Expansive learning: Multicurricular pedagogy and holistic development through a music-centred programme

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with Ruth Round

Abstract

Three years ago Ruth Round began teaching her Year 4, mixed-ability class in ways that made music central to her teaching while at the same time integrating *The New Zealand Curriculum* (Ministry of Education, 2007), focusing in particular on language learning, poetry and art. Through a theoretical frame based on the ideas of Vygotsky, Ruth's programme is underpinned by her belief that music is an art, a discipline, a language and a vehicle of instruction. This paper examines Ruth's expansive learning programme in its third year as a pedagogy of success.

Introduction

I first encountered Ruth Round's teaching programme in 2009 when, on a visit to her central Auckland primary school, I was treated to 2 hours of written and oral expressive language development in a Year 4 class motivated through music-centred learning. When I returned to the school in 2010, enthusiastic children showed me their graphic representations of John Williams' *Fawkes the Phoenix* (from the film soundtrack to *Harry Potter and the Chamber of Secrets*), followed by more representations of sound poems and original poetry. As the music played I noticed the children were responding in a variety of engaged ways: conducting; shaping the musical lines with physical gestures; singing some of the quite complicated themes; or just sitting and quietly swaying to the pulse. I could easily follow the graphic representations, and when I asked questions about why they chose to represent certain features of the music the way they did, I was treated to intelligent explanations that would do many Year 13 music students proud. When two weeks later I made a

further visit, Ruth and the children were listening to a movement from *Kleine Kammermusik* (Opus 42, No. 2, 1922) by the German composer Paul Hindemith. This 20th century art music chamber piece is one I suggest most music students would initially find aurally challenging because of its complex harmonies, unusual melodic lines, textural variety and subtle rhythmic shifts. Not so these Year 4s. At the end they responded to questions about the music, described what they believed was happening musically and as a musical narrative, and then asked to hear it again. Further visits in 2011 found a new class demonstrating the same enthusiasm for language learning through aesthetic affect in music by composers such as Stravinsky, Saint-Saèns and Vivaldi. These experiences led me to ask Ruth to tell her classroom story of this expansive learning programme and to document what I observed and experienced.

The term *expansive learning* is a reworking and extension, by Engestrōm (1999), of Vygotsky's original ideas and explores the collective formation of the Zone of Proximal Development (ZPD). This positions Ruth's pedagogy within the broader spectrum of education and child development (Daniels, 2008, pp. 115–147). Expansive learning incorporates the creation of new learning and new practices for a newly-emerging activity; both the learner and learning are embedded in and are part of the affective transformation of the activity, and this is triggered by the introduction of a new set of concepts or regulations. Expansive learning goes beyond embedding existing knowledge and skills in an established activity, or deploying existing knowledge in new activity settings; these strategies may take place within expansive learning but they take on new meanings, perspectives and motivations as part of the process.

This horizontal dimension, where learning crosses subject boundaries in a nonhierarchical way, reveals new modes of knowledge and skill acquisition and complementary forms of expertise. We will see that Ruth's intertwining of music, poetry, graphic and artistic representation, and visual and descriptive language, is exemplary of this kind of thinking. Vygotsky believes that creativity and the context that supports its enactment involves a social process of learning and transformation such as that offered by Ruth's expansive learning programme.

Appropriating Vygotsky

Vygotsky forged many of his ideas at the time of the Russian Revolution (a time of rapid and intense social upheaval) and his involvement with the development of a state system for education of pedagogically neglected children had an effect on his formative thinking. He noted that the social world of these pedagogically neglected children was mediated by the cultures of the street rather than those of Russian homes and schools. These sociocultural mediations led Vygotsky to begin his development of a cultural-historical theory of the formation of mind.

