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Connecting the Known and the Unknown in a Waldorf Classroom

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Abstract: This paper focuses on the role that narrative methodology plays in the introduction of new content knowledge.
You will read about known knowledge (prior skills), unknown knowledge (new skills that are yet to be acquired) and narrative methodology and how these three aspects connect. The process that I went through to discover this connection, allowed me to explore many different areas of research, the two most important areas being the concrete region and the abstract region.
When introducing new content, these two regions, together with the use of narrative methodology, play a vital part in the child's understanding of the work. All of the above share an intricate connection. I suggest that we identify these connections through understanding the complex mechanism of the 'Swinging Bridge'.

Key words: narrative, methodology, known knowledge, unknown knowledge, concrete and abstract, pedagogy

Part One: Introduction

The Power of Story

My purpose in this paper is to explore how the story form works in a particular Waldorf classroom.

I have always found stories to be interesting. Although most of what I read is fiction, I believe that what grips me is the truth hidden within that fiction. Only, it is written so 'cleverly' that one tends not to question but instead has no choice but to lose oneself in it. "Tolstoy was right-the emotions and ideas in fiction are highly contagious, and people tend to overestimate their immunity to them." (Gottschall, 2012, p. 149)

After four years of studying to become an educator, I came to realise the importance of stories in the Waldorf curriculum. In short, Waldorf education was created by story, therefore in a sense, it 'lives story'. It is said that, "…the human mind was shaped for story, so that it could be shaped by story" (Gottschall, 2013, p. 56). This suggests to me that we are all created genetically to process stories, so that through the stories that we process, our minds are able to develop. The mind is born incomplete and will constantly develop through stories for as long as we live. To me, this was a theory that Rudolf Steiner drew on in his creation of Waldorf education.

As prospective Waldorf educators we are taught that every child has a story to tell, if we just take the time to listen and observe. Their parents, too, are shaped by their individual stories, which provide them with a specific culture. This, in turn, provides a place of belonging for them within the world: "The importance

of the narrative for the cohesion of a culture is as great, very likely, as it is in structuring an individual life" (Bruner, 1996, p. 40). I conclude, therefore, that as teachers it is our responsibility to further develop the stories of young children. They spend most of their hours in school, learning, and through stories told in a Waldorf classroom, their minds are developing a new understanding of the world.

I gasped at the realisation that stories hold much more power within them than most of us are capable of handling. Story is what gives media its popularity. "Story is the spine of televised sports" (Gottschall, 2012, p. 14). Although I am religious, I too have been challenged by story. This proves that stories can either pull you into the light or suck you into the dark. Questions that I am left with now are how are we as teachers able to determine the power of a story before deciding whether or not to share it with the class? Can we for-see if the effect will be good or bad? Could this depend on one's individual perception of the story that we hear?

Stories are constantly at work. I see stories as being the air that we breathe. We cannot see the oxygen that we inhale or the carbon dioxide that we exhale, yet we see plants living and we are living beings. Stories and oxygen are alike. We inhale oxygen involuntarily, just as stories subconsciously have an influence on the development of the mind. Likewise, stories are all around us and within everyone around us, yet we are unable to see them and it is impossible not to listen to stories when we are not even aware of the fact that we are listening to begin with.

We speak of the "work" that stories do. I see the work as being quite busy and fast, yet I would describe stories as a place of quiet and imagination. My list of questions, keep growing as I add yet another one, what is this work that we speak of?

Useful Theoretical Perspectives

In conceptualising this investigation and interpreting my data I have drawn on the work of several theorists. I shall attempt to survey what I found stimulating in their work and the questions their ideas suggested to me.

I have studied papers by Jonathan Gottschall, Jerome Bruner, Kieran Egan, Leo Widrich, Sigrun Gudmundsdottir, Heidi Bordine, Kim Hughes Wilhelm and Lev Vygotsky and have made use of various internet sites, all of which can be found in my list of references.

"We are soaked to the bone in story" (Gottschall, 2012, p. 18). This was a vital statement by Gottschall. He summed up the role that stories play in the lives of human beings in just eight powerful words. He did not narrow this down to the basics or the components of storytelling. He implied, in my opinion, that everything we do is in some sense a story, that we ourselves can be considered to be a story even though we are made up of matter and not words: that story is embedded within us.

Gottschall (2012) goes further with this idea of stories that are embedded within us when he talks about the influence that stories have on our development, a developmental process that we are at most if not at all times unaware of: "…story is constantly nibbling and kneading us, shaping our minds without knowledge or consent" (p. 148). I find this statement to be particularly interesting because I feel that it can be seen from a perceptual point of view. If we look at something as simple as a dog, my story may be about a dog who attacked me, therefore I will be negative towards dogs, whereas your story may be of a childhood pet dog and you will feel nothing but love for dogs. Although I am in agreement with Gottschall, I feel that the experience of a story differs for each individual.

In my experience of telling stories to children, you know that your story is good when your first line has been spoken and the 'classroom world' stops. And it is almost as if you have transported your world into another dimension and the only way in which to return is to follow the journey to the very end.

Going through my readings, I searched for answers as to what this dimension could be. What can be so powerful that it can transport your mind from one place to another? I came to a one word conclusion,

imagination. Gottschall (2012) writes about "ink people" (p. 144) and how they are nothing but "wiggles of ink on paper" (p. 144). It is imagination that breathes life into them. Without imagination stories would cease to exist.

If we are seen as having stories embedded within us, then imagination plays an enormous role in the development of individual life. I found myself asking, what makes a good story and what makes it so different from any other narrative passage? Egan (1989) speaks of stories as having a certain format: "Stories are narrative units. They are distinguishable from other kinds of narratives in that they have particular, clear beginnings and ends" (p. 32). As a prospective Waldorf teacher, I have been trained to write and tell stories in a way that intrigues the reader as well as the listener. Egan (1989) phrased this concept so well when he said, "they set up an expectation at the beginning, this is elaborated or complicated in the middle, and is satisfied in the end" (p. 24).

Widrich (2012) talks about the first cave paintings and how stories and imagination were alive in those paintings. This shows the culture that is embedded within stories: "…since the first cave paintings, telling stories had been one of our most fundamental communication methods" (p. 2012).

