommendation within this document rather than just a side bar notation. Currently, the document references research in that an ideal psychologist to student ratio would be 1:1000 but this is not discussed further within the body of the document, as well this recommendation is outdated. The school psychology section of the CPA recorded the following ratios within their 2014 position paper: 1:500 to 1:700 when providing comprehensive and preventative services (CPA, 2014). The ratio for the psychologists in this study was approximately 1:900, but participants maintained that there were still pressures of time when it came to supporting implementation. Ultimately, ratio is impacted by the student needs and a collaborative approach, flexibility would allow for these considerations. Consequently, the Ministry of Education could promote an updated document emphasizing implementation as a necessity in the psychologist role, as well as a current recommended student ratio to bequeath time and energy for an ecological approach within school divisions.

Another stakeholder key to the continued evolution of the psychologist role is the Psychology Association of Saskatchewan (PAS). The key objectives of PAS, which connect to a role shift and this dissertation, would be to encourage and promote the advancement of psychological research, education, and training in the Province of Saskatchewan and to increase public awareness of psychology and psychological services in Saskatchewan. This fraternal organization should have significant involvement to advocate for a role shift and ratios within Saskatchewan schools. It may be warranted to survey and collect baseline data on various aspects of the psychologist role, such as: ratios, job descriptions, implementation time, current teacher supports available beyond the meeting and report. This data could then be analyzed and utilized to advocate for refining the practices of psychologists in schools.

In Saskatchewan, there are two post-secondary institutions to also emphasize a role shift as a part of the psychologist training, and as a start to include a mandatory course on consultation. A review with pre-service psychologists indicates that intervention supports are not prioritized services for the psychologist and that the four stages of consultation are not followed (Bramlett, Murphy, Johnson, Wallingsford and Hall, 2002). Therefore, this course could review the literature on calls for a collaborative ecological approach to intervention and to emphasize this role within the students' practicum experience in schools. These students may also then contribute to further development of practicing psychologists in modelling and educating of current best practices.

In the future, individual psychologists will also need to advocate within their own school divisions to clarify a process to support implementation and for the provision of

time within their role. The psychologists will need to work with senior school division staff to meet the challenge set out by researchers and to shift their focus from the individual student to working with the adults who control the environments to impact the student learning (Curtis, Chesno Grier, & Hunley, 2004; Gutkin, 2009; Gutkin, 2012; Sheridan & Gutkin, 2000). Increasing collaborative time in education may require increased financial supports, so expanding this understanding and support is a vital part of advocacy. This shift would align with an inclusive movement in which psychologists could be attached to classrooms as support rather than to individual students.

Psychologists and teachers could collaborate frequently as support for implementation as a consultation practice. There is designated preparation time for teachers and the potential of incorporating a collaboration during unit planning may be very compatible.

To recap, the participants in this dissertation research study described barriers with the intervention implementation phase of consultation. For as Sheridan and Gutkin (2000) emphasize, “it should come as no surprise that teachers gain insufficient information from our [psychologists] traditional methods of communication” (p. 487). The two main barriers discussed by participants were no clear process for the provision of implementation supports and if implementation supports were adopted, all participants suggest the model must be efficient and timely. The fact that psychologists within this study continue to rely on the **consult and hope** consultation model and “haven’t been able to make that [the implementation stage] a priority” (Psychologist 1) may reinforce a multi-layer plan to support a shift in the role for the province.

A collaborative ecological approach with a focus on the child, the environment, and the teacher (Meyers et. al., 2012) was key within this study. Research utilizing Bronfenbrenner's model, such as within this dissertation, has assisted in identifying factors influencing teachers and in framing a plan of supports based on the teachers' needs (Lewthwaite, 2011; Stoeber & Rivard, 2011). Psychologists working in schools will need to prioritize obtaining an understanding of the micro factors such as: teaching style, teaching experience, and class composition to support implementation beyond the report and debrief meeting. Embedded planning as an ecological approach utilized collaboration and communication between a psychologist and a teacher to have a better understanding of both the teacher factors and the classroom context and dynamics to build acceptable interventions for implementation. It is hoped that this research will contribute to advocacy at the school division and provincial level for time within the psychologist role for increased collaboration.

Perhaps one of the first steps could be increasing clarity and understanding of the RTI movement. The data from this dissertation project demonstrated the RTI model requires further clarification for psychologists and its application to implementation. Yet, researchers suggest that they are uniquely positioned to implement RTI through the provision of consultation services at each tier of the instructional hierarchy (Powers et al., 2008). Psychologists in schools will need to refine ways to collaborate at each RTI implementation level within their school division. The incorporation of a collaborative ecological approach into an improved RTI model may better support implementation. As researchers argue, a collaborative ecological process between the psychologist and the

teacher allows for deliberation on the ‘what to do’ but should also involve the ‘how and why’ as it relates to the specific classroom environment (Ysseldyke, et. al., 2012). The Ministry practice document describes a RTI model with tiers of support to structure recommended interventions based on student needs to help build a culture of collaboration between the psychologists and teachers in schools (Saskatchewan Ministry of Education, 2009, 2015). Perhaps further direction and in-service on the intent of this movement is required in Saskatchewan.

In summary, Skinner et al. (2013) suggested that psychologists utilizing a RTI model need to increase their own knowledge of effective interventions, ensure they recommend interventions that work within the context of the classroom and increase their evaluation of the interventions utilized by the teacher. Furthermore, Gersten, Jayanthi and Dimino (2017) argue that school divisions need to review and evaluate their RTI practices. A system wide RTI process that is consistent between teacher, schools and school divisions, along with a clear process of student supports is certainly needed. I believe the Ministry of Education, PAS, training institutions and school divisions have roles to play to advance the practice of psychology in schools.

Summary

Within this current section, I have linked the findings from the dissertation to research and to recommendations for practice improvement. Collaboration within this study had psychologists working with classroom teachers to embed interventions within a curricular unit of study. As Jeary and Schwean (2012) express, psychologists will need to link the intervention recommendations to instructional planning as a strategy to support the

teacher and the student. The addition of collaboration supported calls for additional research on the psychological consultation stage of intervention implementation aimed at utilizing: (1) a collaborative ecological approach in schools; (2) expertise of both the psychologist and the classroom teacher; and, (3) embedded professional development.

Next, where could research on psychological consultation in schools go from here?

Future Research: Collaborative Ecological Consultation in Schools

Collaborative unit planning to embed interventions was researched within the dissertation study as an ecological approach to implementation. Nastasi et al. (2000) advocate for additional research, which is needed to examine effective strategies to support intervention implementation as an ecological model within schools. Furthermore researchers argue, in the future, there needs to be an ecological consultation approach, with explicit attention to environmental factors (Sheridan & Gutkin, 2000; Wizda, 2004; Gutkin, 2009) and to support the classroom teachers (Wilkinson, 2006). Interventions that are jointly decided ensure they are adapted to the context (Nastasi et al., 2000), such as demonstrated in the collaboration time.

Inter-Professional Collaboration. This collaborative planning was a concrete example of an ecological approach to consultation. The ecological consultation approach stresses the teacher and psychologists interactions to be two-way (Tissington, 2008) as the teacher's perspectives are essential (Gutkin & Curtis, 2009). In collaboration, the opportunity was provided to review the curricular plan, incorporated the unique and valuable expertise of both the psychologist and the teacher into the embedded interventions. The psychologist's expertise relates to the knowledge of evidence based

interventions for recommendation and the teacher's expertise relates to the acceptability of the approaches as related to their knowledge of the curriculum (Kelliher et al., 2008). Collaboration combined the expertise of both the teacher and the psychologist in planning for a student with diverse needs.

The ecological model of embedded professional development is an essential new thinking in education (Rosenfield, 2012) but there are no specifics on how to operationalize such an approach (Neal & Neal, 2013). Further to this, another important consultation issue is applying an ecological approach into the complex school environment (Neal & Neal, 2013; Sheridan, Swanger-Gagne, Welch, Kwon, & Garbacz, 2009). *Collaboration did operationalize an ecological approach within the school environment.* As well, the opportunity to embed interventions within a curricular unit of instruction had a positive impact on fidelity and integrity of implementation and on the student outcomes. To conclude, Gutkin (2009) suggests, in the future, an ecological approach could be “employed to transform the very foundations of the field of psychology and dramatically alter the way we [psychologists] do business” (p. 484)! What follows is a summary of the limitations of this research.