Vygotsky speculated that "thought is not only mediated externally by signs. It is mediated internally by meanings ... first by meanings and then by words. Therefore, thought is never the direct equivalent of word meanings" (1987, p. 282). "The isolation of meaning from sound, the isolation of word from thing, and the isolation of thought from word are all necessary stages in the history of the development of concepts" (p. 284). This is critical to understanding Ruth's classroom practice.

The concept of the ZPD was formulated by Vygotsky in order to deal methodologically with the need to anticipate a child's course of development. In principle, this appears to be a simple idea, requiring nothing more than deciding on a particular point in a general sequence of development. In this interpretation, the narrow construct conflicts with another central idea of Vygotsky's, "that human development is an open process, which eventually leads to the ZPD itself becoming a concept open to his entire theory and epistemologically demanding" (Del Rīo & Ālvarez, 2007, p. 280).

Vygotsky (1987) discusses the complexities of the relationships between sense and meaning and oral and inner speech. He provides us with a background for concept development and then goes on to discuss the ongoing dynamic between the use of social speech and relatively stable social meanings as they create, conjointly, particular forms and patterns of personal sense which can be construed as the motor of development.

Vygotsky suggests a process of social formation in the shaping of educational ideas and he distances himself from the naturalistic or common sense pedagogical positions, such as the *back to basics* call in contemporary

times. Every function in a child's development appears twice, first on the social level (between people—interpsychological), and later on the individual level (inside the child—intrapsychological). Vygotsky often refers to *scientific concepts*—those introduced by the teacher (but never as a prepackaged concept), and *spontaneous concepts*—those acquired by the child outside of the contexts in which explicit instruction was in place. For Vygotsky, "cooperation and collaboration are crucial features of effective teaching" (Daniels, 2007, p. 311).

Vygotsky argues that the active promotion of creativity is a central function of schooling: "We should emphasize the particular importance of cultivating creativity in school-age children. The entire future of humanity will be attained through the creative imagination; orientation to the future, behavior based on the future and derived from this future, is the most important function of the imagination" (as cited in Daniels, 2008, pp. 22–23).

Clearly, Ruth's programme incorporates a great deal of creative thinking and creative actions. Towards the end of the year Ruth played her class the first movement from the second of Hindemith's *Kleine Kammermusick* chamber pieces. The piece is written for flute, oboe, clarinet, French horn and bassoon. The children were to write a narrative response to the music and here is what one child wrote:

THE BUILDERS AND THE MONKEY

Jim is carrying a heavy chunk of wood while lazy Bob is relaxing on his chair. Then Jim accidently dropes [drops] the piece of wood on his toe. Aaaah!

Bob laughs and they get into a huge commotion, then Jeff arrives from his office to check on them but to his surprise they are fighting and then he commands them to his office.

Just as they opened the door Fluffy opened his parrot-like cage and wizzed [whizzed] out of the door. The two workers zoomed out the door like lightening [lightning], then Fluffy leaped on Bob [Bob's] head like a frog and as Jim lifted his thick long piece of wood then Fluffy bounded away just before the blow but the aim just mist [missed] Fluffy and hit Bobs [Bob's] head. Then to [two] builders became a full on enemy. Flying wood sailed here and there.

> Then the monkey sprang back in his cage and by the time they realised they had cuts and bruses [bruises] all over their bodies.

This example demonstrates active music listening within a conceptual framework where the music becomes both an object and a mechanism through which creative thinking, art making and writing are motivated. The active, focused music listening becomes a leading window or leading activity that opens out to further development and onto new perceptions that give rise to spaces, within the ZPD, for creative possibilities. This action is generated through key questions about the subject (the stimulus— the music), the object (what is developed from the listening experience), the mechanisms that account for development (the teaching strategies and context(s) for learning) and the conditions in which this takes place (the explanatory principle). While the child's response in *The Builders and the Monkey* seems to bear little relationship to music for the unhearing reader, if followed to the music, the story reflects significant musical cues in the piece. The music provides a base for further developments.