Bruner (1996) goes so far as to compare the importance of culture within the narrative to the importance of the role that the narrative plays within the shaping of an individual's life. He says, "The importance of narrative for the cohesion of a culture is as great, very likely, as it is in structuring an individual life" (Bruner, 1996, p. 40). He goes further when he states that, "…school is a culture itself…" (Bruner, 1996, p. 98). I am drawn to this analogy because it injects sense into Waldorf teaching. Story is a major factor in the Waldorf curriculum. Waldorf education is widely based on teaching through stories and on imagination. If stories have a strong cultural background and each individual within the class stems from a different culture, the stories told in the classroom are able to integrate all the cultures, making stories told within the classroom rich with imagination, thus, creating a unique new culture. Culture is an important contributor when it comes down to the understanding that the child has of the world, as well as the way in which the child learns, whether academic lessons or moral lessons: "Values and narratives are inexorably intertwined." (Gudmundsdottir, 1995, p. 1).

The next question I asked was how the narrative is used to teach academic content. Egan (1989) proposes a way in which to use the story format in teaching a lesson: "A model for teaching that draws on the power of the story, then, will ensure that we set up a conflict or sense of dramatic tension at the beginning of our lessons and units." (p. 25).

Stories are often seen as fiction. I believe there is truth in fiction. It all depends on how you interpret the story: "Narratives are never straight copies of the world like photographic images. They are interpretations." (Gudmundsdottir, 1995, p. 32). This statement intrigued me and allowed endless interpretations from different points of view. When a story is being read by the teacher in preparation for her lesson, she interprets it the way she sees best and when she retells the story the children will reinterpret it the way they understand it. I see this as a 'pendulum effect': interpretation leads to reinterpretation. Gudmudsdottir (1995) quotes Whyte (1981) when he speaks of narrative and says: "It involves, in short, the transformation of "knowing into telling" (Whyte, 1981)" (p. 30). It is through the story that concepts are presented and through the experience of interpretation and reinterpretation that concepts are understood: "It is through this narrative dialogue of reflection and interpretation that experience is transformed into pedagogical content knowledge" (Gudmundsdottir, 1995, p. 30).

Gajdamaschko (2005) talks about Vygotsky's theory of imagination in which he speaks about the fact that there is little doubt that the role of imagination in teaching and learning is highly important. Imagination is a powerful part of human nature. The same can be said for emotions. Emotion is a human ability that allows us to make connections with the world and everything in the world. Egan (1989) says that eliminating the human aspect from the academic will defeat the purpose of teaching these concepts: "To present knowledge cut off from human emotion and intentions is to reduce its affective meaning." (p. 30).

"The texts used in teaching, such as textbooks and other curriculum material require that teachers look at them with "pedagogically-seeking-eyes" (Gudmundsdottir, 1995, p. 32). What I infer from the term

"pedagogically-seeking-eyes" is that teachers need to look at the resources made available to them and ask themselves how the content can be brought to life. In our training as Waldorf teachers we are constantly being reminded to use story to awaken the content for the listener, allowing the listener to live within the content and make that connection through the human emotion.

It is said that children already have the ability to understand many abstract concepts when they arrive at school: "They do not learn those concepts; they already have them when they arrive at school" (Egan, 1989, p. 14). If so, where are those abstract concepts stored? According to Gottschall (2012), these abstract concepts are stored in what he refers to as our "implicit memory" (p. 65). He says, "…implicit memory, what our brains know but "we" don't. Implicit memory is inaccessible to the conscious mind. It is behind all the unconscious processing" (Gottschall, 1989, p. 65).

Egan (1989) goes further to say that any knowledge can be introduced to a child as long as it can engage with their "abstract conceptual structures" (p. 14). He also makes the point that children may not have concept of logic but they have the abstract abilities to move a story forward.

In my opinion, by stating the above, Egan claims that it is only with an intuitive knowledge of the abstract that we are able to place events into sensible categories. He calls these categories binary opposites (good/bad, right/wrong, etc). We all have our own understanding of good and bad, right and wrong. Everything that we experience in our lives need to be placed under one or more of the above categories. Only when this placement happens can we move forward in life.

As this part of my paper came to an end, I was left with more questions than answers. Some questions I had answers to while others required me to seek an answer.

The Research Question

The research theme chosen by the faculty of the Centre for Creative Education for the year 2015 was 'The Work of Story in a Waldorf Classroom'

The theme already implies a question: How does the story form work in this particular classroom? This is too broad a question, therefore I chose to focus on how the story form engages with the 'known' and the 'unknown' and how this movement allows space for the imagination. When I speak of the 'known' I will be referring to the skills or abilities that the child has before new content is introduced to him and by the 'unknown' I will be referring to the new skills or abilities that the child will learn from this new content.

It was Egan's theory that created the magnetic force that pulled me towards the above investigative question. Egan's theory suggests that reasoning takes place when a task requires us to swing in our imagination between the known and the unknown. This is how new meanings are formed.

In the Waldorf curriculum it is recommended when teaching new content that we start with the known and move towards the unknown. My interest spiked when Egan suggested that we should not work from the 'known to the unknown' but rather, when content is introduced through the narrative or the story (which in this paper I will consider to be equivalent terms) we constantly swing between the 'known and the unknown'. This "pendulum effect" cannot be physically seen, because it is a swinging process that takes place within our imagination while we listen to story.

Egan (1989) refers to the prior knowledge of the child which he sees as "abstract concepts", those that the child already has when entering the schooling system. His theory is that children have the ability to know and understand new tasks and ideas by drawing intuitively on these 'known' abstract concepts (p. 10)

The above theory lead me to my root question: *How does the unknown draw out the known within the child?*

I look at my question as having endless research possibilities. However, the fact that my root question is largely theoretical makes my research journey practically impossible to complete. On the other hand, my

research question was so alive to me that I could not bring myself to change my question. At this point, it was vital that I find some way in which to investigate my theory practically. It was not until I had grappled with my probable interview categories that I discovered a possible way in which to look practically at my question. I decided that I would focus on lesson content, story and methodology.