Dissertation Limitations

Lewthwaite (2011) recommended future research to implement a strategy allowing for the interaction over time between participants to increase awareness of contextual factors and to identify development opportunities in the microsystem level for implementation (Lewthwaite, 2011). Lewthwaite (2011) argued developmental projects in education that do not prioritize improving the quality of personal interactions will have

limited influence. As well, Manz (2007) extends, researching an innovative consultation strategy with an ecological approach may be a benefit at the individual level but may also facilitate system change. Although the participants in this dissertation expressed positives for teachers, psychologists and students, some limitations are declared. There are four main cautions from this study that are discussed next: (1) participant number and localized setting; (2) confidentiality and micro-politics; (3) Bronfenbrenner's conceptual model; and, (4) qualitative student outcome data.

Participant Number and Localized Setting. This study is limited by the number of psychologist and teacher participant partners. As many psychologist and teacher partners as possible was preferred, there was a finite number of psychologists working within the participating school division, as well, even fewer that had committed to the study. This research involved a significant commitment of time and energy and the limited number of participants may be a reflection of this. Along with limited participants, as an action researcher I need to acknowledge the weakness that the results do not often extend beyond the local setting (Brydon-Miller et al., 2003).

As McAteer (2013) argued, action research findings are not intended for generalizability but may still resonate with others. Action researchers want to produce something to share with others (McAteer, 2013) even though the changes are better able to be made locally (Pellerin, 2011). The data from this research project may possibly not extend beyond the school division, school or even beyond the teacher's classrooms. So, these findings may impact daily practice but not large scale change (Brydon-Miller, et al., 2003) or to say this another way, a practical action research project may result in

improved practice but not cultural change (Brydon-Miller, et al., 2003; McGlinn Manfra, 2009).

We do know that action research findings are able to affect local settings and there is the possibility for others to gain insights for transfer to similar situations (Conoley & Conoley, 1992). For as Brantlinger et al., (2005) express, when others read and review the research they may see similarities and relevance within their own context. Action research is really focused on increasing understanding of the context (Greenbank, 2007), but I am hopeful this dissertation study is useful and may impact practice in this along with other settings. Further to limited participants and localized setting, another limitation in the reporting of an action research project there are often politics to deal with (Herr & Anderson, 2005).

Confidentiality and Micro-Politics. Herr and Anderson (2005) argue all institutions are political and researchers should anticipate encountering micro politics. An action researcher will need to prepare for the politics and not fear that the validity of the data analysis and reporting would be threatened (Herr & Anderson, 2005). As an action researcher, I wanted to build on the strengths but also prepare for the challenges of a project. I maintained a strong collaborative approach within this action research methodology to strengthen the project and mitigate some of the expected challenges. In doing so, participants reviewed and endorsed the process, as well maintained confidentiality of information. The school division supporting this research project valued the research but at the same time maintained a high expectation for confidentiality of students. The school division name or staff identity was not to be disclosed or

participant feedback discerned, without their consent, for this research project. The information that was discussed and shared during the conference presentation was general findings and only data from the presenting participants was utilized. To summarize, a research project must meet the approval requirements of the setting, such as maintain the anonymity of the participants and of the organization. As well, all reflections by participants were included only with permission as the deliberation of ecological factors were focused on the micro-level or the context nearest the individual.

Bronfenbrenner Conceptual Framework. Although Bronfenbrenner's ecological theory model has been endorsed for use in educational projects and did assist in conceptualizing research, there is a perception of limited application in the context of education (Lewthwaite, 2011). Bronfenbrenner had not recognized the application of an ecological approach to understanding and identifying factors influencing development of professional teachers and the model may be considered limited because of its focus on child development (Lewthwaite, 2011). Yet, the ecological model has been found to have strength in its ability to frame influencing factors using a multi-system lens (Lewthwaite, 2011). An ecological approach to consultation, framed by Bronfenbrenner's theory provided a visual model as a reference for the participants within this research. The application of theory to education can be complex and difficult (Lawton, Saunders, & Muhs, 1980), yet Lewthwaite (2011) affirms, Bronfenbrenner's theory "provides a framework with which to effectively plan for and implement professional development strategies in order to effect changes in teacher practices and support experimentation as strategies are tested at the classroom level" (p. 5).

Bronfenbrenner's ecological theory had been used in previous research to identify factors specific to the teacher's microsystem level that influence development (Lewthwaite, 2011). It was determined in that research, Bronfenbrenner's ecological model did provide insight as an organizer for identifying factors of participant development (Lewthwaite, 2011). For this dissertation study, the model also provided a frame for the collection of data specific to the classroom context, and added to the current research on important variables for consideration for intervention implementation in the psychological consultation process.

Bronfenbrenner's ecological theory can also frame the important issues facing psychologists in applying an ecological approach into the complex school environment (Neal & Neal, 2013; Sheridan, Swanger-Gagne, Welch, Kwon, & Garbacz, 2009). Research suggests the ecological layers interact, along with forces within the layer, to influence professional development (Lewthwaite, 2011). The participants within this dissertation study indicated embedded professional development as a key outcome from the data. Bronfenbrenner did not validate use of the ecological model to identify influences on development but it has been determined in previous research this application is useful (Lewthwaite, 2011). There is currently minimal research on the implications of constructivist ideas for professional development (Piscoe & Maila, 2012) but Bronfenbrenner's model can be utilized as a framework within action research to analyze these social layers (Hong & Eamon, 2012). It has been determined, however, it is less valuable in conceptualizing the larger, more complex pattern of contextual influences beyond the individual level (Lewthwaite, 2011).

Qualitative Student Outcome Data. Qualitative methods of research, which attend to the needs and resources of the consultee, hold promise to advance knowledge and practice of intervention implementation (Nastasi & Schensul, 2005). This dissertation study was an action research with qualitative data on collaborative ecological consultation. The data to support positive student outcomes were based on observations, artifacts, and interviews. This study was not designed as an experimental intervention study. The data to determine positive student outcomes did not utilize empirical or experimental designs.

Researchers often argue that to conduct intervention studies, there must be verification and measuring of implementation and its effectiveness (Skinner, et., al., 2013). Although the majority of the data on student outcome was qualitative, there was attention to utilizing teacher evaluation on the progress toward curricular outcomes at the grade level. Furthermore, researchers argue, the findings from a research project using an ecological model could have implications for future school policy and practices (Hong & Eamon, 2012). The conclusion to this dissertation follows.

Conclusion

There were many calls for research on an ecological approach to psychological consultation in schools, particularly at the implementation stage. Additionally, Canadian practice documents were reviewed, along with research, and there were limited concrete examples of how psychologists should do this in schools. The benefits from this study confirmed that psychologists will need to be more active in promoting the impact of consultation with teachers (Farrell, 2010) as a process to assist in the provision of

effective instructional interventions for diverse learners in the classroom (Powers, Hagans, & Busse, 2008; Ysseldyke et al., 2009). Recall that a service delivery model focused on assessment is “dysfunctional by design” (Sheridan & Gutkin, 2000, p. 486) and increased involvement in collaboration and consultation are some of the anticipated changes for psychologists (Kemp-Koo & Claypool, 2011). In this action research dissertation project, time was a factor when utilizing collaboration as an ecological approach to intervention implementation. There is a need to explore the implications for practice with consideration of the extended time required for collaboration within schools. Although the teacher reported that the planning process ultimately was more efficient, the process would require additional classroom-based consultation time from the psychologist. While the additional time may be initially considered prohibitive, there is need to explore the longer-term implications and efficiencies of building teacher and psychologist knowledge of ecologically-valid approaches for instruction and support.

There is also a lack of attention in consultation research on contextual factors (Nastasi & Schensul, 2005) yet it is critical to include the consultee and context variables influencing intervention implementation (Foreman & Zins, 2008). As well, potential future research projects on an ecological approach may prioritize teacher factors as this dissertation project did, or may focus on the system (Gravois, 2012) to support the use of strategies to encourage development (Meyers et al., 2008). Lewthwaite (2011) has argued future education research ought to seek the nature of the processes having an impact upon an individuals’ professional development and that Bronfenbrenner’s ecological model has this utility. Lewthwaite also recommends further qualitative

research in education in which the researchers listens to the teachers concerning the contextual factors impacting development (Lewthwaite, 2011). But factors beyond the micro-level may be warranted, particularly around RTI. Lewthwaite also acknowledged the developmental factors at the microsystem level influence teacher development but can be limited by the practices of the mesosystem (Lewthwaite, 2011).