Later in his career Vygotsky began to elaborate on his concept of mediation and this led him to outline two different planes of representation—external and internal. The external representational plane is where the mediation process begins, and the internal plane of time resituates perception-and-action.

Vygotsky sees the internal and external as forming part of the same *functional circle* and this has relevance when we come to make a close examination of Ruth's pedagogical principles. The functional circle draws on the 19th century theories of biological functionalism that make links between the psyche and the rest of our vital biological processes and which also influenced the thinking of William James and John Dewey. Action and perception are interdependent, but in Vygotsky's model the functional circle is interfered with and expanded by means of mediating and representing stimuli. Teachers can, through this cultural ecofunctionalist perspective, extend the possibilities of perception by introducing new activity systems which stimulate the child and move them from being passive to active learning participants.

By adopting Vygotsky, but adding the dimension of listening, we can conclude that the children solve practical problems not only with their ears, eyes and hands, but also with the help of speech—as song, poetry or description. This embodied knowing, which embeds the senses, language and gesture into problem solving, reorganises previously narrow assumptions, and they now constitute "the real and vital object of analysis" (Vygotsky, 1930, as cited in Del Río & Álvarez, 2007, p. 295).

Del Río and Álvarez (2007) tell us:

> His [Vygotsky's] general genetic law of cultural development had already defined two aspects of the process: functional *appropriation*, or the stage in which the function, formerly socially distributed, becomes individually mastered; and *interiorization*, or the stage in which the function comes from the external plane into the internal plane ... Interiorization is a genetic process that involves the transformation of functions, and therefore the creation of internal processes; moreover, it constitutes a veritable mental and functional revolution. (p. 298)

These notions of general laws of cultural development are taken into account by Ruth when developing her Year 4 programme:

> The different social and cultural backgrounds in my class, the learning needs of my students, the demands and expectations from parents, the Board of Trustees, and the overall school culture, all have a big influence on my selection of Key Learning Areas. Expectations are placed upon me, the individual teacher, which can affect my individual teaching styles and which, in turn, can impact on my ability to teach effectively and address the identified needs of all the children. Different teaching styles suit different children's learning needs, their ways of learning, their emotional and physical maturity, and I take these into account when planning. My enjoyment of music—I play the trumpet in a community big band—also influences my selection of mechanisms to underpin my programme. I also draw heavily on the Multiple Intelligence Theory of Howard Gardner (1993). (Interview with Ruth Round, March 2011)

Ruth's pedagogical method

The Year 4 class under consideration consists of 25 mixed-ability, multi-ethnicity, mixed-gender (14 male and 11 female) students aged between 8 and 9 years old. Three of the children were classified as having learning disorders, but demonstrated advanced skills in areas of perception not commonly valued in education. These include the ability to talk about music through well-developed skills in oracy, which was encouraged and honed in Ruth's class and largely developed through descriptive and technical language centred in music. For one child, possibly a synaesthete, seeing shapes and colours when listening to music has proven to be a distinct advantage when portraying music through colourful graphic notation and artwork or in the vivid descriptions they give to their narrative evaluation of the music heard in class. This led me to ask Ruth how she might apply individualised teaching and learning styles and legitimise these as an effective pedagogy:

> While I accept my accountability in addressing individual learning needs and subsequently my accountability as to who benefits in the end—for example, is it the child or the system?—I allow for more flexibility in my planning and this enables me to incorporate scaffolding processes as I teach towards my Learning Objectives. I often individualize my teaching and learning without even thinking about the Zone of Proximal Development [and] this is influenced by the educational and learning expectations, benchmarks, resources available, the identified social and cultural needs (based on the 'norms' set by the school culture as a whole). (Interview with Ruth Round, March 2011)

Most of the children in the class had no real background in music and their previous exposure had been minimal. Ruth, a generalist classroom teacher with an interest in music, initiated recorder and ukulele lessons as well as unaccompanied singing to a range of te reo Māori (Māori language) greeting songs (waiata). These were often performed either in unison or in two parts. She also taught students to listen to chords and the elements of music while teaching them the ukulele. Ruth also uses appropriate story books that have a music theme running through them in order to increase the children's understanding of musical thinking. Methods for application in reading and writing are in this way firmly established.