Phrased differently, my research question then became: *How is narrative methodology used to connect the known and the unknown in a Waldorf main lesson?*

Firstly, to pursue this question, I would need to establish what subject will be taught in my research classroom and what topic within the subject will be taught. For example: punctuation in English. My next step would be to look at how the teacher uses the imaginative story or the imaginative experience to introduce new content. I would pay specific attention to the plot of the story and the point within the story at which the academic content is first introduced. Then, once I had established that, I would focus on the method that the teacher uses to integrate the academic content with the imaginative content without straying too far from reality, the balance between the reality and the imagination.

I hoped that this question would build a strong foundation on which other questions would stand and allow me access to the information required to gain further insight into my question.

The Research Process

My research was conducted in Class 4 at a small Waldorf primary school in Cape Town. My host in the classroom was a very experienced Waldorf teacher. I observed a Geography main lesson and all learning areas leading up to the main lesson. My role in the classroom for two weeks was that of an unobtrusive observer.

The research approach was a qualitative one, appropriate for the exploration of interaction in small-scale natural settings, and relying on the interpretation of evidence rather than any forms of measurement. The methods used were interviews and observation.

I had an interview with the teacher at the end of each week with the purpose of collecting more data, especially evidence related to what I had observed, and to hear his thoughts on my observations. This helped me gain insight into the teaching methodology. Data was collected as a voice recording, with the teacher's consent.

The main focus of my observation was on content, story and methodology. I drew up an observation guide consisting of a list of categories of things that I was looking for in the classroom. I saw these as tentative observational categories to guide the observation process.

Research based on the interpretation of evidence can easily be seen as over-subjective and invalid. I have attempted to avoid invalid findings by recording my data accurately, not generalising from my findings, supporting my statements by making use of my evidence, referring back to the data collected while writing this research document, allowing my host teacher to peruse draft copies of my data collection, inviting an outsider to read through and critique my work to identify any unfair interpretations, and explaining to the reader in detail what I was doing and the direction in which my thoughts were going. I concluded with a personal reflection on the above process.

In conducting this research, I needed to implement basic ethical values. To begin with, I asked consent from my host teacher before doing anything that concerned any participant involved in my research. I was completely honest with the teacher with regards to the observation and recording process that I followed. I respected the different cultures within the classroom and the values of a researcher. Three of these were being punctual, respecting classroom property and not undermining the teacher in charge.

Part Two: Observation and Interview Data

Introduction

My task in this section of the paper is to compress a very detailed record of 10 days of classroom observation and two hours of interview time into a brief, accessible and illuminating record of data to draw on in attempting to answer my research question. I shall do this in the following ways:

- By providing a quick chronological survey of the flow of the developing lessons over the ten-day period.
- By presenting five episodes of classroom practice that I found particularly interesting.
- Lastly, by briefly summarising my interviews with the teacher.

Interpretations are kept limited in this section and are put in brackets to indicate their tentative nature. Part Three will be devoted to fuller interpretation and analysis.

Main Lesson development over ten days

The teacher was in the process of beginning the Geography main lesson when I arrived on the first of my ten days of observation. He had two focal points throughout the main lesson, weather and direction.

Cape Town had just experienced a major fire that could be seen from the school grounds. On the first day of this main lesson, the teacher gradually introduced elements relating to Geography. He did this through class conversation in relation to the fire. He questioned the children on how fires started and on what role the wind plays in a fire.

On day two, the teacher focused on the weather elements (sun, clouds, wind) and the position of them in relation to where they were standing (above them, behind them, on the side of them, in front of them). They were now drawing on their observation skills and the teacher was using that skill to ease the children into the concept of direction. He was slowly beginning to change their way of thinking by using what they could see (concrete aspect) to introduce the unseen (abstract concept). All of the above took place during their daily observation walks. They walked to an open field behind the school where the children observed the sun, clouds and time of day.

When the children went out for their observation walk on day three, the teacher moved from free to guided observation. Still exploring the concrete aspect of the abstract concept through this living, outer experience, the teacher guided their observations of the weather by asking specific questions. Are there any clouds? Where is the sun? Is there any wind? These questions were always asked in this specific chronological order and because he wanted the children to relate these observations to direction, he would ask specific questions about their position in relation to the sun, wind and clouds. This really structured the children's way of thinking. A few minutes before break time on this particular day, the teacher introduced a story to the class based on the four cardinal points. I will unpack this story at a later stage.

The observation walk on the fourth day was a repetition of day three. The teacher emphasised the measuring of the shadow pole that he had put in place. He measured the shadow using his feet. Everything in this main lesson period was done in brief, but emphasis was put on the position of the things that were being observed, their own position in relation to these things and the time of day. He referred back to the introduction of the story of the four cardinal points.

On day five, the teacher took the children out for their observation walk a half an hour earlier than usual (in an attempt to see the effects of time on weather and sun direction). The story did not continue on this particular day. Rather, the teacher spent time familiarising the children with different geographical phrases and terms and how to use them in a sentence with the correct spelling.

Day six was very structured. From the moment the children walked onto the field, the teacher asked the observation questions in a very structured and systematic way. He began from being in an open space

without a compass, to determining where they were by observing the geographical components of their surroundings. A hint that he gave the children was to first ascertain where, according to the four cardinal points, they were standing. He pointed out to the children what direction they were facing when they faced the mountain or the school building. Then he asked them to point to the opposite direction and to give him the name of that direction. The story continued on this day to the point where the children were sent off in different directions. The teacher introduced map drawing to the children by using an image of a bird flying above the classroom. The children had to draw what they would see if they were the bird.

On day seven the teacher wanted to hear all the observations from the children regarding the shadow pole, wind and sun. He moved away from weather, towards the children telling him in what direction the school building was from where they were standing, where the mountain was, where the horses were and different places within the school grounds. This was the day that they drew a compass with guidance from the teacher.

