



# Exploring the Ecological Approach Used by RTLBs in Interventions for Students with Learning and Behaviour Needs

## A Personal Perspective

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### ABSTRACT

The ecological approach, based on the RTLB Toolkit that guides RTLBs in New Zealand, is one of the seven principles used for interventions for students with learning and behaviour concerns. As a result of a paradigm shift moving from a functional limitations perspective to a more inclusive/ecological perspective in 1999, RTLBs have been trained using this model. This article explores the ecological approach and provides a brief overview of relevant evidence that informs best practice of this approach. A personal perspective based on the author's experience is made, with suggestions and lessons learned.

### Practice paper

**Keywords:** *Ecological approach, , evidence-based, interventions, RTLB*

### INTRODUCTION

Resource Teachers: Learning and Behaviour (RTLB) in New Zealand have been trained in the use of ecological approaches for intervention since 1999. The RTLB Toolkit (Ministry of Education, 2011) has seven principles that guide RTLB practice. The ecological approach forms one of these principles. It is well advocated by the Ministry of Education and is closely monitored by RTLB Cluster Management. The Toolkit describes the ecological approach as: "... the students' needs, programmes, interventions and support provided must all be understood and shaped within the context of the students' current learning environment ..."(p.31).

Hence a student's learning and/or behaviour is assessed within the parameters of the regular class routine, the teaching and learning interactions that happen in class (student-teacher relationship, student-to-student relationship), and the interactions and routines in the school. The ecological perspective describes the student and their learning environment as integral to the relationship and the expectations. The learning is continuous, interactive and occurs in

the said environment. The ecological assessment in this context is culturally-responsive to the learning behaviour of the student.

Evidence-based information about ecological approaches/models suggests that there is much benefit when this approach is proficiently and efficiently used (Mohsin, 2011; Thomson, 2004; Ysseldyke & Christensen, 1993).

Having formerly worked with the Ministry of Education (MOE) Special Education and with current experience as an RTLB, the author has had wide exposure to this approach. Ecological assessment is a major component of the RTLB Toolkit and the early, essential steps in this process involves the obtaining of information/data about the student from multiple sources, consulting and involving the teacher, school, and whanau. This is then followed with the triangulation of data and the analysis of the information. At the feedback and planning meeting, the facts and figures are collaboratively discussed and clarity is obtained about student concerns, intervention strategies and support required.

### EVIDENCE-BASED PRACTICE

Researchers (Alton-Lee, 2003; Kaff, Teagarden & Zabel, 2011) have generally stated the difficulty in defining evidence-based practice. The Australian Capital Territory (2007) document defines evidence-based practice as "... the collection and analysis of relevant data and research and the application of this evidence to teaching and learning and to whole school improvement" (p.1). According to Hattie (2005), evidence-based practice is about "the language of progression" (p.14). He further states that practitioners should ask strategic questions about the data, how this data could be converted to information and knowledge, and how one can use this information wisely and put it into appropriate action.

The ecological approach used by RTLBs in New Zealand can be traced back to the work of Bronfenbrenner, Vygotsky and Dewey. Based on

the ecological model of Bronfenbrenner (1979), the child is centrally positioned within a series of inter-connecting environmental systems. This approach appears to be significant in that the student with learning and behaviour needs is given a vital place and is not viewed as a problem. Alternatively, all the other variables or elements that relate to and impact on the student are considered as the influences.

Both Bronfenbrenner (1979) and Vygotsky (1978) postulated that human development occurs within the social interactions among people. Dewey (1938) initially described this approach by stating that the actions of individuals are affected by the whole situation in which they are involved and people interact with one another to form it.

Similarly, Annan's (2005) model of 'situational analysis framework' is based on the ecological approach which suggests that the problem is not within the child but outside of it. This framework for professional practice and research in educational psychology includes a set of principles that psychologists use to ensure their work is evidence-based, ecological, collaborative and constructive. The RTLB Toolkit embraces all these principles as well. Effective RTLB support includes and maintains an inclusive educational focus in all-encompassing environments, enables teachers to meet the needs of diverse learners, and achieve positive and measurable outcomes for students with learning and behaviour difficulties (Hancox & MacDonald, 2011).