Ruth comments on the process by which she begins to develop higher level functions, accepting that knowledge, skills and understanding evolve and change over time as the child's musicality and musical knowledge develop:

> I consider what we, as educators, already know about music and learning, for example from music therapy, music in the development of language, music as a whole brain activity, music and the connections to societies and cultural expression and so on. I also use music to develop critical and creative thinking and I am conscious of whether one style of music is more effective than another; I also have to think cross-culturally to try to meet the identified learning needs. A piece of music can put a child into an experience in real time; it can also stimulate emotions and feelings. This is the beginning of my scaffolding process, the one that will give them a starting point relevant to their own background experiences—the music. With the music I select, I leave the children's responses open to their own interpretation and from there the opportunity arises for me to ask open-ended questions as part of an inquiry-learning process.

> I identify the elements of music that can potentially enable this to happen in the individual, but I do try to use a one-musical-style-at-a-time approach, to select music, as a pedagogical tool, that suits all of my students in a whole class situation. I identify the types of music that enable this to happen. (Interview with Ruth Round, March 2011)

This means that Ruth begins by establishing what is meant by mood in music and she introduces a verbal repertoire to describe this feature. She then sets out to develop an understanding of pitch, duration and dynamics, which are the essential elements of music as organised sound. Her learning tasks are designed so that there is no wrong answer, and Ruth acknowledges music as an interpretive art. The children listen regularly to a wide range of music and discuss the mood (initially happy/ sad), rhythms, dynamics and cadences (the harmonic endings of musical phrases) and the sound of harmonic shifts—all in the children's own words; for example, using "jumping" to imply staccato. What Ruth seeks to develop is an instinctive knowledge tool rather than an academic one. Taking the music as a real object of analysis, the children solve practical problems that form part of the functional circle described by Vygotsky as they move between the internal and external planes of mediation.

The listening repertoire is selected based on how each piece could help the children achieve what Ruth wants them to learn, understand and do. Telemann was used because it is written in three parts—harpsichord, cello and flute; she later used Hindemith because of its five clearly defined woodwind parts. All listening is carefully scaffolded so that by the end of the year 20th century art music has become a normal part of the listening repertoire. As Ruth teaches in, through, and about the elements of music she takes into account the notion that listening includes and transcends all cultures and this allows her to more effectively scaffold children at varying stages to meet the individualised ZPD expectations in the whole-class situation. Most of the listening the children engage in draws on the repertoire of art music; this is because of its perceived formal structures, clarity of line and the coherence of its musical argument.

After listening to *Fawkes the Phoenix* (John Williams) the children brainstormed descriptive words and phrases as art responses prior to their designing representation through a graphic notation of the piece.

When generating musical representation, Ruth works only with graphic notation, rather than traditional notation, because it encourages the children to realise shapes, see and hear colours, orally describe how the music makes them feel and, where pictorial music is used, allows the children to explain the scene or place they believe the music is describing or representing. They do this on their Music Response Sheet. The children also consider form, the duration of the piece of music, the spatial dynamic aspects of the music (e.g., when it sounds further away—in the distance). The class as a whole commented that this process allows them to better prepare for written description; and Ruth believes it also develops critical thinking skills.