On the field on day eight, the teacher asked no questions. The children recorded what they observed and went back to class. Only then did the teacher ask the observation questions. He continued with the bird's eye view map drawing, moving out of the classroom to look at the school grounds. Again, he began on the black board and began with the same kind of progressive, logical thinking that he had introduced to them when they needed to first ascertain where they were standing in relation to the four cardinal points. The children suggested a starting point and came to the board to draw. They now needed to ascertain where the school was within its surroundings by using the direction of things within the environment. Landmarks played a very important role.

On day nine the teacher asked one question: "What can you observe today?" Little guidance was needed as the children could now observe, ascertain, record, read and report through discussion and writing. The teacher continued with the story until the end.

Day ten required the children to do everything independently. The teacher's focus point in this lesson was the type of winds that we experience in the Cape Peninsula, the "corner" winds (the south-easter and the north-wester). The teacher referred to the story of the four cardinal points throughout this lesson. He expanded map drawing to the South Peninsula. On top of this drawing he drew a compass to show in which direction the places on the map were. (I shall refer to this last lesson as an integration lesson).

Five key episodes in classroom learning

I have extracted five core examples from my research record. These examples will cover all the learning areas building up to the main lesson, as well as the main lesson itself and will indicate how the teacher utilized the story described below in the development process.

Episode 1: The Four Cardinal Points Story

On day three, in the first week of my research, the class was buzzing and the teacher got up and started telling a story. I did not pay much attention to this story as it was ten minutes before break time. However, what I thought was irrelevant information was possibly the most important data of my research. The next day, I quickly caught up with the story during the teacher's recall time. Information that I had missed, came from the children and what they remembered about the story. This reminded me of the power that stories hold.

(This story was told over a period of a few days. Many activities derived from this story and when I asked the teacher about the ending of the story he said that the story is open ended and will, through the main lesson, be added to when needed. The main geographical aspects of this story are direction and the weather conditions that you will find in each of these directions.)

The Four Cardinal Points

In an Indian village there was once a chief named Chief One Place. He had a wife, Chieftess Settle Down. In this village it was the custom that having more than one child was not allowed. The wife of the great Chief One Place one day came to him and said that she was expecting not one, but four children! The Chief was distraught because he did not want to give his children away, but what could he do?

The first night after the birth of his four children, the Chief One Place had put his head to rest with great difficulty. Constantly worrying about his children, as he drifted into a deep sleep, he found himself in a dream. There in his dream he saw the face of his eldest brother and in the middle of the path that he had to take to reach his brother was a big hollow speckled egg.

The next morning, the Chief awoke and he knew exactly what to do about the situation. Just outside of his tent, stood a big hollow speckled egg that no one ever took note of. He took this hollow egg and one by one he put the children inside and sent them off to his brother. He would put one child inside of the egg, make a strange sound which called upon an eagle, and he would instruct this eagle to take this egg to wherever his eldest brother, Sharp Arrow was. The eagle came back for each child and dropped them off safely with Sharp Arrow. The Chief had informed his brother of the children's arrival and of his promise to protect them and raise them.

Now, Chief One Place and Chieftess Settle Down's children were very special. Each of the four children was born with a very special ability, a special power that only they could hold. But each child's ability was so different from the other. First born was Northane, he was very strong and had the ability to call upon the rain and control the storms. Second born was Soumela, she was very busy down at the ocean and had the ability to create thick mist over the ocean that would protect their land from any enemies that came across the ocean. Third born was Estaphan, he had natural red hair and skin that was so warm. He was always the first one up in the mornings and wanted to help everyone. He was rather kind you see, but he had the ability to help and care. The last born and youngest was Westrella, she was dark skinned and when everyone went to bed, she would always be awake studying the moon and the stars. She could read the stars. Her hair was shiny like silk but she would spend most of her day sleeping and at night she would be awake.

(Each of the above characters names is similar to the four cardinal points. Their characters are in sync with the weather conditions that one finds in the areas of the four cardinal points. But the four cardinal points are cleverly hidden, for now at least.)

One day, Chief One Place decided that he really needed to go and visit his four children that were by now all grown up. So, he went to his brother and talked about all his children. The Chief was right, they were very grown up and the Chief decided that the time had come for his four children to be sent off into the world. However, when the Chief learnt about their powers, he picked special places for each child to go, where they will be able to use their powers for good. "The first born, Northane, must be sent off to the top furthest point of the world, where he will use his strength to control the storms and call upon the rain for the people below him. The second born, Soumela, must be sent to the bottom of the world where she can create mist to camouflage us from any enemies coming across the seas. The third born, Estaphan, must be sent to the east side of the world so that he can rise early in the morning and use his warmth to help and care for others. The youngest, Estrella, must be sent to the west side of the world where she can sleep peacefully during the day and be up during the night to study the moon and the stars."

Start out activity: The teacher asked the children to draw a picture of the story. It could be any picture but it had to include the four children. (While the children were discussing their ideas for their pictures with the class, one learner said that he was going to draw the four places that they were sent to, like a cross and put a child at each end. This learner had no idea about the work that was to come, yet he had the general idea of a compass. I would have grasped at any opportunity to observe his brain activity at that particular moment. It was immensely interesting to witness.)

Episode 2: Becoming familiar with the terms in open space

The children now had to make use of the correct geographical terms for the four cardinal points.

Main Lesson Day 6

Recall: The teacher asked the children what they had learnt through the story that was told on day 3 and the children named the four cardinal points. The teacher asked the children if they knew what North, South, East and West were. The children answered: "Elements of some sort and directions." The teacher used the four sides of the classroom as the four cardinal points and asked the children what direction they would be facing if they faced a specific wall. The children were able to answer this question easily due to the story.

The teacher announced to the children that they were no longer allowed to say that the wind is blowing from the left. They would have to make use of the terms used for the four directions instead. He posed a question to the class: "How will you know the direction?" One child answered: "If you know that the sun rises in the East, then the opposite direction will be the west." The teacher then asked the class if they knew how to remember which direction comes where on the compass that was drawn on the board. Another child answered that North is always at the top and South is always at the bottom.

The teacher asked the children if they knew what a compass is and how it works. They knew more or less what a compass was and what it was used for. He discussed the use of a compass briefly and moved on.