The RTLB Toolkit (2011) explains that using an ecological approach to interventions means that student learning and/or behaviour is assessed within the regular routines, interactions and practices of the classroom and school. The ecological perspective is based on the understanding that the student and the learning environment mutually interact, learning is interactive and happens in relevant contexts and to effectively understand assessment, learning behaviour should be considered in the larger cultural context.

## RTLB APPROACH

The author has qualifications in special education and educational psychology and has been working in these fields for more than 25 years. For close to three years now, he has been working as an RTLB in two Decile 1 schools, two Decile 9 schools and one Decile 10 school. For individual case work students, the ecological approach and practice used by the author involved the following:

1. At the initial meeting, data is gathered from the class teacher, school and parents. The presenting concerns, challenges and expectations

for interventions are discussed and a shared understanding about the student is obtained. Reports from other professionals such as psychologists, speech therapists, occupational therapists, medical doctors and others are also considered necessary. A consensus is reached in regard to the nature and type of assessments that may be used, a service agreement is signed at this stage, if possible, and timelines are provided for the feedback and planning meeting.

2. This is followed by data collection in the classroom and school and may involve observing the student in the class, playground and his/her participation in related activities in the school. Depending on the nature of the observation, relevant data sheets are used to capture student behaviour/learning interactions in class (student-to-student and teacher-to-student interaction). Information from these observations is analysed and possible trends/patterns and triggers/antecedents are recorded. The focus here is to obtain an understanding of interactions in the class and school.
3. The next stage involves teacher interview/discussion about the student's progress and challenges in class. Class/school assessment records of the student are also gathered and analysed. If required, a sociogram may be administered for all the students in the class to establish relationship patterns. A curriculum-based assessment is also carried out to ascertain the academic achievement of the student.
4. If the student is referred for behaviour and learning concerns in class/school, the following published assessments may be used:

*Dyslexia Portfolio Assessment (DPA)*. A fairly recent, literacy-based assessment developed by Turner (2008). It consists of eight, brief diagnostic tests that help identify areas of difficulty in literacy learning.

*Automated Working Memory Assessment (AWMA)*. A computer-based assessment of working memory skills, developed by Alloway (2007), and used to screen individuals for significant working memory problems.

*Behavioural and Emotional Rating Scale (BERS-2)*. Developed by Epstein (2004), it is designed to provide professionals with an assessment of emotional and behavioural strengths in children. It uses a strengths-based approach and focuses on three potential sources of data: the child, a parent or caregiver, and a teacher or therapist. If required, a functional behaviour assessment is carried out.

With reference to Rowe's (2005) assertion that one should be 'data informed' and not 'data driven', the author also uses other assessments as appropriate to obtain reliable information on the status quo or potential strengths and needs of the student.

5. Parents are also consulted throughout this ecological process as they can provide perspectives on matters that serve in the best interests of the student (Comer & Haynes, 1991). A home visit is also included to gain some insight about the student's home environment and lifestyle. Information from this visit can provide rich data on cultural-responsiveness and inclusion.
6. If necessary, visits or interviews may also be carried out with other professionals who come in contact with the student such as private tutors or support therapists. This ensures that information is widely gathered and there is a shared understanding (inter-professional practice) that all parties should work collectively and in the best interests of the student. Whenever possible, support professionals are also invited for the planning meetings.
7. Once all the identified elements of the ecological process are completed, the data is analysed constructively (identifying positive supports in the environment), using relevant research that is legitimate to inform and guide the process (evidence-based). The process is collaborative as all concerned parties have been consulted and their views considered.

In the majority of cases it was possible to follow most of the components of the ecological process above. However, there continues to be some challenges in regard to the breadth and depth of this process.