Researchers argue that the structure of intervention implementation stage has not kept up with an ecological shift to consultation (Scherffius-Jakes & Brookins, 2004) and as Manz (2007) advocates, future researchers could benefit from innovative approaches to consultation. Conoley et al. (2009) advocate for researchers to shift attention to the implementation phase, in an attempt to illustrate what works in schools, for development of future consultation strategies. Further to research on consultation, Forman and Zins (2008) argue it is time to begin to identify effective intervention of implementations in research and in particular, additional research on the potential impact of additional strategy or action in the consultation process (Truscott et al., 2012). As well, the documentation of a consultation strategy aligning the interventions to the context is critical (Nastasi & Schensul, 2005). Innovative implementation support and planning are needed and Bernes and Witko (2009) challenge psychologists to “get out from under the stacks of assessment referrals to demonstrate their skills beyond assessment” (p. 11) and to be more active in promoting the impact of consultation with teachers (Farrell, 2010).

This action research study examined a collaborative ecological approach to the intervention implementation stage of consultation for psychologists working in Saskatchewan schools. This dissertation complements the literature on the role of

psychologist and the shift from a focus on assessment to collaboration with teachers through consultation. It also enhances the literature as an example of an ecological approach to intervention implementation stage of consultation. Collaborative planning was an opportunity for psychologists to work with teachers, for as Gutkin and Curtis (2009) argue, interventions need to align with the ecological systems of the classroom to impact student learning. The participants of this study deliberated through the ecological factors classroom teachers prioritized, including their teaching beliefs and their knowledge of the student dynamics within the classroom.

Collaboration was an encouraging approach to formally support intervention implementation. All of the participants determined the collaboration to embed interventions within a curricular unit of study was positive for the classroom teachers, the psychologists, and most importantly, the students. Psychologists, as professional leaders within the schools divisions of Saskatchewan, need to continue to develop consultation approaches to support teachers in the intervention implementation stage. Psychologists need to design a consultation approach with less emphasis on the report and debrief meeting as a resource for teachers and for families but to work collaboratively in consideration of the key ecological factors impacting implementation integrity and fidelity.

References

- Adams, P. (2006). Exploring social constructivism: theories and practicalities, education 3-13. *International Journal of Primary, Elementary and Early Years Education*, 34, 243-257, doi:10.1080.03004270600898893.
- Akin-Little, K., Little, S. & Delligatti, N. (2004). A preventative model of school consultation: Incorporating perspectives from positive psychology. *Psychology in Schools*, 4, 155-162, doi: 10.1002/pits.10147.
- Annan, J., & Priestly, A. (2012). A contemporary story of school psychology. *School Psychology International*, 33, 325-344, doi:10.1177/0143034311412845.
- Avgitidou, S. (2009). Participation, roles and processes in a collaboration action research project: a reflexive account of the facilitator. *Educational Action Research*, 17, 585-600, doi:10.1080/09650790903309441.
- Barab, S., & Roth, W. (2006). Curriculum-based ecosystems: Supporting knowing from an ecological perspective. *Educational Researcher*, 35, 3-13.
- Bartlett, B., & Elliott, S. (2009). The contributions of educational psychology to school psychology. In T. Gutkin & C. Reynolds (Eds.), *The Handbook of School Psychology*, 4th Edition, (pp. 591-635). New York, NY: Wiley.
- Baumfield, V., Hall, E., & Wall, K. (2013). *Action research in education (second edition)*. Thousand Oaks, CA: Sage Publications Ltd.
- Baynham, B. (2000). CONSULTATION. *The model*. Internal Psychological Service Paper. Bradford: Bradford Psychological Service.

- Beaulieu, R. (2013). Action research: Trends and variations. *Canadian Journal of Action Research*, 14, 29-39.
- Bernes, K., & Witko, K. (2009). At this rate, school psychology may never move beyond the “test them and tell them” role in Canada. *The Alberta Counsellor*, 30, 3-12.
- Blair, E. (2010). How does telling the truth help educational action research? *Educational Action Research*, 18, 349-358, doi:10.1080/09650792.2010.499810.
- Bourmot-Trites, M., & Belonger, J. (2005). Ethical dilemmas facing action researchers. *Journal of Educational Thought*, 39, 197-215.
- Brainerd, C. (1996). Piaget: A centennial celebration. *Psychological Science*, 7, 191-195.
- Bramlett, R., Cates, G., Savina, E., & Lauinger, B. (2010). Assessing effectiveness of academic interventions in school psychology journals: 1995-2005. *Psychology in Schools*, 47, 114-125, doi:10.1002/pits.20457.
- Bramlett, J., Murphy, J., Johnson, J., Wallingford, L., & Hall, J. (2002). Contemporary Practices in School Psychology: A National Survey of Roles and Referral Problems. *Psychology in the Schools*, Vol. 39, 327-335, doi:10.1002/pits.10022.
- Brantlinger, E., Jimenez, R., Klingner, J., Pugach, M., & Richardson, V. (2005). Qualitative studies in special education. *Exceptional Children*, 71, 195-207.
- Brinkman, S. (2007). The good qualitative researcher. *Qualitative Research in Psychology*, 4, 127-144, doi:10.1080/14780880701473516.

- British Columbia Ministry of Education. (2011). Ministry of Education, Province of British Columbia. Supporting Students with Learning Disabilities A Guide for Teachers. Author.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development*. Cambridge, Massachusetts: Harvard University Press.
- Bruce, S., & Pine, G. (2010). *Action research in special education. An inquiry approach for effective teaching and learning*. New York, NY: Teachers College Press.
- Brydon-Miller, M., Greenwood, D., & Maguire, P. (2003). Why action research? *Action Research*, 1, 9-28, doi:10.1177/14767503030011002.
- Burns, M. (2011). School psychology research: Combining ecological theory and prevention science. *School Psychology Review*, 40, 132-139.
- Burrows, B., Thomas, J., Woods, A., Suess, R., & Dole, D. (2012). Riding the wave: Student researcher reflection on the action research process. *Educational Action Research*, 20, 291-312, doi:10.1080/09650792.2012.676308.
- Canadian Psychological Association (CPA) (2007). *Guidelines for Professional Practice for School Psychologists in Canada*. CPA: Author.
- Canadian Psychological Association (CPA) (2014). *School Psychology an Essential Public Service in Canada*. CPA: Author.
- Clary Business Machines (2012). *MimioTeach Interactive System*. Retrieved from: Mimio-Boards website at: <http://www.mimio-boards.com/about-us.html>

- Clift, R., Veal, M., Johnson, M., & Holland, P. (1990). Restructuring teacher education through collaborative action research. *Journal of Teacher Education*, 41, 52-62, doi:10.1177/002248719004100207.
- Conoley, J. & Conoley, C. (1988). Useful theories in school-based consultation. *Remedial and Special Education*, 9, 14-20, doi: 10.1177/074193258800900606.
- Conoley, J., & Conoley, C. (1992). *School consultation: Practice and training, second edition*. New York, NY: Macmillan Publishing Company.
- Conoley, C., Conoley, J., & Reese, R. (2009). Changing a field of change. *Journal of Educational and Psychological Consultation*, 19, 236-247.
- Cook, J. (2010). Collaborative action research: The ethical challenges. *International Journal of Evidence Based Coaching and Mentoring*, 4, 141-150.
- Cook, T. (2009). The purpose of mess in action research: Building rigour through a messy turn. *Educational Action Research*, 17, 277-291, doi:10.1080/09650790902914241.
- Cook, L., & Friend, M. (1991). Principles for the practice of collaboration in schools. *Preventing School Failure: Alternative Education for Children and Youth*, 35, 6-9.
- Corkum, P., French, F., & Dorey, H. (2007). School psychology in Nova Scotia. A survey of current practices and future roles. *Canadian Journal of School Psychology*, 22, 108-120.
- Cunningham, J. (2007). Centripetal and centrifugal trends influencing school psychology's international development. In S. Jimerson, T. Oakland & P. Farrell

(Eds.), *The Handbook of International School Psychology* (pp. 463-474).

Thousand Oaks, CA: Sage Publications Ltd.

Curtis, M., Chesno Grier, J., & Hunley, S. (2004). The changing face of school psychology: Trends in data and projections for the future. *School Psychology Review*, 33, 49-66.

Dennis, R. (2004). So far so good? A qualitative case study exploring the implementation of consultation in schools. *Educational Psychology in Practice*, 20, 17-29, doi:1080/0266736042000180384.