A narrative structure is then established, beginning with a brainstorm and the drafting of ideas (the children's original story based on the music). The children then design a cover for their story and write a 50-word blurb for the back cover. The children reflect on the music through Narrative Inquiry—the narrative of the music and their own narratives surrounding this. Ruth has developed a Music Response Sheet, based on the work of Derewianka (1990) and Knapp and Watkins (1994), which the children complete. The response sheet has four key headings:

- Orientation (setting, time, place, introduce the characters, etc.)
  Remember to:
  1) talk about how the music made you feel and why it made you think of this
  2) talk about the imagery the music helped to form in your mind
- Complication (what was the problem)
  Remember to talk about the music, i.e., pitch (high/low), tempo (fast/slow), tone colour/timbre/texture (blend of sounds and instruments used)
- Events (exciting happenings in the story)
- Resolution (how was the problem resolved)

From this overview we can deduce that Ruth's pedagogical style is one of comprehensible input within engaged and enjoyable situations in classroom-based contexts. Ruth's learners demonstrate high motivation, self-confidence, a good self-image and a low level of anxiety as she seeks to remove stress from their learning environment. They are better equipped, therefore, for success.

Ruth designs her programme with attention to the initial and terminal thresholds within which linguistic and musical development can take place. This helps her to determine the sensitive periods for different educational goals in association with the concept of "mental age". A central idea of Vygotsky's system is that human development is an open process, and thought is not only externally mediated by signs, but is also mediated internally by meanings and the words. This means that thought is never merely a derivative of words, but that thinking occurs *first* and is then externalised through speech and writing, and further refined through poetry and story writing.

Here are two examples that demonstrate how the children respond to the headings of Orientation, Complication, Events and Resolution, in response to Hindemith's *Kleine Kammermusick*. The first example is by the child who wrote the earlier narrative (*The Builders and the Monkey*) and is directly related to that activity. Note the use of sophisticated musical terminology:

Orientation:
I chose builders, wood and the monkey. I chose the builders and the wood

because when the music gets louder, and the music starts to collide I thought of a builder dropping wood on his toe and shrieking and the other builder laughs and they get into a commotion.

Complication:

The clarinet is the lazy and bossy one and the oboe is like the obedient one (sometimes), the oboe is slow, low and it is quite deep and soft and legato the flute was quite loud, mediem [medium] and it made me think of bossy things and it was also staccato and legato the clarinet is fast and comes in every now and then so I thought it was a bossy chief.

Events:

Since the music commotion came again it made me think of a naughty monkey escaping and bounding around the place so then the music started to fire up and the oboe and the flute chased the monkey.

Resolution:

There was a fight and the monkey sprang back into his cage and flung the door shut.

One child called their story *The Missing Recipes*, and here is their response. Note that they have inserted their own choice for some instruments, even though they are not there, and also the creative word formations ("durationing"):

Orientation:

When I close my eyes and listen to the music, the first setting that came to my mind was a forest full of beasts. I choose [chose] mythacal [mythical] creatures because [it sounded like an] ancient tune, and the animals seemed to fit. The music sounds jumpy like a horse galloping. The clarinet, the oboe, the flute and the bassoon are mixed together to represent characters and thier [their] actions. The music made me feel jumpy, curious and nervous. The pitch is high, the tempo is slow and the duration is very fast.

Complication:

When the mayor hears the conversation the low sounds of the basson [bassoon] represent him hollering and the bumpy sounds of the flute represent his creaky voice. The trugeing [trudging] from the creatures

is the oboe. The dynamics are loud, the tempo is slow. I feel excited and bouncy.

Events:

When Frisbee pierces the dragon there is a screeching sound and little splatters of blood which is the flute and the clarinet. Tinkles of triangles are rain and magical feather sparkles. [Note: there is no percussion in the music—the triangles are imagined.]

Resolution:

There was a crash of symbols [I assume cymbals] to take them home. There is a calm tempo. The oboe was durationing in circles to represent the swallowing of food.

(Teacher's portfolio of children's work)

I was fortunate to observe two sessions during which the music used to motivate and inspire was *Fawkes the Phoenix* (John Williams) from the film soundtrack to *Harry Potter and the Chamber of Secrets*. Here is an example of a child's response to music through the creation of their own painting:

Title:

I named my abstract painting Swirl because the music doesn't stop. If you were to draw lines or loops from the music you would see swirls and loops that would make a picture of mammals or [other] animals.