### **CHALLENGES IN THE PROCESSES OF THE ECOLOGICAL APPROACH**

In their approaches to data gathering and analysis for case work, RTLBs need to be versatile to ensure effectiveness and acceptability of interventions (Elliot & Darveaux, 1985). The author's individual experience in this is one of continued learning and reflection. Listening to the voices of students, school staff, whanau and the community is crucial for success and towards quality RTLB practice. Best practice in RTLB work is observed when every element of the ecological approach synergises to inform and guide effective, proficient understanding and planning for the student or project work.

The following are some of the challenges faced by the author when using the ecological approach in his RTLB practice:

#### *1. Timeframe*

The RTLB Toolkit advises that the intervention plan or feedback should be completed within 3 to 4 weeks from the date of referral. Whilst this could be achieved in most cases, there are other factors that may impact on meeting the time frame or influence the quality of the process. This could be dependent on the workload of the RTLB (number of cases, projects, systems work, specific-focus group involvement - PB4L, research, assessment, Incredible Years and others).

#### *2. Data gathering*

This should be sufficient and accurate to ensure that student outcomes are relevant to inform teaching practice and programme delivery. Making informed judgement on the quantity and quality of information/knowledge required can be arbitrary, and is dependent on the knowledge and experience of the RTLB.

#### *3. Collection, analysis and application of evidence*

RTLBs need to consider and ensure that these are undertaken within the values shared by the school and community.

#### *4. Accuracy of evidence obtained*

Ensuring this can be a complex process. How would RTLBs know that their data collection for assessment is valid, reliable and was undertaken with rigour and depth?

RTLBs need to be guided by ensuring that the data/evidence gathered answers and brings clarity to the concerns raised in the referral/initial meeting. It must be also ensured that this data is comparable to other available data. Personally, the author is of the opinion that there is still potential for improvement for him in this process.

#### *5. Data reporting and the language used*

These are crucial for the success of the ecological process. For instance, the author had to explain or re-write information numerous times to ensure team members clearly understood an assessment result, how the data was analysed, and the use of new terms. This can cause frustration or lack of buy-in (acceptance) from team members, and frequently, there is insufficient time during meetings to clarify or give adequate information.

#### *6. Constructive debate/discussion on the ecological assessment*

This should be present at the initial meeting, and at the feedback and planning meeting. Empowering parents, and sometimes teachers, for this process is necessary. There have been occasions when the SENCO or a member from senior management would take over and influence

the meeting.

When there is a lack in the inter-professional practice process, it can result in goals not being met. Effective coordination and monitoring is required.

#### 7. *Consent procedures and confidentiality*

Following these is crucial and must be respected. There have been occasions, due to timeframe requirements, when this procedure was not fully complied with. In some situations, school staff appear to openly discuss the casework students amongst themselves.

8. Evidence is linked to informed decisions about the instructional environment, school programme and resulting plan of action. This must be ensured as it forms the final result of the ecological assessment. Commonly during planning meetings, there can be an agreement to target goals and how the plan of action can unfold. However, this process can become weak during the implementation phase. If there is poor acceptability of the intervention or teacher buy-in, there can be a lack of integrity in the interventions proposed. Continuous monitoring and support is essential, and strategic decision-making is required at the right time. Making this possible is an on-going challenge for the author.

The main challenges faced by the author in using the ecological approach were in enabling effective gathering of evidence (rigour), and in ensuring that all team members had been consulted and their views documented efficiently. In addition, accessing evidence-based literature within the timeframe for the casework or project work, synthesising all the information and making constructive hypothesis for intervention posed another significant challenge.

### **LESSONS LEARNED**

When undertaken proficiently and efficiently, the ecological assessment does support and improve learning (Masters, 2005). Masters suggests the following elements operate at both classroom and whole school levels:

- a. Identification and planning (*What do we know?*)
- b. Systematic observations and synthesis of evidence (*What do we do?*)
- c. Reflection on what has worked well and what has not (*What do we know now?*)
- d. Commitment to replicating effective practices (*What do we do now?*)

Though diligently following these elements may be challenging, it could form the direction and aspirations of RTLBs.