Dettmer, P., Knackendoffel, A., & Thurston, L. (2013). *Collaboration, consultation, and teamwork for students with special needs, seventh edition*. Upper Saddle River, NJ: Pearson Education Inc.

DeVries, R. (2000). Vygotsky, Piaget, and education: A reciprocal assimilation of theories and educational practices. *New Ideas in Psychology*, 18, 187-213.

Doll, B., Spies, R., & Champion, A. (2012). Contributions of Ecological School Mental Health Services to Student's Academic Success. *Journal of Educational and Psychological Consultation*, 22, 44-61.

Doolittle Wilson, J. (2017). Reimagining disability and inclusive education through universal design for learning. *Disability Studies Quarterly*, 37, doi:10.18061/dsq.v37i2.5417.

Dworkin, A., & Dworkin, E. (1975). A conceptual overview of selected consultation models. *American Journal of Community Psychology*, 3, 151-159.

- Efrat Efron, S. & Ravid, R. (2013). *Action research in education. A practical guide*. New York, NY: Guilford Press.
- Erchul, W., & Martens, B. (2010). *School Consultation: Conceptual and Empirical Basis of Practice, Third Edition*. New York, NY: Springer Science + Business Media, doi:10.1007/978-1-4419-5747-4.
- Ertmer, P., & Newby, T. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, 6, 50-72, doi:10.1111/j.1937-8327.1993.tb00605.x.
- Estep, J. Jr. (2002). Spiritual development as social: Toward a Vygotskyan Developmental Perspective, *Religious Education*, 97, 141-164.
- Fagan, T. (2002). School Psychology: Recent Descriptions, Continued Expansion, and an Ongoing Paradox. *School Psychology Review*, 31, 5-10.
- Fagan, T., & Wise, P. (2007). *School Psychology: Past, Present, and Future, Third Edition*. Bethesda, MD: National Association of School Psychologists.
- Farrell, P. (2006). Developing inclusive practices among educational psychologists: Problems and possibilities. *European Journal of Psychology of Education*, 25, 293-304.
- Farrell, P. (2010). School Psychology: Learning lessons from history and moving forward. *School Psychology International*, 31, 581-598.
- Fine, M. (1985). Intervention from a systems-ecological perspective. *Professional Psychology: Research and Practice*, 16, 262-270.

- Finlay, L. (2002). "Outing the researcher": The provenance, process, and practice of reflectivity. *Qualitative Health Research*, 12, 531-545.
- Flavell, J. (1996). Piaget's legacy. *Psychological Science*, 7, 200-203.
- Forman, S., & Zins, J. (2008). Evidence-based consultation: The importance of context and the consultee. In W. Erchul & S. Sheridan (Eds.), *Handbook of Research in School Consultation*, (pp. 361-371). New York, NY: Lawrence Erlbaum Associates.
- Frey, A., Sabatino, C., & Alvarez, M. (2013). Consultation to improve treatment integrity. *Children & Schools*, 35, 3-8.
- Gainotti, M. (1997). Jean Piaget (1896-1980). *International Sociology*, 12, 373-379.
- Gergen, K., & Gergen, M. (2008). Social Construction and Research as Action. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice*, (pp. 159-171). Thousand Oaks, CA: Sage Publications Ltd.
- Gersten, R., Jayanthi, M., & Dimino, J. (2017). Too much, too soon? Unanswered questions from national response to intervention evaluation. *Exceptional Children*, 83, 244-254.
- Gilman, R., & Gabriel, S. (2004). Perceptions of School Psychological Services by Education Professionals: Results from a Multi-State Survey Pilot Study. *School Psychology Review*, 33, 271-286.
- Grant, J., Nelson, G., & Mitchell, T. (2008). Negotiating the Challenges of Participatory Action Research: Relationships, Power, Participation, Change and

- Credibility. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice*, (pp. 589-601). Thousand Oaks, CA: Sage Publications Ltd.
- Gravois, T. (2012). Consultation services in schools: A can of worms worth opening. *Consulting Psychology Journal: Practice and Research*, 64, 83-87.
- Greenbank, P. (2007). Utilizing collaborative forms of educational action research: some reflections. *Journal of Further and Higher Education*, 31, 97-108, doi:10.1080/03098770701267531.
- Grimes, M. (2015). Teaching leadership through a cultural psychological lens. *Journal of Leadership Studies*, 9, 63-72, doi:10.1002/jls.21348.
- Guhn, M., & Goelman, H. (2011). Bioecological theory, early child development and the validation of the population-level early development instrument. *Soc Indic Res*, 103, 193-217, doi:10.1007/s11205-011-9842-5.
- Gutkin, T. (2009). Ecological school psychology: A personal opinion and a plea for change. In T. Gutkin & C. Reynolds (Eds.), *The Handbook of School Psychology, 4th Edition*, (pp. 463-496). New York, NY: Wiley.
- Gutkin, T. (2012). Ecological psychology: Replacing the medical model paradigm for school-based psychological and psychoeducational services. *Journal of Educational and Psychological Consultation*, 22, 1-20, doi:10.1080/10474412.2011.649652.

- Gutkin, T., & Curtis, M. (2009). School-based consultation: The science and practice of indirect service delivery. In T. Gutkin & C. Reynolds (Eds.), *The Handbook of School Psychology, 4th Edition*, (pp. 591-635). New York, NY: Wiley.
- Gutkin, T., & Reynolds, C. (2009). Ecological school psychology: A personal opinion and a plea for change. In T. Gutkin & C. Reynolds (Eds.), *The Handbook of School Psychology, 4th Edition*, (pp. xiii-xiv). New York, NY: Wiley.
- Hadaway, S., & Brue, A. (2016). Practitioner's guide to functional behavioral assessment: Process, purpose, planning and prevention (pp. 9-21). New York, NY: Springer Science+Business Media.
- Hallet, R., & Griffen, J. (2015). Empowering parents in the college-planning process: An action-inquiry case study. *Journal of Education for Students Placed at Risk*, 20, 101-119, doi:10.1080/10824669.2014.984035.
- Hasiuk, M. (2006). The perceptions of Nova Scotia school psychologists regarding their roles. *ProQuest Dissertations and Theses*, 2007, Master's Thesis, Mount Saint Vincent.
- Hazel, C., Laviolette, G. & Lineman, J. (2010). Training professional psychologist in school-based consultation: What the syllabi suggest. *Training and Education in Professional Psychology*, 4, 235-243.
- Heron, J., & Reason, H. (2008). Extending Epistemology within a Co-operative Inquiry. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice*, (pp. 366-380). Thousand Oaks, CA: Sage Publications Ltd.

- Herr, K., & Anderson, G. (2005). *The action research dissertation: A guide for students and faculty*. Thousand Oaks, CA: Sage Publications Ltd.
- Herr, K., & Anderson, G. (2015). *The action research dissertation: A guide for students and faculty, second edition*. Thousand Oaks, CA: Sage Publications Ltd.
- Hirtle, J. (1996). Social Constructivism. *English Journal*, 85, 91-92.
- Holloway, I., & Biley, F. (2011). Being a qualitative researcher. *Qualitative Health Research*, 21, 968-975, doi:10.1177/1049737210395607.
- Hong, J., & Eamon, M. (2012). Students' perceptions of unsafe schools: An ecological systems analysis. *J Child Fam Stud*, 21, 428-438.
- Howell Major, C., & Savin-Baden, M. (2011). Integration of qualitative evidence: Towards construction of academic knowledge in social science professional fields. *Qualitative Research*, 11, 645-663, doi:10.1177/1468794111413367.
- Hylander, I. (2012). Conceptual change through consultee-centered consultation: A theoretical model. *Consulting Psychology Journal: Practice and Research*, 64, 29-45, doi:10.1037/a0027986.
- Jha, A. (2012). Epistemological and pedagogical concerns of constructionism: Relating to the educational practices. *Creative Education*, 3, 171-178, doi:10.4236/ce.2012.32027.
- Jeary, J., & Schwean, V. (2012). How can psychological assessment inform classroom practice? The role of the school psychologist in Canadian schools. In C. F. Webber & J. L. Lupart (Eds.), *Leading Student Assessment, Studies in Educational Leadership*, 15, 107-132, doi:10.1007/978-94-007-1727-5-6.