Mood: (*How the music makes you feel and how you mixed/blended/ applied your paint*)

I painted my background using the colours green and blue because they are both gentle and peaceful colours, and a hint of red so that the colours can shine, and so the red can contrast with the green and blue. I created a blending of colour with hints of green, red and blue to represent the music's tempo slowing and the swirling of the music continues. I did this by blending blue with green first, then I put a hint of white to make sure it's not too dark. When I put the red on I saw a smooth red contrasted with the blue and green.

> My abstract symbols represent: (*Remember to talk about the imagery the music helped to form in your mind which inspired you to create your abstract symbols and position/overlap/sequence on top of your background*)
>
> I put these symbols on because the oval is a smooth, peaceful, round shape and the rectangle is a long straight shape that would look good inside a circle. The dynamics of my symbol is soft. I put a yellow symbol and layered it with a hint of contrasting red.
>
> (Ruth's typed up page in the class portfolio; the photograph of the painting was included on the page.)

By the second session the class had created a huge collaborative graphic representation of the contemporary-sounding art music. While the music played, several students were singing the themes, others were gesturing the melodic lines or rhythmic feel in the air, others simply conducted and two sat and gently rocked their bodies—internal processes in action. No one spoke and none looked bored; they were fully engaged in listening to and interacting with the music.

Interiorisation

The concept of the interiorisation of mental operations in Ruth's programme draws on reading (poetry), speaking (describing), listening (to poetry and music) and representing (using graphic notation and original poems). There are two aspects to this process: *appropriation*, in which the socially-distributed function (the classroom context) and material become individually mastered. This becomes *interiorisation* when the function and purpose of the material is internalised, reflecting Vygotsky's theory of mediation: "outside-the-skin" to "inside-the-skin" forms of cultural development. Galperin has developed a model which suggests how this transition might occur:

1. Creating a preliminary conception of the task (ideation, anticipation, planification);
2. Mastering the action using objects;
3. Mastering the action in the plane of private external speech;
4. Transferring the action to the mental plane (private internal speech or mental gesture);

5. Consolidating the mental action (as cited in Del Río & Álvarez, 2007, p. 298).

I asked Ruth to outline how these stages occur in her own teaching and learning programmes, in this case, the initial unit, the outside-the-skin lessons that explain and motivate:

1. Creating a preliminary conception of the task:

At the start of the year I use the elements of music—rhythm, pitch, dynamics, harmony, texture, tone colour and form—to teach the children the connections between music, oral, written and visual language. I begin by listening to the poem 'Night Countdown', which is on the CD from *Into Music 1* [Ministry of Education, 2001], and the children identify which percussion instruments represent key words in the poem (e.g., stars, triangle). They then search the words in the dictionary and incorporate visual language, such as 'millions of stars'.

2. Mastering the action using subjects:

The children are given similar instruments to those used in the recording of the poem and they are encouraged to explore the different ways these instruments can be played. The elements of pitch, tempo, dynamics and tone colour are introduced and the children discuss and describe the kinds of sounds produced by the instruments. They then consider how they might draw/represent these sounds graphically.

Mastering the action in the plane of private external speech:
3. The children listen to a different poem with musical accompaniment and talk about the instruments they think are being used and why they were used to represent different subjects or moods in the poem. They use the elements of music to clarify and justify their ideas and transfer these into a graphic organizer.

Transferring the action to the mental plane of private internal speech or mental gesture:
4. The Māori legend 'Tāne and the Three Baskets' is read to the children and then a short extract from the story is given the main focus as

the children decide what sounds might best represent aspects of the story (e.g., native bush, wind, insects). The children are then given a section of the story to talk about and act out. Each group responds to each other's enactments and the discussion focuses on what sounds or music could be heard in the story (literal or inferred), and justify why they think this.