To a large extent, the RTLB practice is on increasing teacher and school capability and capacity. As aptly stated by Alton-Lee (2003), teachers have the greatest effect on students. RTLBs can and do provide individual as well as systems-level support in this respect. Understanding the classroom culture or ecology is considered important to the development of culture-specific, ecologically-valid interventions that are acceptable to the teacher (Nastasi, Moore & Varjas, 2004).

According to Detrich (1999), change is more likely to be sustainable if the interventions require teachers to enhance, develop and refine their practices rather than radically change their procedures or introduce new ones. A sense of self-efficacy is crucial for teachers to adopt and continue with new practices (Wong, 1997). Thomson (2004) states that RTLBs need theory, research-base and methodological rigour of the scientist, coupled with an understanding of the critical variables in the ecology of the classroom.

New research suggests that in order to serve children better from an ecological perspective, professionals need to provide efficient services to education systems (Meyers et al., 2012). This is the challenge for all RTLBs in New Zealand.

The RTLB study programme jointly organised by Massey University and Canterbury University is a cutting-edge programme preparing RTLBs for this role. Equipped with new knowledge, skills, competence and tools, we are also evidence-based and collaborative; enabling us to serve children more proficiently and efficiently.

Cultural responsiveness and evidence-based practice are two key competencies given much preference and motivation for effective RTLB practice. Ecological approaches used by RTLBs require serious consideration on multiple variables that may impact on Maori, Pasifika and other multi-cultural students (Acle, Roque & Contreras, 2004).

### **CONCLUSION AND SUGGESTIONS**

The aim of this paper was to explore the ecological approach used by RTLBs in New Zealand, which is one of the principles of the RTLB Toolkit that guides RTLB practice. The paper also provided relevant information on the evidence that underpins this approach. The ecological approach used in RTLB practice was also examined critically, based on the author's perspective and experience as an RTLB. Challenges on the use of the ecological approach were also described. Lessons learnt from the author's experience provided the backdrop of personal and current RTLB practice.

Recent literature postulates that an ecological approach to gather reliable and valid data, and to inform evidence-based practice has high integrity and acceptance of interventions for students with learning and behaviour difficulties (Berryman et al., 2000; Mohsin, 2011; Thomson, 2004). The RTLB Toolkit (2011) highlights this principle as a shift from a functional limitations perspective towards a more inclusive/ecological perspective (Thomson, Brown, Jones & Manins, 2000). In addition, more relevant to using this approach is that it focuses on the active participation and consultation of the whanau and community. Using this approach, triangulation of data is highly evident (Altrichter, Feldman, Posch & Somekh, 2008).

The following are the main suggestions identified for an efficient and proficient ecological approach in RTLB practice, based on the author's experience:

1. Consultation with school staff, whanau, relevant professionals, student, and the community needs to be thorough and well-documented.
2. Inter-professional practice involves a shared understanding of the problem or concern; thus pooling resources and crafting an efficient intervention for the student(s). This practice would require serious commitment and coordination to be deemed effective.
3. RTLBs workload should be balanced or realistic to ensure that it does not impact on the quality of their work.
4. The use of clinical assessments only, whilst necessary, should not significantly influence the planning of interventions. Information from other relevant sources especially from whanau, class and school environments is also crucial for student's success. Thus, triangulation of data is essential for a balanced analysis (reliability and validity) and efficient planning of intervention. More rigour/effort is required in this respect.
5. The student's psychological health and wellbeing requires attention and support besides academic achievement. Not all school staff have the ability or the knowledge to address this efficiently. A more concerted effort to make this possible is required.
6. Frequent home visits and establishing a good rapport with parents/whanau is highly recommended.

RTLBs need to ensure that consistency is observed in all areas of their work. The ecological approach is one of the principles that RTLBs have to follow for an efficient and credible outcome in the interventions proposed and implemented. Every effort should be

made to ensure there is integrity in RTLB work. Thus, learning is continuous and reflective. Commitment and passion in RTLB practice can generate positive outcomes, making a significant difference in the learning and behaviour of children. Although RTLBs use evidence-based practice, we are still in the early years of this process. Our RTLB work is challenging yet rewarding; and that makes our practice meaningful and inspiring.

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