- Jimerson, S., Burns, M., & VanDerHeyden, A. (2016). From response to intervention to multi-tiered systems of support: Advances in the science and practice of assessment and intervention. In S. Jimerson, M. Burns & A. VanDerHeyden (Eds.), *Handbook of response to intervention: The science and practice of multi-tiered systems of support, second edition* (pp. 1-8). New York, NY: Springer Science+Business Media.
- Johnson, G. (2012). The ecology of interactive learning environments: situating traditional theory. *Interactive Learning Environments*, 22, 298-308, doi:10.1080/10494820.2011.649768.
- Jordan, J., Hinds, Y., & Saklofske, D. (2009). School psychology in Canada: A survey of roles and functions, challenges and aspirations. *Canadian Journal of School Psychology*, 24, 245-264, doi:10.1177/0829573509338614.
- Kaiser, L., Rosenfield, S., & Gravois, T. (2009). Teachers' perceptions of satisfaction, skill development, and skill application after instructional consultation services. *Journal of Learning Disabilities*, 42, 444-457.
- Kelliher, C., Riley-Tillman, T., & Power, T. (2008). An initial comparison of collaborative ad expert driven consultation on treatment integrity. *Journal of Educational and Psychological Consultation*, 18, 294-324, doi:10.1080/104744108024910408.
- Kelly, P. (2005). Practical suggestions for community interventions using participatory action research. *Public Health Nursing*, 22, 65-73.

- Kemal Tekin, A., & Kotaman, H. (2013). The epistemological perspective on action research. *Journal of Educational and Social Research*, 3, 81-91, doi:10.5901/jesr.2013.v3n1p81.
- Kemmis, S., and McTaggart, R. (2008). Participatory action research: Communicative action and the public sphere. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of Qualitative Inquiry, third edition*, 10, 271-330. Thousand Oaks, CA: Sage Publications Ltd. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.473.4759&rep=rep1&type=pdf>
- Kemp-Koo, D., & Claypool, T. (2011). Response to intervention (RTI) in the province of Saskatchewan. *International School Psychology*, 39, 4-6.
- Kennedy, E., Frederickson, N., & Monsen, J. (2008). Do educational psychologists “walk the talk” when consulting? *Educational Psychology in Practice: Theory, Research and Practice in Educational Psychology*, 24, 169-187.
- Kibby, M. (2009). Why is the school psychologist involved in the evaluation of struggling readers? *Journal of Educational and Psychological Consultation*, 19, 248-258.
- Knotek, S. (2005). Sustaining RTI through consultee-centered consultation. *The California School Psychologist*, 10, 93-104.
- Knotek, S., Kaniuka, M., & Ellingsen, K. (2008). Mental health consultation and consultee-centered approaches. In W. Erchul & S. Sheridan (Eds.), *Handbook of*

Research in School Consultation (pp. 127-145). New York, NY: Lawrence Erlbaum Associates.

Knotek, S., Rosenfield, S., Gravois, T., & Babinski, L. (2012). The process of fostering consultee development during instructional consultation. *Journal of Educational and Psychological Consultation*, 14, 303-328.

Koshy, E., Koshy, V., & Waterman, H. (2011). *Action research in healthcare*. Sage Publications. Retrieved from http://www.sagepub.com/upm-data/36584_01_Koshy_et_al_Ch_01.pdf.

Kozik, P., Cooney, B., Vinciguerra, S., Gradel, K., & Black, J. (2009). Promoting inclusion in secondary schools through appreciative inquiry. *American Secondary Education*, 38, 77-91.

Labaree, D. (1992). Power, knowledge, and the rationalization of teaching: A genealogy of the movement to professionalize teaching. *Harvard Educational Review*, 62, 123-154.

Lambert, N. (2004). Consultee-centered consultation: An international perspective on goals, process and theory. In N. Lambert, I. Highlander, & J. Sandoval (Eds.), *Consultee-centered Consultation: Improving the Quality of professional Services in Schools and Organizations* (pp. 3-19). Mahwah, NJ: Erlbaum.

Lane, K., Mahdair, J., & Borthwick-Duffy, S. (2003). Teacher perceptions of the prereferral intervention process: A call for assistance with school-based interventions. *Preventing School Failure*, 47, 148-155.

- Larney, R. (2003). School-based consultation in the United Kingdom: Principles, practice and effectiveness. *School Psychology International*, 24, 5-19. DOI: 10.1177/0143034303024001518.
- Lawton, J., Saunders, R., & Muhs, P. (1980). Theories of Piaget, Bruner, and Ausubel: Explications an implications. *The Journal of Genetic Psychology*, 136, 121-136.
- Ledoux, S. (2012). Behaviorism at 100. *American Scientist*, 100, 60-65.
- Lee, G. (2012). Reconsidering constructivism in qualitative research. *Educational Philosophy and Theory*, 44, 403-412, doi:10.1111/j.1469-5812.00720.x.
- Levin, M., & Greenwood, D. (2008). The future of universities: Action research and the transformation of higher education. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice*, (pp. 211-226). Thousand Oaks, CA: Sage Publications Ltd.
- Lewin, Kurt (n.d). Quote by Lewin, Kurt on Understanding. *Quotations Book*. Retrieved April 25, 2018 from <http://link.galegroup.com/apps/doc/A234839962/ITOF?u=ureginalib&sid=ITOF&xid=1273bfa6>.
- Lewthwaite, B. (2011). *Applications and utility of Urie Bronfenbrenner's Bio-ecological Theory*. Manitoba Education Research Network: Monograph series. Winnipeg, MB: University of Manitoba. Retrieved October 5, 2013 from <http://www.mern.ca/monographs/Bio-Ecological.pdf>.

- Lilles, E., Griffiths, A., Santiago Cardenas, A., Chacko, Y., & Jimerson, S. (2008). A Consultation Model to Facilitate Reading Success. *The California School Psychologist*, 13, 19-32.
- Lopez, E., & Nastasi, B. (2008). Section commentary: An integrative view of process/outcome research from selected models of consultation. In W. Erchul & S. Sheridan (Eds.), *Handbook of Research in School Consultation*, (pp. 247-265). New York, NY: Lawrence Erlbaum Associates.
- Ludema, J., Cooperrider, D., & Barrett, F. (2006). Appreciative inquiry: The power of the unconditional positive question. In P. Reason & H. Bradbury (Eds.), *Handbook of Action Research*, (pp. 155-165). Thousand Oaks, CA: Sage Publications Ltd.
- Ludema, J., & Fry, R. (2008). The practice of appreciative inquiry. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice*, (pp. 280-296). Thousand Oaks, CA: Sage Publications Ltd.
- Luiselli, J. (2008). Focus, scope and practice of behavioral consultation to public schools. *Child & Family Behavior Therapy*, 24, 5-21, doi:10.1300/J019v24n01_02.
- Manz, P. (2007). Cultivating fertile grounds: Enhancing and extending the scientific base of social and emotional learning. A commentary on "The Scientific Base Linking Social and Emotional Learning to School Success," a chapter by Joseph Zins, Michelle Bloodworkth, Roger Weissberg and Herbert Walberg, *Journal of*

Educational and Psychological Consultation, 17, 211-218,

doi:10.1080/10474410701346642.

Martens, B & DiGennaro, F. (2008). Behavioural consultation. In W. Erchul & S. Sheridan (Eds.), *Handbook of Research in School Consultation*, (pp.147-170).

New York, NY: Lawrence Erlbaum Associates.

McAteer, M. (2013). *Action research in education*. Thousand Oaks, CA: Sage Publications Ltd.

McDougall, J., Nastasi, B., & Chafouleas, S. (2005). Bringing research into practice to intervene with young behaviorally challenging students in public school settings: Evaluation of the behavior consultation team (BCT) project. *Psychology in Schools*, 42, 537-551, doi:10.1002/pits.20090.

McGarry Klose, L., Plotts, C., & Lasser, J. (2012). Participants' evaluation of consultation: implications for training in school psychology. *Assessment & Evaluation in Higher Education*, 37, 817-828.

McGlinn Manfra, M. (2009). Action research: Exploring the theoretical divide between practical and critical approaches. *Journal of Curriculum and Instruction*, 3, 32-46, doi:10.3776/joci.2009.v3n1p32-46.

McMahon, G., Mason, E., Daluga-Guenther, N., & Ruiz, A. (2014). An ecological model of professional school counselling. *Journal of Counseling & Development*, 92, 459-471, doi:10.1002/j.1556-6676.2014.00172.x.

McNiff, J. (2013). *Action research principles and practice third edition*. New York, NY: Routledge.