Observational walk: When they arrived on the field outside of the classroom, the teacher told the children that they first needed to ascertain where they were standing according to the four cardinal points. He told them the easiest way in which to do so was by looking at their surroundings. The teacher waited for the children to give him answers. They began by mentioning the mountains that were straight ahead of them. The teacher informed the children that in the specific area that they were standing, whenever they faced the mountain, they would always be facing the West. This meant that the opposite direction would always be the East. (They immediately understood because they had just discussed this in the classroom, that the sun rises in the East). It was made easier for the children to establish the Easterly direction because it was morning.

To establish the direction in which the wind was blowing, the teacher dropped a few pieces of grass from a height and watched to see the direction in which the grass blew. He reminded the children, while they were verbally answering, that they are only allowed to make use of the four directions when recording their observations. They returned to the classroom where the teacher discussed their observations briefly, before they were left to complete their weather report for Day 6.

The teacher made use of their prior English grammar knowledge and reminded the children the four cardinal points must be written with a capital letter. He did not give them reasons for this, instead, he asked the children for their reason why. The children answered: "It is a name."

He asked one child to come up to the board and draw the front wall of the class from above, but she was unable to do so. The teacher called upon another child to help her. Each time a different wall had to be drawn, the teacher called a different child. Different children came up to the board to draw the different windows and the door. One child drew the last window wider than the others, when in reality the windows were the same width. The teacher let the children turn around to face the windows and see whether they were the same width. The windows were exactly the same width and the teacher asked the children to be aware of this when they start drawing their classroom maps. The teacher called different children up to the board to fill in different objects on the drawing. He also called upon children to fill in an 'x' on the map where they thought they sat within the classroom. The teacher asked the children to stand up and the children recited a verse related to direction. This was a verse that the children were very familiar with.

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Table 1: Episode 2

Content	**Prior skills** (known)	**New Skills** (unknown)	**Methodology**	**Activity**
Main lesson	-The children have observation skills. The children can: - record what they observed -write a weather report -be specific about the position of things	-The children will be able to look at their surroundings and identify the four cardinal points. -Children will be able to draw from a bird's eye view. (Map drawing)	To introduce the four directions, the teacher made use of a story that he told. The weather conditions in each area of the four directions were associated with the characteristics of the four children in the story. Thus, linking their weather reports to the four directions.	1st activity: The children did a weather report for Day 6. 2nd activity: The children had to draw a bird's-eye-view map of their classroom with a short description of where things were within the classroom, using directions.

Episode 3: Working with the compass (visual stimulation)

The teacher formally introduced the compass and modern way of ascertaining direction: a visual stimulus for an abstract concept.

Main Lesson Day 7

Observation walk: The teacher told the class that he would like to hear the observations from them. He asked the children one by one what they could observe. The teacher asked the children who were speaking to be specific and clear. The teacher started asking the children in which direction certain places were from where they were standing, for example, the school building was East from where they were standing. The children always measured the shadow pole in centimetres with a measuring tape. The teacher took the same amount of steps heal to toe inside, as he took to measure the shadow pole outside. As the teacher took a step, the children measured with the measuring tape. (Children converted this measurement to centimetres using a measuring tape when they returned to class). The teacher drew the skeleton of the compass on the board prior to the lesson and the children drew it in their books.

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Table 2: Episode 3

Content	**Prior skills** (known)	**New Skills** (unknown)	**Methodology**	**Activity**
Main lesson	- The children have observation skills. Children can: - record what they have observed - write a weather report - be specific about position of things - ascertain direction within an open space - children are drawing on mathematical conversion skills when measuring the shadow pole	- Children will be able to identify the four cardinal points on a compass as well as the in between directions. - They will also be able to establish which direction comes where on a compass, as well as the weather conditions that you will find when travelling in those directions. - The children will be able to identify the conditions of the winds coming from the in between directions.	- The teacher created a living experience through the observation walk. - What the children observed remained the same, but the way in which they recorded their observations became more geographic. - The teacher referred back to the story and the four children whenever weather conditions of the four main directions were brought up. -Recall and repetition	1st activity: The children completed a weather report. 2nd activity: The children drew a compass into their main lesson books with the four cardinal points and the in between directions.

Episode 4: Exploration of newly learnt content

Now that the children had obtained the basic knowledge, they needed to interact with this content through practice and living experiences.

Main Lesson Day 8

Recall: The teacher asked different children to walk to the East, West, North and South sides of the classroom. Then he did the following:

- child A= North
- child B= South
- child C= West
- child D= East
- child E= North West
- child F= South West
- child G= North East
- child H= South East

The teacher asked the class: "If the wind came from where child A is standing, what would this wind be called?" The children answered this question with ease because they had been observing the wind for several days and now knew how to use direction. The teacher asked the children: "What would we call the wind if it blew from where child A is standing to where child C is standing?" and they answered this easily too.

Observation walk: When the children arrived on the field, the teacher told them that no questions would be asked. They had to make their observations and he would ask the questions later.

Later, the teacher asked the children the following questions:

"What direction are we facing?"

"What kind of wind is blowing?" (South Westerly)

"What about the clouds?"

"What is the time closest to the hour?"

In class, the teacher decided to do a role play with the children. He asked if anyone would take their observations from that day and give the class a weather broadcast. The teacher set a scene for the children, saying they were geologists about to speak to the Cape Peninsula on live television. He created an introductory drum roll and the children volunteered to come up and present a weather broadcast. They used the knowledge that they had and embodied this character (known knowledge), while exploring what they had just discovered (unknown knowledge).

The teacher told them to imagine they were birds flying over the eco-village in which the school was situated and that they were going to draw a map of the eco-village, with the school at the centre. He guided the children by telling them to identify landmarks. He asked the class: "Where would you start with your map?" One child said he would start on the outskirts. The teacher started drawing the out-skirts of the schools ground roughly on the board. The next question the teacher asked was: "Where on the outskirts? What will be your landmark?" As a class the children decided to start at the main entrance gate. The class tried to place everything in close surroundings to their school.