Consolidating the mental action:

5.   In groups, the children create/compose a sound score to accompany the action in the part of the story and include cause and effect (such as the wind blowing causes the leaves on the trees to rustle). They combine rhythmic and pitch-based layering for a more in-depth understanding of the text, giving consideration to structure and narrative progression. They then represent/record this using graphic notation, ensuring accuracy and clarity so that another person could follow the graphic score and perform it. They justify their choices, thoughts and ideas through language and music. (Interview with Ruth Round, December 2010.)

Discussion

In Ruth's class, music is used as a meditational means to stimulate modes of action in language and art. These create an imagined world in which the artefacts function in processes of cultural mediation. As we have seen, music is central to making learning connections. The music helps to internalise learning through the external experiences of listening, moving and talking; it becomes a scaffold through which learning intentions and performance objectives are met and internalised. Teaching and learning occur both inside and outside the classroom and inside and outside the body and are finally established internally (interiorised).

Ruth's emphasis on self-construction brings two crucial issues to the foreground. First, each child is an individual and an active agent in their own development. Second, it affirms the importance of the sociocultural context because the development takes place through the use of those tools or artefacts that are available at a particular time in a particular place. The tools and artefacts act as devices for mastering mental processes and include: music; language; symbol systems; the children's original

works of art; writing; and conventional signs such as graphic notation. These processes generate a natural adaptation to new knowledge and understanding and motivate the flow and structure of mental functions.

Vygotsky insists that:

> Pedagogical experience demonstrates that direct instruction in concepts is impossible. It is pedagogically fruitless. The teacher who attempts to use this approach achieves nothing but a mindless learning of words, an empty verbalism that stimulates or imitates the presence of concepts in the child. Under these conditions, the child learns not the concept but the word, and this word is taken over by the child through memory rather than thought. Such knowledge turns out to be inadequate in any meaningful application. (1987, p. 170)

The strength of Ruth's programme is that it introduces new concepts in such subtle ways that the children negotiate meanings, accept them and make them their own. They share their feelings and responses, they co-operate and collaborate and every child participates. This means that:

- the children take ownership of their activities
- what Ruth teaches is appropriate student knowledge and it becomes a cognitive apprenticeship through the use of authentic problems
- each lesson is structured as a natural sequence of thought
- there is ongoing collaboration and joint problem solving between teacher and students
- the children gradually internalise the expansive knowledge and can externalise it in new contexts
- the children become enculturated musically, artistically, linguistically and poetically.

Throughout his work Vygotsky argues that co-operation and collaboration are crucial features of effective teaching; the child can do more in collaboration than they can do independently. In *Thinking and Speech*, Vygotsky (1987) uses the terms *spontaneous thinking* and *spontaneous concepts*. These terms refer to a formative context which is that of immediate, social, practical activity as opposed to a context of instruction in a formal system of knowledge, such as the formal music lesson that is more theoretical than embodied, art where the teacher chooses the

subject, or constrained language teaching that is more intent on literal interpretations of the National Literacy Standards than on the child's artistic and linguistic expression in expansive pedagogies.

Conclusion

Expansive learning implies the reformulation of teaching and learning and the creation of new tools and artefacts for engagement within these new pedagogical sites. Using music, art and language as problem-solving tools has been shown to create new knowledge and new practices for newly emerging activities in Ruth's classroom. Learning becomes embedded in the qualitative transformation of these activities simply by placing music at the centre of all activities. Rather than following a traditional pedagogy of embedding skills in already established activities, Ruth makes space available for an expansive transformation, one that is a collective journey through the ZPD within each activity. The knowledge that has to be learned must be learned as it is being developed, for Ruth cannot predict with any certainty which direction each transformation will take. The outcome is that the children are motivated to explore different meanings and perspectives as parts of the expansive process in which they are engaged.

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