- Meyers, A., Meyers, J., Graybill, E., Proctor, S., & Huddleston, L. (2012). Ecological approaches to organizational consultation and systems change in educational settings. *Journal of Educational and Psychological Consultation*, 22, 106-124, doi:10.1080/10474412.2011.649649.
- Mike, K. (2010). School psychologists' preferences on response to intervention. *ProQuest Dissertations and Theses*, 2010, Doctor of Philosophy Dissertation, University of Arizona, USA.
- Moore, J. (2011). Behaviorism. *The Psychological Record*, 61, 449-464.
- Nastasi, B. (2006). Multicultural issues in school psychology practice. *Journal of Applied School Psychology*, 22, 1-11, doi:10.1300/J370v22n02_01.
- Nastasi, B., Varjas, K., Schensul, S., Silva, K., Schensul, J., & Ratnayake, P. (2000). The participatory intervention model: A framework for conceptualizing and promoting intervention acceptability. *School Psychology Quarterly*, 15, 207-232.
- Neal, J., & Neal, Z. (2013). Nested or networked? Future directions for ecological systems theory. *Social Development*, 22, 722-737, doi:10.1111/sode.12018.
- New Brunswick Department of Education. (2001). *Guidelines for Professional Practice for School Psychologists*. Fredericton, NB: Author.
- Newman, D., Ingraham, C., & Shriberg, D. (2014). Consultee-centered consultation in contemporary schools. *Communique*, 42, 14-17.
- Newton, P. & Burgess, D. (2008). Exploring types of educational action research: Implications for research validity. *International Institute for Qualitative Methods*, 7, 18-30.

- Noell, G., Gansle, K., Mevers, J., Knox, R., Mintz, J., & Dahir, A. (2014). Improving treatment plan implementation in schools: A meta-analysis of single subject design studies. *Journal of Behavioral Education, 23*, 168-191, doi:10.1007/s10864-013-9177-1.
- Noell, G., Witt, J., Slider, N., Connell, J., Gatti, S., Williams, ... Duhon, G. (2005). Treatment implementation following behavioral consultation in schools: A comparison of three follow-up strategies. *School Psychology Review, 34*, 87-106.
- Noffke, S. (2009). Revisiting the professional, personal, and political dimensions of action research. In S. Noffke & B. Somekh (Eds.), *The SAGE Handbook of Educational Action Research*, (pp. 6-23). Thousand Oaks, CA: Sage Publications Ltd.
- Noffke, S., & Somekh, B. (2009). Introduction. In S. Noffke & B. Somekh (Eds.), *The SAGE Handbook of Educational Action Research*, (pp. 1-5). Thousand Oaks, CA: Sage Publications Ltd.
- Odom, S., Peck, C., Hanson, M., Beckman, P., Kaiser, A., Lieber, J., ... Schwartz, I. (n.d.). Retrieved February 2, 2014 from http://education.jhu.edu/PD/newhorizons/Exceptional%20Learners/Inclusion/General%20Information/inclusion_preschool.htm.
- Oja, S., & Smulyan, L. (1989). Collaborative action research: a developmental process. London: Falmer Press.

- Onchwari, G., Onchwari, J., & Keengwe, J. (2008). Teaching the immigrant child: An application of child development theories. *Early Childhood Educ J*, 36, 267-273, doi:10.1007/s10643-008-0269-9.
- Ontario Ministry of Education. (2011). A Guide to Effective Assessment and Instruction for All Students, Kindergarten to Grade 12 Learning for All (Draft). Retrieved from www.ontario.ca/education
- Onwuegbuzie, A., Collins, K., & Frels, R. (2013). Forward: Using Bronfenbrenner's ecological systems theory to frame quantitative, qualitative and mixed research. *International Journal of Multiple Research Approaches*, 7, 2-8.
- Orland-Barak, L. (2009). Unpacking variety in practitioner inquiry on teaching and teacher education. *Educational Action Research*, 17, 111-119, doi:10.1080/09650790802667485.
- Park, P. (2006). Knowledge and participatory research. In P. Reason & H. Bradbury (Eds.), *Handbook of Action Research*, (pp. 83-93). Thousand Oaks, CA: Sage Publications Ltd.
- Pellerin, M. (2011). University-school collaboration action research as an alternative model for professional development through AISI. *Alberta Initiative for School Improvement Journal*, 1, 1-7.
- Piscoe, V., & Maila, W. (2012). Towards constructivist teacher professional development. *Journal of Social Sciences*, 8, 318-324.
- Positive Behavioural Intervention and Supports: Office of Special Education Programs (OSEP), the Technical Assistance Center (2007). [Graphic Image of the

Intervention Continuum]. Retrieved from

https://www.pbis.org/Common/Cms/Images/school_pages/RtI_System_resize.png

Positive Behavioural Intervention and Supports: Office of Special Education Programs (OSEP), the Technical Assistance Center (2007). [Multi-tiered system of support information section]. Retrieved from <https://www.pbis.org/school/mtss>

Powers, K., Hagans, K., & Busse, R. (2008). School psychologists as instructional consultants in a response-to-intervention model. *The California School Psychologist*, 31, 41-53.

Razfar, A. (2013). Dewey and Vygotsky: Incommensurability intersections, and the empirical possibilities of metaphysical consciousness. *Human Development*, 56, 128-133, doi:10.1159/000346536.

Reason, P., & Bradbury, H. (2006). Introduction: Inquiry and participation in search of a world worthy of human aspiration. In P. Reason & H. Bradbury (Eds.), *Handbook of Action Research; Concise Paperback Edition*, (pp. 1-14). Thousand Oaks, CA: Sage Publications Ltd.

Reason, P., & Bradbury, H. (2008). Introduction. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice*, (pp. 1-10). Thousand Oaks, CA: Sage Publications Ltd.

Reich, K. (2007). Interactive constructivism in education. *Education & Culture*, 23, 7-26, doi:10.1353/eac.2007.0011.

Richards, Lyn. (2005). *Handling qualitative data: A practical guide*. Thousand Oaks, CA: Sage Publications Inc,

- Rimehaug, T., & Helmersberg, I. (2010). Situational consultation. *Journal of Educational and Psychological Consultation*, 20, 185-208, doi:10.1080/10474412.2010.500509.
- Robinson, D. (2013). Getting girls in the game: Action research in the gymnasium. *Canadian Journal of Action Research*, 14, 3-28.
- Rosa, E., & Tudge, J. (2013). Urie Bronfenbrenner's Theory of Human Development: Its evolution from ecology to bioecology. *Journal of Family Theory & Review*, 5, 243-258, doi:10.1111/jftr.12022.
- Rosenfield, S. (2008). Best practice instructional consultation and instructional consultation teams. In A. Thomas & J. Grimes (Eds.), *Best Practices in School Psychology V*, (pp. 1645-1660). Bethesda, MD: National Association of School Psychologists.
- Rosenfield, S., & Humphrey, C. (2012). Consulting psychology in education: Challenge and change. *Consulting Psychology Journal: Practice and Research*, 64, 1-7, doi:10.1037/a0027825.
- Rosenfield, S., Silva, A., & Gravois, T. (2008). Bringing instructional consultation to scale. In W. Erchul & S. Sheridan (Eds.), *Handbook of Research in School Consultation*, (pp. 203-223). New York, NY: Lawrence Erlbaum Associates.
- Sagor, R. (1992). *How to conduct collaborative action research*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Sagor, R. (1997). Collaborative action research for educational change. *Association for Supervision and Curriculum Development Yearbook*, 169-191.

- Saldana, J. (2009). *The coding manual for qualitative researchers*. Los Angeles, CA: Sage Publications Ltd.
- Salm, T. (2013). Action research to improve collaboration among student support services teams. *Educational Action Research*, 22, 93-108, doi:10.1080/09650792.2013.854173.
- Sandoval, J. (1996). Constructivism, consultee-centered consultation and conceptual change. *Journal of Educational and Psychological Consultation*, 7, 89-97.
- Saskatchewan Ministry of Education (n.d.). *Curricular Documents*. Retrieved from <https://www.curriculum.gov.sk.ca/webapps/moe-curriculum-BBLEARN/Home?language=en>
- Saskatchewan Ministry of Education. (1991). *Instructional Approaches: A Framework for Professional Practice*. Regina, Canada. Author. Retrieved from <http://www.education.gov.sk.ca>.
- Saskatchewan Ministry of Education. (1992). *The Adaptive Dimension in Core Curriculum*. Regina, Canada. Author. Retrieved from <http://www.education.gov.sk.ca>.
- Saskatchewan Ministry of Education. (2001). *Creating Opportunities for Students with Intellectual or Multiple Disabilities*. Regina, Canada. Author. Retrieved from <http://www.education.gov.sk.ca>.
- Saskatchewan Ministry of Education. (2008). *Guidelines for the Practice of Professional Psychology in Schools within Saskatchewan (Living Document)*. Regina, Canada: Author. Retrieved from <http://www.education.gov.sk.ca>.