Table 3: Episode 4

Content	**Prior skills** (known)	**New Skills** (unknown)	**Methodology**	**Activity**
Main lesson	- The children have observation skills. - They know their school grounds well. The children can: - record what they have observed - write a weather report - be specific about position of things - ascertain direction within an open space - observe different winds	- Children will be able to identify different winds. - Children will be able to draw maps from bird's eye view of a broader area, using direction to position places and buildings and greenery. (with guidance)	The teacher gave the children a living experience while doing recall. Most recall was done verbally. The children did their observations without guidance from the teacher. Concerning the map drawing, the teacher moved from the small classroom to the broader school campus. He gradually moved from small areas to bigger areas. The teacher was not too specific about how their maps should be drawn, but rather what the children drew on their maps and where they placed it on the map. The teacher brought in the imaginative aspect by telling the children to imagine that they were eagles or birds flying over the school grounds and to draw what they saw.	Children drew a bird's eye view map of their school campus. They included surrounding roads and the optional railway line, horse stables, greenery, the pool, shops and houses in the school grounds. Once they completed their maps, they had to add colour to their maps.

Episode 5: Exploration of new content through old content (drawing on the narrative)

The children have acquired the basic skills and have been introduced to the new content. The teacher had created the interaction between the child and the new content. Now, the integration lesson begins. (The teacher explores the new content beyond the basics by building on the narrative picture of the main story. The teacher pushes the boundaries of what the children should know to what he feels they are capable of fathoming. As a result, to complete the tasks required of them, the children needed to integrate their prior skills with the new skills.)

Main Lesson Day 10

Observation walk: Everything the children observed and the way they did this was done independently. The teacher only questioned the children once they had completed their observation. On returning to the class, they had a short discussion about their observations. (The children have learnt to be very precise). The teacher moved on to the type of winds experienced in the Cape Peninsula and told the children that these were mostly corner direction winds.

The teacher drew a general map of the Cape Peninsula, with a compass on it. He indicated the four main directions on the compass as well as the in between directions, which was on the board. The children could then see in which region they were situated when they stood on the field in the mornings for their observations. They now had a bird's eye view of their observation area. They saw the mountains on the West side and this cleared up any uncertainties that the children had concerning the directions during their observations. They could now see the bigger picture.

The teacher referred back to the characteristics of the four children in the story. With these four characteristics, he introduced the winds and the weather conditions that each wind brings with it to the Cape Peninsula. (The teacher never gave the children answers without giving them a short explanation first and hearing their thoughts on the topic). The teacher mentioned the Cape Doctor wind and asked the children why they thought this type of wind was given this name? As the teacher mentioned a corner wind, he would draw the wind in that corner and try to bring out a colour to associate with the type of weather conditions that the wind brings along with it. The teacher created a ghost-like wind face that would blow out the wind through his mouth. Temperaments were shown on the faces of these characters. At one point when introducing the NW wind, the teacher drew clouds and posed the question to the class, "Where do clouds come from?" One child said that clouds came from the sea, and another child added that it came from the sea during the evaporation process. I asked the teacher if they had perhaps learnt about the water cycle prior to this main lesson. He informed me that these two boys were quite involved in nature activities and that they have not yet covered the water cycle process. (At this point I realised that prior knowledge may differ widely among individuals.) The children re-drew the compass on the board into their geography main lesson books.

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Table 4: Episode 5

Content	**Prior skills** (known)	**New Skills** (unknown)	**Methodology**	**Activity**
Main lesson	The children know their directions well. -The children can identify direction of winds in an open space.	The children will learn to identify the different types of winds that we experience in the Cape Peninsula and the weather conditions that each type of wind brings to the Cape Peninsula.	The teacher used art and made use of the children's prior living experiences that they had gained through their observations, to introduce the different winds in the Cape Peninsula. He referred back to the four children to introduce the weather conditions that these winds bring with them to the Cape.	Children copied the work shopped compass from the board into their books. This compass identified the different corner winds that we experience in the Cape Peninsula.

Interviews with the teacher

My teacher agreed to one interview at the end of each week. I used a recording device to record the information in a question, answer format. All answers are direct quotes from the teacher. I have extracted five key questions from each interview.

First interview

Within the main lesson, what subject content is being taught?
The subject is Geography which consists of the four directions, map making, local environment orientation. The children will be drawing maps which are orientated in direction, from their home, maybe their way to school, the school building. We will look at the South Peninsula and Cape Town in the fourth term when we revisit this main lesson. We will start off small and have an outing around Pinelands. The children need a sense of where they are at this age. Observation plays a big part in this main lesson. More and more of them (the children) are beginning to see things they took for granted before being presented with this phenomena of observation.

What prior skills and abilities have the children acquired, concerning the subject content?
As far as their writing goes, they are working with capital letters, punctuation and sentence structure.

When this specific content of this Geography main lesson is over, what are the new skills and abilities that the children will have learnt?
The aims of the main lesson would be spatial orientation in their own space and environment. They should be able to know the directions, to draw simple maps from a bird's-eye-view and have more feeling for their spatial surroundings. If they go for a swim at the pool, they will be able to pick up there is the playground, there is the gate, the water is over here, etc. I would like to do the winds, so that the children get an idea of the direction they are coming from, the clouds and the different types of clouds that you get. They can maybe wake up in the mornings and determine what the weather is going to be like, judging by the clouds and the direction it is coming from and going to. If you look at studying the plant kingdom, when it comes to the observational side of that main lesson, some skills of observing phenomena and comparing things would have developed.

In terms of working with the imagination, how do you as the teacher, take the subject content and link it to the children's imagination?

The first thing I normally do is try to transcribe the content of the main lesson into a poem. This is a form of narrative which is an inner picture for me of the content. I teach this in the rhythmical time. When the children know it off by heart, they can write it down and this helps them with their spelling and reading. The story that I have for direction, comes from the imagination. It is created by the teacher and the children can then draw on the directions from the names of the children in the story. The characteristics of the children are the qualities and characteristics of the four points of the earth and of the winds of the Cape. I try to create those inner pictures through the narrative. This week the facts of the story are becoming present, so you moving from the story to the lesson content. If you start with a story like this, you can build on it.