- Saskatchewan Ministry of Education. (2009). *Impact assessment profile*. Regina, Canada: Author. Retrieved from <http://www.education.gov.sk.ca>.
- Saskatchewan Ministry of Education. (2010). *Saskatchewan Curriculum: Renewed Curriculum: Understanding Outcomes*. Regina, Canada. Author. Retrieved from <http://www.education.gov.sk.ca>.
- Saskatchewan Ministry of Education. (2001) *Creating Opportunities for Students with Intellectual or Multiple Disabilities*. Regina, Canada. Author. Retrieved from <http://www.education.gov.sk.ca>.
- Scherffius-Jakes, S., & Brookins, C. (2004). Introduction: Understanding ecological programming: Merging theory, research, and practice. *Journal of Prevention & Intervention in the Community*, 27, 1-11, doi:10.1300/j005v2702.
- Sheridan, S., Clarke, B., & Burt, J. (2008). Conjoint behavioral consultation. In W. Erchul & S. Sheridan (Eds.), *Handbook of Research in School Consultation*, (pp. 171-202). New York, NY: Lawrence Erlbaum Associates.
- Sheridan, S., & Gutkin, T. (2000). The ecology of school psychology: Examining and changing our paradigm for the 21st century. *School Psychology Review*, 29, 485-502.
- Sheridan, S., Swanger-Gagne, M., Welch, G., Kwon, K., & Garbacz, S. (2009). Fidelity measurement in consultation: Psychometric issues and preliminary examination. *School Psychology Review*, 38, 476-495.
- Scheurman, G. (1998). From behaviorist to constructivist teaching. *Social Education*, 62, 6-9.

- Skinner, C., McCleary, D., Skolits, G., Poncy, B., & Cates, G. (2013). Emerging Opportunities for School Psychologists to Enhance our Remediation Procedure Evidence Base as we Apply Response to Intervention. *Psychology in the Schools*, 50, 272-298, doi:10.1002/pits.21676.
- Sladczek, I., & Heath, N. (1998). Consultation in Canada. *Canadian Journal of School Psychology*, 13, 1-14, doi:10.1177/082957359801300203.
- Snoeren, M., Niessen, T., & Abma, T. (2011). Engagement enacted: Essentials of initiating an action research project. *Action Research*, 10, 189-204, doi:10.1177/1476750311426620.
- Sontag, J. (1996). Toward a comprehensive theoretical framework for disability research: Bronfenbrenner revisited. *The Journal of Special Education*, 30, 319-344.
- Stoeber, R., & Rivard, L. (2011). Research Study 6: Supporting the professional development of Francophone science teachers in minority language contexts. In B. Lewthwaite (Ed.) *Applications and utility of Urie Bronfenbrenner's Bio-ecological Theory. Manitoba Education Research Network: Monograph series*, (pp. 52-61). Winnipeg, MB: University of Manitoba. Retrieved October 5, 2013 from <http://www.mern.ca/monographs/Bio-Ecological.pdf>.
- Stoiber, K., & Vanderwood, M. (2008). Traditional assessment, consultation, and intervention practices: Urban school psychologists' use, importance, and competence ratings. *Journal of Educational and Psychological Consultation*, 18, 264-292.

- Sullivan, A., & Long, L. (2010). Examining the changing landscape of school psychology practice: A survey of school-based practitioners regarding response to intervention. *Psychology in the Schools, 47*, 1059-1070, doi:10.1002/pits.20524.
- Sullivan, A., Long, L., & Kucera, M. (2011). A survey of school psychologists' preparation, participation, and perceptions related to positive behaviour intervention and supports. *Psychology in the Schools, 48*, 971-985, doi:10.1002/pits.20605.
- Summers, D., & Turner, R. (2011). Outside the green box: embedding education for sustainable development through cooperative inquiry. *Educational Action Research, 19*, 453-468, doi:10.1080/09650792.2011.625682.
- Takaya, K. (2008). Jerome Bruner's theory of education: From early Bruner to later Bruner. *Interchange, 39*, 1-19, doi:10.1007/s10780-0089030-2.
- Thiollent, M. (2011). Action research and participatory research: An overview. *International Journal of Action Research, 7*, 160-174, doi:10.1688/1861-9916_IJAR_2011_02.
- Tissington, L. (2008). A Bronfenbrenner ecological perspective on the transition to teaching for alternative certification. *Journal of Instructional Psychology, 35*, 106-110.
- Trickett, E., & Rowe, H. (2012). Emerging ecological approaches to prevention, health promotion, and public health in the school context: Next steps from a community

psychology perspective. *Journal of Educational and Psychological Consultation*, 22, 125-140, doi:10.1080/10474412.2011.649651.

Truscott, S., Kreskey, D., Bolling, M., Psimas, L., Graybill, E., Albritton, K., &

Schwartz, A. (2012). Creating consultee change: A theory-based approach to learning and behavioral change processes in school-based consultation.

Consulting Psychology Journal: Practice and Research, 64, 63-82,

doi:10.1037a0027997.

Truscott, S., Richardson, R., Cohen, C., Frank, A., & Palmeri, D. (2003). Does rational

persuasion influence potential consultees? *Psychology in the Schools*, 40, 627-

640, doi:10.1002/pits.10132.

Vujnovic, R., Fabiano, G., Morris, K., Norman, K., Hallmark, C. & Hartley, C. (2014).

Examining school psychologists' and teachers' application of approaches within a response to intervention framework, *Exceptionality: A Special Education Journal*,

22,

129-140, doi:10.1080/09362835.2013.865530.

Walker, G. (2014). The significance of Jerome Bruner. *International Schools Journal*,

33, 8-15.

Walter, M. (2010). *Social Research Methods: Second Edition*. South Melbourne, Vic.:

Oxford University Press. Retrieved September 30, 2013 from

http://www.oup.com.au/titles/higher_ed/social_science/sociology/9780195562835/other_social_research_methods

- Wang, Q., & Zhang, H. (2014). Promoting teacher autonomy through university-school collaborative action research. *Language Teaching Research*, 18, 222-24, doi:10.1177/1362168813505942.
- Watkins, C., & Hill, V. (2010). On consultation and beginner educational psychologists. *Educational Psychology in Practice*, 16, 47-52.
- Watkins, M., Crosby, E., & Pearson, J. (2001). Role of the school psychologist: Perceptions of school staff. *School Psychology International*, 22, 64-73.
- Welch, M. (1994). Ecological assessment: A collaborative approach to planning instructional interventions. *Intervention in School and Clinic*, 29, 160-164.
- Wertsch, J. (2005). Making human beings human: Bioecological perspectives on human development. *The British Journal of Developmental Psychology*, 23, 143-151, doi:10.1348/026151004X21134.
- Wertsch, J., & Tulviste, P. (1992). L.S. Vygotsky and contemporary development psychology. *Developmental Psychology*, 28, 548-557.
- White, J., & Kratochwill, T. (2005). Practice guidelines in school psychology: Issues and directions for evidence-based interventions in practice and training. *Journal of School Psychology*, 43, 99-115.
- Wilkinson, L. (2006). Monitoring treatment integrity: An alternative to the 'consult and hope strategy in school-based behavioral consultation. *School Psychology International*, 27, 426-438.

- Williams, J., & Greenleaf, A. (2012). Ecological psychology: Potential contributions to social justice and advocacy in school settings. *Journal of Educational and Psychological Consultation*, 22, 141-157, doi:10.1080/10474412.2011.649653.
- Witt, J., Gresham, F., & Noell, G. (1996). What's behavioral about behavioral consultation? *Journal of Educational and Psychological Consultation*, 7, 327-344.
- Wizda, L. (2004). An instructional consultant looks to the future. *Journal of Educational and Psychological Consultation*, 15, 277-294.
- Wong, W. (2001). Co-constructing the personal space-time totality: Listening to the dialogue of Vygotsky, Lewin, Bronfenbrenner, and Stern. *Journal for the Theory of Social Behavior*, 31, 365-382.
- Ysseldyke, J., Burns, M., Dawson, P., Kelley, B., Morrison, D., Ortiz, S., ... & Telzrow, C. (2006). *School Psychology: A Blueprint for Training and Practice III*. Bethesda, MD: National Association of School Psychologists.
- Ysseldyke, J., Burns, M. K., & Rosenfield, S. (2009). Blueprints on the future of training and practice in school psychology: What do they say about educational and psychological consultation? *Journal of Educational and Psychological Consultation*, 19, 177-196. doi:10.1080/10474410903106448.
- Ysseldyke, J., Lekwa, A., Klingbeil, D., & Cormier, D. (2012). Assessment of ecological factors as an integral part of academic and mental health consultation. *Journal of Educational and Psychological Consultation*, 22, 21-43, doi:10.1080/10474412.2011.649641.