After the children have acquired the new skills or abilities from this subject content, will you say that this can be considered as part of their known knowledge?
I would say part of their growing knowledge because it is expanding all the time. Of course children forget and they just need a bit of a flame to get it going again. A child's growing knowledge is like a body. It just keeps growing and building. Children go through stages of remembering and forgetting.

Second interview:

These interview questions are more closely related to the class that I was observing. My intention for this interview was to have a situation where the answer to one question, formed the basis for the next question:

During a class discussion, when do you feel it is appropriate to first make mention of the content?
I prefer to leave it to the latest point possible. I try and let the images live for as long as possible. Then bring it out towards the end.

How do you deal with the children's different levels of understanding of the work? Particularly when it comes to direction, some children are still not clear as to where the different directions are.
I do not necessarily worry about it too much if the children do not understand the work straight away. My feeling is that they all catch up sometime. Like with this, for example, I have got no doubt that by the end of the year, those that do not know, will have picked it up when we continue with the next one or two Geography main lessons that we will be doing concerning direction. We are doing mirror imaging where I face them and point to the left and they have got to point to the right, same thing, direction but tricky. They are all going to get it at some point or the other.

In terms of map drawing that you have started with your class this week, some of the children were getting quite scared when they had to draw the map of the school. What do you think the children needed to know, to be able to draw that map, besides knowing what is in the surrounding school grounds?
It was a challenge for the children because the school ground has a very complex set up. Not all of the children have developed those observational skills yet and can differentiate between which side the railway line is from this property. I could have waited with this main lesson until they had possibly all reached similar faculties for this main lesson. I feel that it is fine for the children to struggle and grapple sometimes.

You posed a question to the children: "Where do clouds come from?" Boy number 1 said that it came from the sea and boy number 2 said that water is evaporated from the ocean. Was there any prior main lesson that included the water cycle?
No, boy number 2 just knows a lot. His classmates call him nature boy. He is always out in nature, discovering new things. We have not done that side of Geography yet but we will do that, probably this year still.

Where will you move to from here?
I will move into a bigger map of the Cape Peninsula and spend more time on just developing the colour skills for drawing maps and the ocean, the shading of the edges of the land including the mountains. I will try to reach that aspect of map drawing for now.

Conducting the second interview based on my observations allowed me to explore my research question more thoroughly and openly. A contributor to the flow of both my interviews and to the ample information gathered was the use of open ended questions. In Part Three, I will analyse the selection of observation and interview data presented above in an attempt to answer my research question.

Part Three: Discussion and Conclusion

My research question was: 'How is narrative methodology used to connect the known to the unknown in a Waldorf main lesson?' My task for Part Three is to try and answer this question by engaging in reflective 'conversation' with my data. Through this deepened analysis I hope to arrive at a point where I feel ready to conclude this investigation.

In conversation with my data

I went into the classroom looking for answers that I strongly believed would be found when connections between certain things were identified. I had imagined that this connection between unknown and known knowledge would lie in the methodology that the teacher used to bring this new content across to the children.

However, in spite of reading through my data numerous times and trying to make systematic sense of all my information, the above connection was still not visible to me. The connection I actually discovered was an unexpected find. I discovered that the key connection does not lie between the unknown knowledge and the methodology, but rather that the connection for which I searched, lies more fundamentally between the child's prior skills and new skills; between known knowledge and unknown knowledge.

When studying my research data I discovered three imperative aspects that contribute greatly to answering my research question: *the two sides that share a deep connection and the bridge that must be used to bring out that connection.* On the one side we have the prior knowledge, on the other side we have the unknown knowledge and in between we have what I call the "swinging bridge" that joins the two sides. I shall attempt to elucidate the "swinging bridge" at a later stage.

Whilst I was conducting my research, I realised that to list the prior skills of a child in a main lesson would be an enormous task. Then to do so for a whole class would be unfeasible even given unlimited time. Not only had I discovered that children often know more than we assume, I also came to realise that each child's level of prior knowledge differs. Episode five in Part Two provides an excellent example of this differentiation, through the answers that two children gave with reference to the water cycle. During my second interview with the teacher, I enquired about these boys out of an interest in how much they knew about the water cycle. The teacher said that he had never done the water cycle with the class before, but nature interested these boys and whatever they discovered when exploring nature by themselves, they would share with the class whenever an opportunity arose.

The children have developed countless skills over the years beginning at class one. However, all of these prior skills are not used at one time. Depending on the lesson being taught, the child draws on those prior skills and selects what he needs to perform the tasks required in that particular lesson. The table in episode three clearly indicates that the children had needed to draw on their prior mathematical skills to complete a particular task: whereas the table in episode four shows no indication of their prior mathematical skills being used. This was because in episode four they no longer required those skills to complete their given task. This is a clear indication that children only draw on prior knowledge as required.

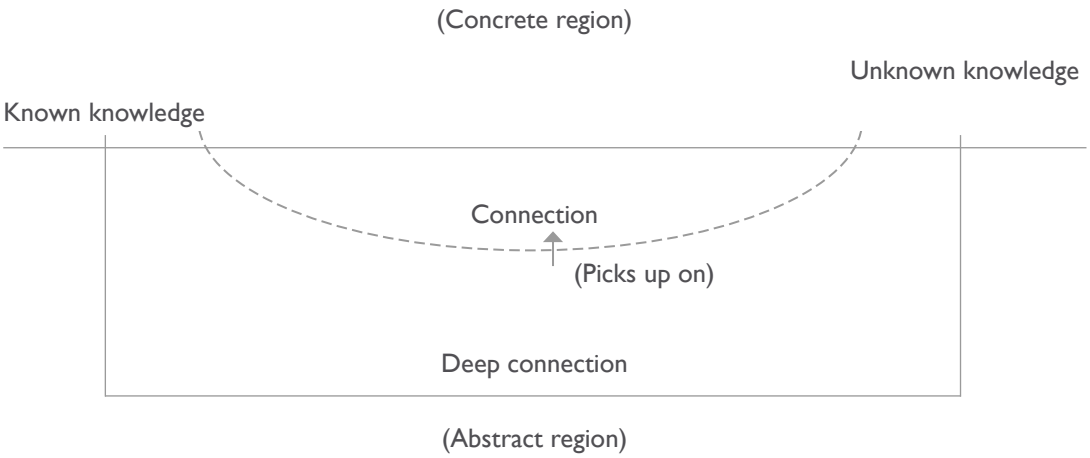
This selective process is crucial. The connection between the known knowledge and the unknown knowledge comes into play when this happens. An example of this would be the observation walks the children went on from the commencement of the Geography main lesson. In class 3, the children completed

a farming main lesson through which they developed observational skills when examining the soil. Naturally, when they are told to observe, they draw on those observational skills. What they observed, then formed the basis for their engagement with the new content, which at first was observing the weather and gradually moved towards the concept of direction. The children needed to understand aspects of weather before the teacher could start with general direction. This was the angle from which he chose to enter this main lesson.