Zeni, J. (1998). A guide to ethical issues and action research. *Educational Action Research*, 6, 9-19, doi:10.1080/09650799800200053.

APPENDICES

Appendix A: Ethics Approval

University of Regina
Research Ethics Board
Certificate of Approval

REB #
2016-015

Investigator(s)	Tammy Anne Ferguson	Dr. Twyla Salm, Dr. Katherine Arbuthnott, and Dr. Wanda Lyons,
Department: Supervisor:	Faculty of Education Dr. S. Anthony Thompson	Funder: McDowell Foundation Research Grant

Title: Psychological Consultation in Schools and an Ecological Approach to Intervention Implementation

APPROVED ON: February 29, 2016 RENEWAL DATE: February 29, 2016

APPROVAL OF:

Application For Behavioural Research Ethics Review
Recruitment Poster
Participant Consent Form
Semi-structured guides for initial and concluding interviews
Transcript release form

FULL BOARD MEETING

DELEGATED REVIEW X

The University of Regina Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol, consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS

In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions: <http://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/forms1/ethics-forms.html>.

Dr. Larena Hoeber, Chair

University of Regina Research Ethics Board

Please send all correspondence to:

Research Office
University of Regina
Research and Innovation Centre 109
Regina, SK S4S 0A2
Telephone (306) 585-4775
Fax: (306) 585-4893
research.ethics@uregina.ca

Appendix B: Psychologist Recruitment

**Department of Education
University of Regina**

PARTICIPANTS:

Registered Psychologists Working in Schools NEEDED FOR ACTION RESEARCH PROJECT

We are looking for collaborative partners to participate in a study of
Collaborative Ecological Consultation

As a participant in this study, you would be asked to: (participate in all aspects of the action research project including planning, acting and reflecting. It may include: interviews and/or focus groups, journaling, data collection, data review, and/or analysis.)

Your participation would involve approximately 24 hours of direct research time (not including classroom observation or teaching time) over a ten-month timeframe.

Psychologists will have participation time as part of their role in the school division. Teacher partners will have access to substitute teacher time while working on this project.

For more information about this study, or to volunteer for this study, please contact: Tammy Ferguson at fergusot@uregina.ca

This study has been reviewed and received approval through the Research Ethics Board, University of Regina.

Appendix C: Classroom Teacher Recruitment Information Letter

Research and Participant Recruitment Notice to Principals and Teachers

Principal Investigator: Ms. Tammy Ferguson
Title: Collaborative Ecological Consultation

UofR File #: 2016-015

Dear Principal and Classroom Teachers (school name):

This letter is to notify you of the approval of the research project Collaborative Ecological Consultation to be conducted within the school division. Ms. Tammy Ferguson will be working with participating psychologists and teachers on a doctoral degree research project. Ms. Ferguson and the psychologist attached to the school will meet with you to review the research process, teacher recruitment, parental consent and timeline requirements.

Teacher substitute time will be provided for the teachers to participate in:

- two interviews (2-3 hrs each) (March and then June/July)
- collaborative planning to embed interventions within a curricular unit of study (2 to 3 hrs) (March/April)
- research logs/diaries (3-5 hrs) (March through to July), and
- reviewing data analysis (2-3 hrs) (October/November).

It is anticipated teachers will be provided up to approximately 3 days of substitute time during or in lieu of their participation time. It is anticipated 1-2 days (2-4 half days) will be available this school year (2015-16) and 1 to 2 days (2-4 half days) will be available next school year (2016-17). The research is expected to begin in March 2016 and for the data analysis review to be completed by November 2016.

The psychologists will participate within their work day as the research is considered an extension of standard practices.

I thank-you in advance for your support of this project. Please contact me if you have any questions or concerns.

School Division Superintendent
Tammy Ferguson Researcher

Appendix D: Initial Interview Semi-Structured Questions

Teacher	Psychologist
What is your role within the school division?	What is your role within the school division?
Can you tell me a bit of your background?	Can you tell me a bit of your background?
What are your responsibilities within the school division?	What are your responsibilities within the school division?
Have you received previous psychological consultative services within your role?	Have you provided previous psychological consultative services within your role?
Describe the consultation process?	Describe the consultation process?
What is it about this action research project that resonated with you? Why did you want to be a participant?	What is it about this action research project that resonated with you? Why did you want to be a participant?
What do you see as some of the greatest challenges with the consultation process in the teacher role?	What do you see as some of the greatest challenges with the consultation process in the psychologist role?
Do you have any concerns specific to the intervention implementation phase of consultation?	Do you have any concerns specific to the intervention implementation phase of consultation?
Tell me about the planning to embed interventions within a curricular plan?	How can you provide supports that's embedded into the curricular plan?

What do you hope to get out of your collaborative participation in this project?	What do you hope to get out of your collaborative participation in this project?
<p>Research Questions:</p> <p>Question 1: How do the teachers and psychologists experience and interpret collaboration in the implementation phase of psychological consultation?</p> <p>Question 2: Within extended consultation, which classroom/teacher or micro-level factors were discussed? And how did such discussions lead to the embedding of particular interventions into a curricular unit of study?</p> <p>Question 3: How did students respond to the interventions with collaboration in the implementation phase?</p>	
Is there anything else you want to add?	Is there anything else you want to add?

Appendix E: Final Interview Semi-Structured Questions

Teacher	Psychologist
<p>This research project data is qualitative and includes your thoughts and experiences throughout the project steps. I will start by asking you to just recap the research process from your perspective.</p>	
<p>Research Questions: Question 1: How do the teachers and psychologists experience and interpret collaboration in the implementation phase of psychological consultation? Question 2: Within extended consultation, which classroom/teacher or micro-level factors were discussed? And how did such discussions lead to the embedding of particular interventions into a curricular unit of study? Question 3: How did students respond to the interventions with collaboration in the implementation phase?</p>	
<p>Questions 1 and 2: Think back, what was your experience when you were first provided the student report and discussed at a team meeting overall – prior to the collaborative planning?</p>	<p>Questions 1 and 2: Think back, what were your experiences when you first provided the student report and discussed at a team meeting – prior to the collaborative planning?</p>
<p>What were your thoughts and experiences, in particular to the recommendations/interventions – prior to the collaborative planning?</p>	<p>What thoughts and experiences did you have, in particular related to the recommendations/interventions - prior to the collaborative planning?</p>
<p>Describe the collaborative planning process.</p>	<p>Describe the collaborative planning process.</p>
<p>Tell me about your experiences in the collaboration to embed interventions within a curricular unit plan? (+ and -)</p>	<p>Tell me about your experiences in the collaboration to embed interventions within a curricular unit plan? (+ and -)</p>

What personal (teacher) or classroom factors impact intervention implementation that you were able to discuss and deliberate during the collaborative planning?	Were there teacher or classroom factors discussed and deliberated during the collaborative planning that resonate with you?
Did or do these factors impact your planning?	How do you reconcile all the teacher/classroom differences when making recommendations for teacher planning?
Question 3: What are your thoughts about the curricular unit plan now that the teaching is complete as it relates to the student? How did the student do?	Question 3: Did you complete observations of the interventions within the curricular unit discussed from the collaborative planning – what did you observe? How did the student do?
What other data, beyond anecdotal, do you have on the student response to interventions?	What other data do you have on the student response to the interventions?
Is this data similar to data you would have collected without the collaborative planning process?	How did you obtain student response to the interventions prior to the research?
So, if you were designing how a psychologist provides consultation and recommendations to teachers, what would that look like?	So, if you were designing how a psychologist provides consultation and intervention implementation/follow-up supports, what would that look like?
What have the benefits and drawbacks of participating in this action research project?	What have been the benefits and drawbacks of participating in this action research project?
Is there anything else you want to add?	Is there anything else you want to add?