The integration lesson in episode five follows the same pattern. The children had acquired the new skills and needed to integrate them with the prior skills in order to complete the task that was given. This happened when the teacher pushed the boundaries of what the children needed to know and what he knew they were capable of handling. Somewhere between the selective integration process and the teacher pushing the boundaries, those new skills become so well known and understood that they will begin to form part of the prior skills. This is the point at which the teacher can use these skills as the basis for learning when he returns to the Geography main lesson later in the year.

The Swinging Bridge (narrative methodology)

The following, in diagrammatic form, is my metaphor for the link between the known and the unknown.



In Part One, I mentioned Egan's theory that suggests that reasoning takes place when a task requires us to swing between the known and the unknown. This is how new meanings are formed.

The above diagram identifies two regions, the concrete region and the abstract region. In the concrete region lie all the 'literal' concepts that we can see and in the abstract region lie all the 'figurative' concepts that are not visible to us. Based on my data, the diagram above shows the mechanism of the 'swinging bridge'. The swinging bridge is the narrative methodology, represented by the broken line. On the one side is the known knowledge (prior skills) and on the other side, the unknown knowledge (new skills). *However, there is already a deep connection between the two sides.* This deep connection lies within the abstract region. It is an abstract connection that the children need to understand. "Direction" provides an example of such an abstract concept. This can be seen in episode two when the teacher tried to use landmarks and visual weather aspects, like the sun, to help the children ascertain direction in an open space as direction cannot be seen.

The swinging bridge works by first identifying concrete aspects of the abstract concept. For example, in relation to direction the teacher began with the sun, clouds and wind. These concrete aspects usually form part of the known knowledge (prior skills); the children knew what the sun, clouds and wind were. They also knew how to observe. This was knowledge that the children attained and understood very well. It was concretely embedded. The teacher uses the children's known knowledge (prior skills) from the concrete

region. Through the use of narrative methodology, he carries these prior skills on to the bridge, from the concrete region, through the abstract region where the narrative methodology is used to pick up on the deep connection between the two sides. The narrative methodology then moves this connection forward on the bridge, up to the unknown side of the bridge situated in the concrete region where the new skills have been shown to the children. At this point, the new skills have been taught to the children and the connection between the two sides has been made visible to them through the practice of prior skills. The connection between the two sides is no longer abstract, but is now beginning to take on a concrete form in the child's mind. The narrative methodology used allowed the child to make sense of the new content. The vagueness of the new content will slowly evaporate as the new skills are practiced.

Direction is an abstract concept that we cannot see. At one point on their observation walk, the teacher told the children that they were not allowed to use any terms other than the four cardinal points to describe position and conditions of the weather. Prior to this walk the class had discussed the rising of the sun. The weather is a concrete aspect that can be connected to direction, which is an abstract concept. We can see, feel and experience weather (concrete), but we cannot see, feel or experience direction (abstract). The children knew that the sun rose in the east. When they saw the sun that morning, they knew that they were facing the East. The sun was used as a concrete aspect of an abstract direction. We can see the sun but we cannot see the easterly direction.

Answering the research question

Now, if one looks closely at the concept of weather and the concept of direction, there is definitely a deep connection between the two concepts. However, this connection is not visible to someone who has limited knowledge about weather and direction. This is where the teacher has to step in. Through the use of various forms of narrative methodology, the teacher needs to create a way in which to introduce this new content. This narrative methodology will not be used to create a connection between the two sides, but rather to enhance the connection that is already there and make it visible to the children. Narrative methodology helps the children understand abstract content. While analysing my tables in Part Two, I discovered that various prior skills needed to be put to practice for every one new skill to be understood and acquired. With the introduction of new content, the teacher could ask himself: What prior skills do the children have? How is that beneficial to the acquisition of the new content? My evidence shows that this is the point from which the teacher entered his main lesson.

In answer to my question, I discovered that between the known knowledge (prior skills) and the unknown knowledge (new skills), lie a deep abstract connection. The role of the narrative methodology is to pick up on and enhance that connection, making an already existing connection visible and concrete to the children.

In light of this discovery, I have decided that a more appropriate way to word my research question would have been: *'How is narrative methodology used to connect the unknown knowledge to the known knowledge in a Waldorf classroom?'*

Conclusion

One thing that I feel is necessary to mention, is a question that I asked my teacher during an interview, 'Once the new knowledge has been introduced and understood, can it be considered as part of the known knowledge?' The teacher replied that it may not be understood immediately and that it may be understood in years to come, but it is an "ever growing knowledge" and it grows with the human being.

My findings satisfied my curiosity. This research has been vastly different to any other challenge that I have accepted. It was fresh, it was new, it was exciting and definitely thought provoking but also very intimidating. To me, being able to finish this dissertation is a great achievement at my present academic level. In the beginning, going into the classroom to conduct my research was hard because, after nearly four years of formal training to become a teacher, I had to retrain myself and let go of habits that I developed as a student

teacher, especially when it came to recording my data. It was only once I learnt to do this that I became a true researcher. As a researcher I was able to see, understand, analyse and interpret things that I would never have been able to do as a teacher. These are good spectacles to keep safe in one's briefcase, as another way of looking at the world. In my opinion, being a researcher should always be part of being a teacher. As a teacher, you can never know enough and with every new lesson comes a new research assignment.

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